



**Stanford – Vienna  
Transatlantic Technology Law Forum**

A joint initiative of  
Stanford Law School and the University of Vienna School of Law



# **European Union Law Working Papers**

**No. 133**

**The Legal Uncertainty of the Regulatory  
Regime Governing Online Choice  
Architecture in the EU Consumer Law  
Acquis**

**Laura Jakubek**

**2026**

# European Union Law Working Papers

**Editors: Siegfried Fina and Roland Vogl**

## **About the European Union Law Working Papers**

The European Union Law Working Paper Series presents research on the law and policy of the European Union. The objective of the European Union Law Working Paper Series is to share “works in progress”. The authors of the papers are solely responsible for the content of their contributions and may use the citation standards of their home country. The working papers can be found at <http://tlf.stanford.edu>.

The European Union Law Working Paper Series is a joint initiative of Stanford Law School and the University of Vienna School of Law’s LLM Program in European and International Business Law.

If you should have any questions regarding the European Union Law Working Paper Series, please contact Professor Dr. Siegfried Fina, Jean Monnet Professor of European Union Law, or Dr. Roland Vogl, Executive Director of the Stanford Program in Law, Science and Technology, at:

Stanford-Vienna Transatlantic Technology Law Forum  
<http://tlf.stanford.edu>

Stanford Law School  
Crown Quadrangle  
559 Nathan Abbott Way  
Stanford, CA 94305-8610

University of Vienna School of Law  
Department of Business Law  
Schottenbastei 10-16  
1010 Vienna, Austria

## **About the Author**

Laura Jakubek holds a Bachelor of Laws (LL.B.) degree in German-French Legal Studies from the University of Potsdam in Germany and a Licence en droit from the University Paris Nanterre in France. She recently graduated from the University of Vienna in Austria with a Master of Laws (LL.M.) degree in European and International Business Law, with highest honors.

## **General Note about the Content**

The opinions expressed in this student paper are those of the author and not necessarily those of the Transatlantic Technology Law Forum, or any of TTLF's partner institutions, or the other sponsors of this research project.

## **Suggested Citation**

This European Union Law Working Paper should be cited as:  
Laura Jakubek, The Legal Uncertainty of the Regulatory Regime Governing Online Choice Architecture in the EU Consumer Law Acquis, Stanford-Vienna European Union Law Working Paper No. 133, <http://tlf.stanford.edu>.

## **Copyright**

© 2026 Laura Jakubek

## **Abstract**

This thesis examines the principal sources of legal uncertainty in the regulatory framework for online choice architecture (OCA) in EU law. It focuses on the EU Unfair Commercial Practices Directive 2005/29/EC, the EU Consumer Rights Directive 2011/83/EU and the EU Unfair Contract Terms Directive 93/13/EEC as horizontal instruments of EU consumer law, complemented by the EU Digital Services Act Regulation 2022/2065 (DSA). Online choice architecture describes the environment in which online users make decisions and inherently steers their decision-making. The current legislative framework for OCA that is designed and organized for commercial purposes is fragmented on multiple levels. On one side is the EU legislator's tentative approach, mainly tinkering around the edges of traditional consumer law instruments that are ill-suited to address digital influence over choices, even when introducing a standalone prohibition of certain online choice architecture in the DSA. This approach has left considerable ambiguities. On the other side are recent consequential but equally ambiguous interpretative shifts of the normative framework of consumer law by the Court of Justice of the European Union. This has produced an uncertain regulatory regime in need of reform. This thesis establishes different forms of online choice architecture and the distinct ways they influence choices, leading to divergent legal assessments. It then analyzes applicable provisions of the UCPD, CRD, UCTD and the DSA to identify the respective and overarching sources of legal uncertainty, concluding with the overall need for further legislative intervention.

## **Table of Abbreviations**

AG	Advocate General
AGCM	Autorità Garante della Concorrenza e del Mercato (Italian Competition Authority)
AI	Artificial Intelligence
B2B	Business-to-Business
B2C	Business-to-Consumer
BEUC	Bureau Européen des Unions de Consommateurs (‘The European Consumer Organisation’)
BGBI	Bundesgesetzblatt (German Federal Law Gazette)
BGH	Bundesgerichtshof (German Federal Court of Justice)
CRD	Consumer Rights Directive (2011/83/EU)
CRRE	Centre on Regulation in Europe
DF Fitness Check	Digital Fairness Fitness Check
DG JUST	Directorate-General for Justice and Consumer of the European Commission
DSA	Digital Services Act Regulation (2022/2065)
ECJ	European Court of Justice
EDPB	European Data Protection Board
EuCML	Journal of European Consumer and Market Law
EuZW	Europäische Zeitschrift für Wirtschaftsrecht
FTC	Federal Trade Commission (United States of America)
GDPR	General Data Protection Regulation
GRUR	Gewerblicher Schutz und Urheberrecht
GRUR-RR	GRUR Rechtsprechungs-Report
IMCO	Committee on the Internal Market and Consumer Protection of the European Parliament
IoT	Internet of Things

IPOL	Directorate-General for Internal Policies of European Parliament
ML	Machine learning
MMR	Multimedia und Recht
NJW	Neue Juristische Wochenzeitschrift
OCA	Online choice architecture
OECD	Organization of Economic Co-operation and Development
OJ	Official Journal of the European Union
OLG	Oberlandesgericht (German Higher Regional Court)
RD <i>i</i>	Recht Digital
SSRN	Social Science and Research Network
SWD	Staff Working Document
TFEU	Treaty on the Functioning of the European Union
UCPD	Unfair Commercial Practices Directive (2005/29/EC)
UCTD	Unfair Contract Terms Directive (93/13/EEC)
UK CMA	Competition and Markets Authority of the United Kingdom
VLOPs	Very Large Online Platforms
VLOs	Very Large Online Search Engines
VuR	Verbraucher und Recht
ZEuP	Zeitschrift für Europäisches Privatrecht
ZfDR	Zeitschrift für Digitales Recht



1.2.2.	Transparency obligations and online interface presentation assessed by the average consumer standard .....	82
1.2.3.	Specific online interface design obligations for financial services.....	87
1.2.4.	Presentation of the right to withdrawal for contracts concluded via online interface	91
1.2.5.	CRD Consent obligations and online choice architectural design .....	93
1.2.6.	Conclusion on the CRD's bearing on the legal assessment and uncertainty of OCA	94
1.3.	<i>Unfair Contract Terms Directive</i> .....	96
1.3.1.	Scope and applicability to online choice architecture .....	97
1.3.2.	Evaluation of OCA under fairness and transparency of contractual terms assessed by the average consumer standard .....	99
1.3.3.	Conclusion on the UCTD's bearing on the legal assessment and uncertainty of OCA	104
2.	<i>Bearing of the DSA on the legal assessment and legal uncertainty of online choice architecture and interplay with the UCPD</i> .....	105
2.1.	General prohibition of dark patterns .....	106
2.1.1	Uncertain definition of dark patterns .....	106
2.1.2.	Delineation of scope as a source of legal uncertainty.....	109
2.2.	Compliance by design .....	112
2.3.	Additional obligations for VLOPs and VLOs.....	113
2.4.	<i>Conclusion on the bearing of the DSA to the legal assessment and uncertainty of OCA</i>	114
3.	<i>Conclusion on the existent framework for online choice architecture in EU law established by horizontal consumer law instruments and the Digital Services Act</i> .....	117
IV.	<i>Literature</i> .....	123
	<i>Table of cases</i> .....	123
	European Case Law .....	123
	National Judgments of the Member States .....	124
	<i>Table of Legislation</i> .....	124
	European Legislation .....	124
	Other primary sources .....	125
	<i>Secondary Sources</i> .....	125
	Journal Articles .....	125

## I. Introduction

Online choice architecture (OCA) describes the digital environment in which users make their choices.<sup>1</sup> This environment always influences the decisions online users make; it is impossible to design OCA in a way that does not steer decision-making to a certain degree.<sup>2</sup> This steering effect on the decisions we make can be amplified due to the modular nature of the web and further aided by a wide array of techniques that build on user data collected through various channels, including smart devices like watches we wear, social media, and our behavior on websites, which may be processed by technologies like AI-driven algorithms and big data analytics.<sup>3</sup> This thesis will concern the online choice environment as designed and organized for commercial purposes.

The European legislator has shown awareness of these increased possibilities to influence decision-making through online choice architecture. In fact, the regulation of OCA had already become an explicit policy objective of the Commission as part of the 2020 New Consumer Agenda, for the intended ‘green and digital transition.’<sup>4</sup> The current legal framework for OCA in European Union law is fragmented across provisions from traditional consumer law and the more recently emerging body of digital law. Union legislative efforts have so far embodied the underlying rationale that horizontal instruments of consumer law, namely the Unfair

---

<sup>1</sup> Cf. on choice architecture which is the foundation of the definition of online choice architecture as is further examined in section (II.1.) of this thesis, Richard Thaler and Cass Robert Sunstein, *Nudge Improving decisions About Health, Wealth and Happiness* (1 Yale University Press 2008); on online choice architecture Christoph Busch, Amelia Fletcher, ‘Harmful Online Choice Architecture’ (2024) CRRE Report 7 <<https://cerre.eu/publications/harmful-online-choice-architecture/>> accessed 16.01.2026.

<sup>2</sup> Cf. Busch and Fletcher for CRRE (n 1) 7; Markus Weinmann, Christoph Schneider and Jan vom Brocke, ‘Digital Nudging’ (2016) 58 *Business & Information Systems Engineering* 433, 434 (footnotes on supporting literature omitted).

<sup>3</sup> Armindokht H. Sadeghian and Ali Otarkhani, ‘Data driven digital nudging: a systematic literature review and future agenda’ (2023) 43 *Behavior and Information Technology* 3834, ‘Data Driven digital nudging definition.’

<sup>4</sup> European Commission, ‘New Consumer Agenda. Strengthening consumer resilience for sustainable recovery’ COM (2020) 696 final, 1, cf. ‘user-interface designs aimed at manipulating consumers’ 10.

Commercial Practices Directive 2005/29/EC<sup>5</sup> (UCPD), the Consumer Rights Directive 2011/83/EU<sup>6</sup> (CRD) and the Unfair Contract Terms Directive 93/13/EEC<sup>7</sup> (UCTD), are equipped to regulate digital practices including online choice architecture in the evolved online environment. Online consumer protection was to be achieved by means of soft law instruments and provisions applicable to specific sectors or actors and particular practices in the digital environment. This premise has materialized through Commission Guidance Notices for the UCPD<sup>8</sup> and the CRD<sup>9</sup> addressing their application to new digital practices, as well as through additional provisions applicable to specific sectors of the digital environment and distinct practices, including those introduced by Directive 2023/2673<sup>10</sup> amending the CRD and the actor-specific Digital Services Act Regulation 2022/2065<sup>11</sup> (DSA).

These measures were ostensibly the EU legislator's partial response to pressing concerns raised by consumer organizations and in legal scholarship. Legal scholarly debate about consumer law instruments and their application to the digital realm has mainly been undertaken through the lens of consumer-protection. Scholars have criticized the inability of Union law to protect consumers from digital practices including OCA that steers consumer decision-making, as stemming from the underlying normative framework. This normative framework is now

---

<sup>5</sup> Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market and amending Council Directive 84/450/EEC, Directives 97/7/EC, 98/27/EC and 2002/65/EC of the European Parliament and of the Council and Regulation (EC) No 2006/2004 of the European Parliament and of the Council (2005) OJ L149/22 (Unfair Commercial Practices Directive).

<sup>6</sup> Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council (2011) OJ L304/64 (Consumer Rights Directive).

<sup>7</sup> Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts (1993) OJ L95/29 (UCTD).

<sup>8</sup> European Commission, '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) OJ C526/01.

<sup>9</sup> European Commission, 'Guidance on the interpretation and application of Directive 2011/83/EU of the European Parliament and of the Council on consumer rights' (2021) OJ C525/01.

<sup>10</sup> Directive (EU) 2023/2673 of the European Parliament and of the Council of 22 November 2023 amending Directive 2011/83/EU as regards financial services contracts concluded at a distance and repealing Directive 2002/65/EC (2023) OJ L2023/2673.

<sup>11</sup> 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 (2022) OJ L277/1.

undergoing the requested shift, through an expanded standard of protection against the steering of decision-making reflected in newer legislation such as the DSA and Directive 2023/2673, as well as through the expansion of the standard of protection underlying traditional provisions of consumer law pursuant to recent case-law of the Court of Justice of the European Union. Still, the Commission has acknowledged persistent lacunae in the current regulatory framework in announcing the preparation of the Digital Fairness Act.<sup>12</sup> This comes as part of the new 2030 Consumer Agenda in which the Commission refers to persistent ‘shortcomings and problematic practices in the digital environment that require action at EU level to fill gaps in consumer protection, reduce legal uncertainty for businesses, prevent regulatory fragmentation and facilitate enforcement.’<sup>13</sup>

The heightened influence on decision-making for commercial purposes raises obvious consumer protection concerns but also creates a dilemma for businesses. Given that choice architecture can never be truly neutral, businesses designing and organizing the choice environment must be able to ascertain where the legal boundary lies. Uncertainty as to the legality of online choice architecture is a lose-lose scenario, leaving the consumers vulnerable to sophisticated influence over their decisions, while simultaneously burdening businesses with unclear compliance obligations. Against the backdrop of the fragmented legal framework for online choice architecture and new shifts in legislation and case-law, this thesis seeks to answer the following research question: To what extent do the UCPD, CRD and UCTD as EU horizontal instruments of consumer law complemented by the DSA, provide a legally certain framework for online choice architecture and what are the primary sources of legal uncertainty?

---

<sup>12</sup> Announcing plans to further regulate ‘dark patterns’, which is a form of OCA that will be defined in section (II.2.2.) of this thesis, see Directorate-General for Communication, ‘Review of Consumer law, Digital Fairness Act’ Official Website of the European Commission <[https://commission.europa.eu/law/law-topic/consumer-protection-law/review-eu-consumer-law\\_en](https://commission.europa.eu/law/law-topic/consumer-protection-law/review-eu-consumer-law_en)> accessed 16.01.2026.

<sup>13</sup> European Commission, ‘2030 Consumer Agenda and action plan for consumers in the single market “A new impulse for consumer protection, competitiveness and sustainable growth”’ COM (2025) 848 final, 7.

To provide a differentiated analysis that examines differences between varying forms of online choice architecture, Section II. of this thesis first establishes definitions of different forms of OCA. It will also delineate the underlying mechanisms for the steering of decision-making. These will serve as a reference point in the subsequent analysis of the regulation of OCA. In Section III.1. as the core of this thesis, the respective bearing of horizontal consumer law instruments on the legal assessment and legal uncertainty of OCA will be analyzed. To gain an understanding of the sources of legal uncertainty, the application of the legislative text to different forms of OCA will be evaluated with a view to their current interpretations in case-law of the European Court of Justice, the European Commission and legal scholarship. Each of the Directives and their applicable provisions are considered, to conclude on the respective sources of legal uncertainty of each instrument. Section III.2. of this thesis then complements the consumer law analysis with an examination of the Digital Services Act and its positioning in the framework for OCA, which is mainly established by traditional consumer law instruments. It will then conclude on the sources of legal uncertainty in the evaluation of OCA under the DSA and its interplay with the UCPD. Finally, this thesis will conclude on the currently persistent overarching sources of legal uncertainty in analyzed applicable instruments and regulatory gaps or legal grey zones for specific forms of online choice architecture the thesis has identified.

## II. Analytical Framework for the legal assessment of online choice architecture

To determine the regulatory regime applicable to online choice architecture, this chapter outlines the interdisciplinary concept that defines it, to the extent necessary for legal analysis.

### 1. Origin of the concept of choice architecture as a challenge to the assumptions of rational choice theory

Online choice architecture stems from the concept of ‘choice architecture’, which is based on behavioral economics and was popularized by Thaler and Sunstein in their 2008 work *Nudge*,<sup>14</sup> for purposes of offering a concept to improve public policy decisions by governments. The two authors conceptualize ‘choice architecture’ to be the environment in which individuals make decisions.<sup>15</sup> In *Nudge*, they relay that this environment influences the choices individuals will make, through features of that choice environment, or ‘architecture’.

Thaler and Sunstein conceptualized choice architecture in *Nudge* on the grounds of insights from behavioral psychology, building on their arguments for importing behavioral-psychological insights into legal analysis from their earlier work with Jolls, *A Behavioral Approach to Law and Economics*.<sup>16</sup> They criticize the use of the rational actor model of the ‘homo economicus’ in Law and Economics and relay the inaccuracy of the model as demonstrated by empirical evidence and psychologists,<sup>17</sup> notably in works of the psychologists Tversky and Kahneman.<sup>18</sup>

---

<sup>14</sup> Thaler and Sunstein (n 1).

<sup>15</sup> Ibid (n 1) 118.

<sup>16</sup> Christine Jolls, Cass Robert Sunstein and Richard Thaler, ‘A Behavioral Approach to Law and Economics’ (1998) 50 *Stanford Law Review* 1471.

<sup>17</sup> Thaler and Sunstein (n 1) chapters 1 and 2; Jolls, Sunstein and Thaler (n 16) 1477.

<sup>18</sup> Jolls, Sunstein and Thaler (n 16) 1477; referenced heavily all throughout and in Thaler and Sunstein (n 1).

Evidence relays that rather than making rational decisions like the ‘homo economicus’, decision-makers take cognitive shortcuts or ‘mental rules-of-thumb’<sup>19</sup> referred to as heuristics and are influenced by many cognitive biases which are ‘tendencies toward certain interpretations of information’<sup>20</sup>, all of which can be predicted.<sup>21</sup> Further contradicting rational choice, *Nudge* also references psychologist Kahneman, who synthesized human decision-making into a dual model of System 1 and System 2 thinking.<sup>22</sup> Thaler and Sunstein refer to these Systems as ‘automatic’(System 1) and ‘reflective’(System 2) thinking<sup>23</sup> to relay that people often make automatic choices they are not aware of. Choice architecture often influences these automatic choices, without the person noticing, which would not be possible if their decision-making corresponded to that of the ‘homo economicus’.<sup>24</sup>

Terminology often used to oppose rational choice theory with regard to these evidenced tendencies are ‘bounded rationality’ referring to cognitive limitations people have in the decision-making process<sup>25</sup> and ‘bounded willpower’ referring to limitations people have in the immediate effort they will make to serve ‘long-term interests.’<sup>26</sup>

Thaler and Sunstein use the term ‘nudge’ to describe influence on a person’s decision, which is predictable based on these insights.<sup>27</sup> In Thaler and Sunstein’s original intention, the term ‘nudging’ is used to describe the influence a government or private sector entity takes by integrating insights from behavioral psychology into the choice architecture they create to steer

---

<sup>19</sup> Mark Egan, *An Analysis of Richard H. Thaler and Cass R. Sunstein’s Nudge Improving Decisions about Health, Wealth, and Happiness* (1 Macat International 2017) 34 with reference to chapter 1 and 2 Thaler and Sunstein (n 1).

<sup>20</sup> Ibid (n 1).

<sup>21</sup> Thaler and Sunstein (n 1) 6; Jolls, Sunstein and Thaler (n 16) 1476-1485.

<sup>22</sup> Daniel Kahneman, *Thinking fast and slow* (1 Farrar, Straus and Giroux 2011).

<sup>23</sup> Thaler and Sunstein (n 1) 19.

<sup>24</sup> Egan (n 19) 41.

<sup>25</sup> Jolls, Sunstein and Thaler (n 16) 1478; on the reason ‘bounded rationality’ is often used in the context of the application of EU consumer law see below (III.1.1.3.5.).

<sup>26</sup> Ibid 1479.

<sup>27</sup> Thaler and Sunstein (n 1) 6.

people towards making better choice as judged from their own perspective, without prohibiting any choices.<sup>28</sup> When presenting such features that have a steering effect on choice, Thaler and Sunstein have illustrated the feature of ‘defaults’, with the example of pre-ticked boxes to software downloads.<sup>29</sup> Therefore, the same mechanisms of choice architecture have been known to be applicable to online spaces since it’s conceptualization.

In this thesis, choice architecture of the private sector will be discussed.

In this context the same principles of influence on decision-making can be used to maximize the profits of companies,<sup>30</sup> whereby the term ‘nudging’ in the context of online choice architecture is rather used with reference to the manipulative capacity of choice architecture, without being connotated to serve the person’s own interest like intended by Thaler and Sunstein.<sup>31</sup> Choice architecture and nudging are terms commonly used in scholarship; ‘nudging’ has also more recently been referenced with reference to manipulation in legislative acts in the European Union.<sup>32</sup>

The term manipulation can be understood to designate varying degrees of influence on the decision-making process. It is often associated negatively, particularly with the influence on the decision-making process and exploitation of vulnerabilities impairing private autonomy.<sup>33</sup>

It can also be understood to prevent the possibility of rational choice entirely.<sup>34</sup>

---

<sup>28</sup> Thaler and Sunstein (n 1) 6.

<sup>29</sup> Richard Thaler, Cass Robert Sunstein and John Balz, ‘Choice Architecture’ in Eldar Shafir (ed) *The Behavioral Foundations of Public Policy* (1 Princeton University Press 2013),430.

<sup>30</sup> Cf. Egan (n 19) 41-42.

<sup>31</sup> Cf. Weinmann, Schneider and Brocke (n 2) 434.

<sup>32</sup> 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 (2022) OJ L277/1 (Digital Service Act), Recital 67.

<sup>33</sup> Daniel Susser, Beate Roessler, Helen Nissenbaum, ‘Technology, autonomy and manipulation’ (2019) 8 *Internet Policy Review* 1 <<https://policyreview.info/articles/analysis/technology-autonomy-and-manipulation>> accessed 05.04.2025, 4.

<sup>34</sup> Philipp Hacker, ‘Manipulation by algorithms. Exploring the triangle of unfair commercial practice, data protection, and privacy law’ (2021) 29 *European Law Journal* 2023 142, 145

Choice Architecture designates both perceived and hidden features of an environment which can influence the decision-maker both in ways they perceive positively or negatively and likewise can have both positive and negative effects.<sup>35</sup> These effects can be decisive for legal evaluation. The term manipulation in this thesis is used to provide a more neutral term than nudging, to be understood neutrally as simply steering decision-making, unless otherwise specified.

As the online environment can be entirely tailored and controlled by the choice architect and possibilities are constantly evolving, the manipulative impact of choice architecture is now driven by an increasing efficiency of tools to intervene in the process leading up to the final decision being taken.<sup>36</sup> This manipulative capacity of the online choice architect in the current digital sphere further reinforces the challenge to the expectation of rational decision-making in practice.<sup>37</sup>

The concept of choice architecture is introduced here by its challenging position to rational choice, as the rational ‘homo economicus’ is said to serve as a decisive basis for European consumer law and codified case law of the ECJ by large parts of legal scholarship.<sup>38</sup> This perfectly introduces the challenge of legally assessing online choice architectural design and organization, which is based in insights to the contrary understanding of human decision-making to the one that is, or at least seems to be,<sup>39</sup> underpinning Union consumer law.

---

<sup>35</sup> Weinmann, Schneider and Brocke (n 2) 434.

<sup>36</sup> Cf. Susser, Roessler Nissenbaum (n 33) 2.

<sup>37</sup> Katharina Gelbrich and Sarah Legner, ‘Wer ist Verbraucher? Zu Ausdifferenzierungen des Verbraucherschutzes im digitalen Umfeld’ (2025) 1 *VuR* 8, 8.

<sup>38</sup> See for example Frederico Ferretti, ‘The consumer image under EU law: Average, rationally bounded and dispositionally vulnerable. What are the prospects for protection in digital markets?’ (2025) 62 *Common Market Law Review* published by Wolters Kluwer Law 121, 124.

<sup>39</sup> Arguably EU Consumer law does incorporate contrary insights and only appears to be based on the perfectly rational consumer ‘for reasons of the internal market rationale that underpins Eu law on information’, see Anne-Lise Sibony and Genevive Helleringer, ‘European consumer protection through the behavioral lens’ (2017) 05/2017 *The Columbia Journal of European Law* 607, 613; see below (III.1.1.3.5.).

## **2. Definition of online choice architecture**

Online choice architecture (OCA) describes the digital environment in which users make their choices, including layout options, wording, settings, ordering of options and visual cues.<sup>40</sup>

Irrespective of whether the choice architect has an intention to manipulate choices or not, it is impossible for online choice architectural design not to influence the user.<sup>41</sup>

The term can be used to refer to the stricter scope of user interfaces ‘that require people to make judgments or decisions.’<sup>42</sup> An example of this would be an interface where the user has to click boxes to make a choice, which could be designed so that specific boxes are already ticked (default option) or none are ticked.<sup>43</sup>

However, the term can also describe additional elements that influence the choice that will be made, for example how many pages on a website must be clicked and how titles on a navigation menu are organized to find these boxes with which a certain choice, like altering a subscription, can be made.<sup>44</sup> In this thesis, the term is used in this more comprehensive sense.

There is no legal definition of OCA that would be applicable across the different applicable provisions. Moreover, to date a specific taxonomy of OCA has not been officially endorsed by an Institution of the European Union. The DG for Justice and Consumers has proposed 7 different taxonomies of online choice architecture in a report on unfair commercial practices

---

<sup>40</sup>Cf. Christop Busch, Amelia Fletcher, ‘Harmful Online Choice Architecture’ (2024) CRRE Report 7 <<https://cerre.eu/publications/harmful-online-choice-architecture/>> accessed 16.01.2026.

<sup>41</sup> Cf. Busch and Fletcher for CRRE (n 1) 7; Weinmann, Schneider and Brocke (n 2) 434 (footnotes of supporting literature omitted).

<sup>42</sup> Weinmann, Schneider and Brocke (n 2) 434.

<sup>43</sup> Cf. Weinmann, Schneider and Brocke (n 2) 433.

<sup>44</sup> Cf. Busch and Fletcher for CRRE (n 1) 7.

in the digital environment,<sup>45</sup> a behavioral study addressing OCA and manipulative personalization techniques,<sup>46</sup> but without developing precise definitions.<sup>47</sup>

In view of the upcoming Digital Fairness Act, the Parliamentary Research Service has published a document in January 2025,<sup>48</sup> acknowledging that both academics and stakeholders are estimating that the lack of a unified definition of what is considered to be ‘harmful’ OCA<sup>49</sup> is a source of legal uncertainty.

To adequately examine the legal situation of OCA under Union traditional consumer law and the Digital Services Act, the notion will be examined through a typology of overlapping definitions of forms of online choice architectural design: Digital nudging, sludge and dark patterns.<sup>50</sup> This typology is chosen here, to provide definitions that can later be referred back to, highlighting the different ways online choice architecture can be implemented that lead to different legal consequences or uncertainties in the framework established by the Union consumer law and the DSA.

---

<sup>45</sup> Directorate-General for Justice and Consumers, ‘Behavioral study on unfair commercial practices in the digital environment – Dark Patterns and manipulative personalization’ (2022) Publications Office of the European Union, 29-41.

<sup>46</sup> The Report is titled to focus on dark patterns but also addresses forms of OCA differentiated in this thesis.

<sup>47</sup> The report argues that any practice can be captured as an unfair B2C practice by the UCPD, whereby there is no need for such definitions from a consumer protection perspective.

<sup>48</sup> Polona Car and Filippo Casseti of Member’s Research Service, ‘Regulating Dark Patterns in the EU: Towards Digital Fairness’ (2025) European Parliamentary Research Service.

<sup>49</sup> Car and Filippo address dark patterns, often used to reference OCA with presumably negative effects and reference ‘harmful choice architecture’ by Busch and Fletcher for CRRE (n 1).

<sup>50</sup> This division of OCA into three forms is in reference to the taxonomy that provides a comprehensive scheme assessing different aspects and effects, see Competition and Markets Authority of the United Kingdom ‘Evidence Review of Online Choice Architecture and competition harm’ (2022).

<https://www.gov.uk/government/publications/online-choice-architecture-how-digital-design-can-harm-competition-and-consumers/evidence-review-of-online-choice-architecture-and-consumer-and-competition-harm>> accessed 16.01.2026.

None have a unified definition in scholarship.<sup>51</sup> The term ‘dark patterns’ is discussed in the last separate section, as it is often used as an umbrella term for different implementations of OCA, that are negatively connotated or seen as harmful to online users.<sup>52</sup>

## **2.1. Digital Nudging, Hypernudging and Sludge**

These definitions highlight aspects of online choice architecture, relevant to the subsequent legal analysis.

### **2.1.1. Digital Nudging**

The term ‘digital nudging’ refers to the influence or steering effect designed interface elements have on decision-making.<sup>53</sup> Digital Nudging can substantially be understood as the new iteration of nudging online, with ‘hypernudging’ as a specific form of digital nudging, based on data-driven algorithms.<sup>54</sup> Dark patterns that leverage insights of psychology to manipulate decision-making are also digital nudges.<sup>55</sup>

Digital Nudging is an intensified form of nudging, because of a twofold foundational evolution that has enhanced the capacity of the choice architect to intervene in a person’s decision-making process: One dimension of this evolution concerns the increasing position of information technology as a key means of decision-making, in turn rendering human decision-

---

<sup>51</sup> Cf. discussion of different definitions OECD, ‘Dark Commercial Patterns’ (2022) 336 Digital Economy Papers <<https://doi.org/10.1787/44f5e846-en>> accessed 16.01.2025, 9.

<sup>52</sup> See below (II.2.2.).

<sup>53</sup> Weinmann, Schneider and Brocke (n 2) 433; Busch and Fletcher for CRRE (n 1).

<sup>54</sup> Viktorija Morozovaite, ‘Hypernudging in the changing European regulatory landscape for digital markets’ (2022) 15 Policy & Internet 2023 78 <<https://onlinelibrary.wiley.com/doi/full/10.1002/poi3.329>> 16.01.2026.

<sup>55</sup> On dark patterns see below (II.2.2.).

making more predictable<sup>56</sup>. The user can be confronted by digital nudges through ‘all conceivable channels’, like ‘e-mails, smartphone apps, company software, social media platforms’.<sup>57</sup> Some Internet of things (IoT) devices ‘placed on or in the body’ like micro-chips or cybernetic implants can further be said to create ‘Cyborgs’, short for cybernetic organisms (‘human-machine-hybrid’).<sup>58</sup> So-called ‘Cyborg consumers’ are more susceptible to be influenced by nudges, due to factors like enhanced personalization.<sup>59</sup>

Another dimension concerns the possibilities of designing choice architecture in the digital realm. Contrary to analogue choice architecture, OCA can be easily modeled and designed to correspond to the exact vision of the online choice architect in all aspects.<sup>60</sup> Users can be nudged based on their individual characteristics and psychological traits, by means of segmentation and selection of user and personalization of OCA to the user.<sup>61</sup> Via ‘segmentation’ the choice architect groups together certain users based on their characteristics, like age, gender, and income group, to tailor their choice architecture to the groups most important to them, their customer base.<sup>62</sup> Personalization describes the tailoring of OCA to such a group of consumers or one specific user based on their individual traits.<sup>63</sup>

---

<sup>56</sup> Benjamin Clubbs Coldron and others, ‘When The Internet Gets Under Our Skin: Reassessing Consumer Law and Policy in a Society of Cyborgs’ (2025) 48 *Journal of Consumer Law and Policy* 205, 210.

<sup>57</sup> Dirk Nicolas Wagner, ‘On the Emergence of AI nudging: Gentle Big Brother?’ (2021) 2 *Robonomics: The Journal of the Automated Economy* 18.

<sup>58</sup> Manfred Clynes and Nathan Kline, ‘Cyborgs and Space’ (1960) 14 *Astronautics* 26 *cited in* Clubbs Coldron and others (n 56) 208.

<sup>59</sup> Clubbs Coldron and others (n 56) 211-215.

<sup>60</sup> Tim Benjamin Lembecke and others, ‘To Nudge or Not to Nudge: Ethical Considerations of Digital Nudging Based on Its Behavioral Economics Roots’, (2019) Conference Paper from the European Conference on Information Systems in Stockholm *cited in* Morozovaite (n 54) 82.

<sup>61</sup> On segmentation and personalization see DG JUST Study (n 45) 33-34; on selection see Hacker (n 34) 143.

<sup>62</sup> DG JUST Study (n 45) 33 (footnotes omitted).

<sup>63</sup> *Ibid* (n 45) 33 (footnotes omitted).

The counterpart to the latter would be ‘selection’ where the choice architect chooses a specific type of person who will be susceptible to be manipulated by a certain design, as opposed to others on whom the design would not have the same effect of steering their behavior.<sup>64</sup>

The increased possibility to curate every detail of the choice environment in the digital environment and ability to gather data of the user, allows for the choice architect to *create* vulnerabilities to influence, instead of just finding existing vulnerabilities.<sup>65</sup>

A new aspect of digitalization is that also the choice architect themselves is increasingly digitalized and themselves an algorithm driven by Artificial Intelligence.<sup>66</sup> This will be further discussed in the following section on hypernudging.

### **2.1.2. Hypernudging and AI data-driven personalization**

‘Hypernudging’ is a term first proposed by Karen Yeung, as nudging in digital environments based on Big Data.<sup>67</sup> She refers to Big Data as a ‘combination of technology and process’ which allows to mine for data and analyze data in a way that allows to create a ‘highly data-intensive form of knowledge.’<sup>68</sup> This involves machine learning algorithms and critically also creates the ‘ability to find useful correlations within datasets “not capable of human analysis.”’<sup>69</sup> These

---

<sup>64</sup> Cf. ‘pre-selection’ Hacker (n 34) 143 (footnotes omitted).

<sup>65</sup> For a detailed description with concrete examples of how vulnerability manipulation can be created see Natali Helberger, Marijn Sax, Hans-Wolfgang Micklitz, ‘Choice Architectures in the Digital Economy: Towards a New Understanding of Digital Vulnerability’ (2022) 45 *Journal of Consumer Policy* 175.

<sup>66</sup> Stuart Mills and Henrik Skaug Sætra, ‘The autonomous choice architect’ (2022) 39 *AI & Society* 583, 583

<sup>67</sup> Karen Yeung ‘“Hypernudge”: Big Data as a mode of regulation by design’ (2016) 20 *Information, Communication & Society* 118.

<sup>68</sup> Julie Cohen *Configuring the Networked Self* (Yale University Press 2012) *cited in* Yeung (n 51) 119.

<sup>69</sup> Jonathan Shaw ‘Why “Big Data” is a Big Deal’ (2014) 116 *Harvard Magazine* *cited in* Yeung (n 51) 2.

correlations can precisely be used to tailor online choice architectural designs to the user in the presented various ways.<sup>70</sup>

Hypernudging as a concept has evolved since first being conceptualized by Karen Young and misses a uniform definition.<sup>71</sup> However, Morozovaite has developed 9 cumulative criteria for “hypernudging” published in an article, which has been cited by Members of the Parliamentary Research Service when calling for clearer definitions of OCA.<sup>72</sup>

Morozovaite included 5 criteria based on ‘Thaler and Sunstein’s conceptualization of a nudge.’

Besides, 4 criteria distinguish ‘hyper’-nudging. Morozovaite proposes 3 characteristics, she ascertained to be ‘unique to hypernudging’, informed by an ‘interdisciplinary law and informatics perspective’<sup>73</sup>:

(1) They are ‘(p)ersonalized’, meaning here that hypernudging leverages data, ‘such as preferences, capabilities and opportunities’ to deliver user-specific nudges.<sup>74</sup>

(2) They are ‘(d)ynamic’, meaning adaptable in form and able to react to a user’s behavior in real time, sometimes also in the medium used to deliver a message.<sup>75</sup>

(3) Hypernudging is ‘deductive and/ or predictive’, meaning it leverages personal data, including ‘personality, predispositions, values and emotions’ to predict people’s behavior.<sup>76</sup>

Mills has emphasized ‘*Real-time* (Re)Configuration’ as the distinguishing feature of hypernudging as opposed to nudging, which is the constant feedback loop of data, prediction

---

<sup>70</sup> DG JUST Study (n 45) 34.

<sup>71</sup> Morozovaite (n 54).

<sup>72</sup> Parliamentary Research Service (n 35).

<sup>73</sup> See Morozovaite (n 54) Table 1.

<sup>74</sup> Morozovaite (n 54) 84 (Footnotes omitted).

<sup>75</sup> Ibid (footnotes omitted).

<sup>76</sup> Ibid (footnotes omitted).

and subsequent prediction, only rendered possible by the technological underpinning of hypernudging.<sup>77</sup>

This technical component is also the last criterium of hypernudging in Morozovaite's definition, based specifically on Human-Computer interaction literature: (4)

Hypernudging is '(d)elivered via digital Interfaces', meaning it is enabled through advanced AI and ML algorithms which require a digital medium such as an online interface or IoT device.<sup>78</sup>

Hypernudging can be differentiated from dark patterns, as the latter do not always leverage psychological insights and may instead also outright force the user to complete an action, such to register and make an account, for which no such insight is required.<sup>79</sup>

However, nudging and hypernudging are frequently subsumed under a broader concept of dark patterns, which is used to describe different choice architectural designs that are negatively perceived.<sup>80</sup>

Leiser and Santos<sup>81</sup> analyze dark patterns from the perspective of their perceptibility in a 'three-tier visibility threshold' and classify hypernudging as the 'darkest pattern', since it is the least perceptible pattern to the user.<sup>82</sup> This has also otherwise been described as the 'hiddenness' of hypernudging.<sup>83</sup>

---

<sup>77</sup> Stuart Mills, 'Finding the "nudge" in hypernudge' (2022) 71 *Technology in Society* 102117, 3-4; On this feedback loop and constant adjustments, see also Helberger, Sax and Micklitz (n 65) 186-187.

<sup>78</sup> Morozovaite 'Two sides of the digital advertising coin: Putting hypernudging into perspective' (2021) 5 *Markets and Competition law review* 105 *cited in* Morozovaite (n 54) 84.

<sup>79</sup> Stuart Mills, 'Deceptive choice architecture and behavioral audits: A principles based approach' (2024) 18 *Regulation and Governance* 1426, 1427; OECD (n 51) 8, 50.

<sup>80</sup> On the definition of dark patterns, see below (II.2.2.).

<sup>81</sup> Mark Leiser and Cristiana Santos, 'Dark Patterns, Enforcements, and the Emerging Digital Design Acquis: Manipulation beneath the Interface' (2024) 15 *European Journal of Law and Technology* 1, 5.

<sup>82</sup> *Ibid* 5.

<sup>83</sup> For a critical analysis of the 'hiddenness' of hypernudging see Mills ('nudge in hypernudge' n 77) 4 .

The depiction of hypernudging as ‘the darkest pattern’ reflects how hypernudging is implemented and materializes in practice. It is realized by machine learning (ML) algorithms integrated as code into the software components and data flows, that govern the functionality of a device or applications<sup>84</sup>. Therefore, they are not visible to the user on the User-Interface or in the User-experience.

Two subcategories of hypernudging as ‘the darkest patterns’ can be differentiated based on how these algorithms operate - with ‘clear, albeit hidden, logic’ or with ‘unpredictable and often inexplicable outcomes’:<sup>85</sup>

One category is that of ‘deterministic patterns’<sup>86</sup>. They are supported by “deterministic algorithms”<sup>87</sup> which leverage ‘user behavioral data and preferences’ to highly personalize the nudging technique it employs.<sup>88</sup> These patterns are concealed within the architecture, such that the person being hypernudged cannot see how they are being influenced.<sup>89</sup> An example of such hypernudges based on deterministic patterns is certain recommendation systems underpinned by specific algorithms that make them highly personalized.<sup>90</sup> What the person can perceive is the recommendation they are given, but not the deterministic algorithms and the personal data used to personalize it.<sup>91</sup> An auditor however could uncover a deterministic pattern ‘subject them to regulatory oversight’.<sup>92</sup>

---

<sup>84</sup> Leiser and Santos (n 81) 18.

<sup>85</sup> Ibid (n 81) 6.

<sup>86</sup> Ibid (n 81) 5.

<sup>87</sup> GeeksforGeeks, ‘Difference between Deterministic and Non-deterministic Algorithms’ (no date) <https://www.geeksforgeeks.org/difference-between-deterministic-and-non-deterministic-algorithms/> accessed 25 April 2023 cited in Leiser and Santos (n 81) 18.

<sup>88</sup> Ibid (n 81) 5.

<sup>89</sup> Ibid (n 81) 5.

<sup>90</sup> Ibid (n 81) 18.

<sup>91</sup> Ibid (n 81) 18.

<sup>92</sup> Ibid (n 81) 18.

By contrast ‘Stochastic patterns’, rely on ‘systems that operate as black boxes, where the reasoning behind their outputs is unclear, and outputs for identical inputs can vary’.<sup>93</sup>

This refers to those ML algorithms which process data in such a complex way autonomously, that even the choice architect cannot predict the output of the algorithm.<sup>94</sup> These systems, often driven by ML algorithms, adapt and evolve on their own and subtly ‘extend manipulation to a collective level (...) beneath the surface level of interaction’.<sup>95</sup> The choice architect can purposefully employ these ML algorithms or other ‘statistical methods that are difficult to understand’ to create different outputs based on the same inputs, making them difficult to detect, audit or regulate.<sup>96</sup>

The ‘blackbox-effect’ is a general phenomenon of certain Artificial Intelligence (AI)-systems,<sup>97</sup> which also imports to other online choice architectural design for which the same principle can be applied.<sup>98</sup>

These examples characterizations of hypernudging illustrate important aspects of hypernudging, which are relevant to their legal assessment.

---

<sup>93</sup> Ibid (n 81) 5.

<sup>94</sup> Ibid (n 81) 5.

<sup>95</sup> Ibid (n 81) 5.

<sup>96</sup> Ibid (n 81) 18 and 19.

<sup>97</sup> Marieke Luise Merkle, ‘Transparenz nach der KI-Verordnung- von der Blackbox zum Open-Book?’ (2024) 9 RD*i* 2024 414, 415 ‘KI als Blackbox’.

<sup>98</sup> Cf. Mills and Sætra (n 66).

### 2.1.3. Sludge

Two concepts which are sometimes differentiated from a more neutral concept of nudging and used in scholarship are ‘sludge’ and ‘dark nudging’.

‘Sludge’ is a concept developed by Thaler and Sunstein.<sup>99</sup> Thaler first popularized the term ‘sludge’<sup>100</sup> as ‘essentially nudging for evil’ by making it more difficult for people to make decisions in their best interest.<sup>101</sup> Sunstein linked the concept of Sludge specifically to the term ‘frictions’ which are hurdles in the decision-making process to reach the choice which is in the decision makers own best interest,<sup>102</sup> thereby leveraging bounded willpower.<sup>103</sup> ‘Sludge’ in the digital environment can take the form of difficulty in unsubscribing from an online service.<sup>104</sup> Sludge is often subsumed under dark patterns<sup>105</sup> but also partially differentiated, as sludge is not a concept that only applies online, but also in analogue environments.<sup>106</sup> This term therefore provides a definition that can aid in the interpretation of Consumer law instruments conceived for offline sludge that now also applies to the online environment.<sup>107</sup>

‘Dark nudges’ are the counterpart to sludge, in that they remove frictions for people to make choice that ‘inadvertent or ill-considered’.<sup>108</sup> An online example of this would be a ‘subscription trap’ that allows people to sign up for free without clearly informing them that the service that was subscribed to will automatically renew and incur costs in the future.<sup>109</sup>

---

<sup>99</sup> Who originally conceptualized nudging and choice architecture, see Thaler and Sunstein (n 1).

<sup>100</sup> Richard Thaler, ‘Nudge, not Sludge’ (2018) 361 AAAS Science 431 available under <<https://www.science.org/doi/10.1126/science.aau9241>> accessed 16.01.2025.

<sup>101</sup> Ibid.

<sup>102</sup> For a detailed concept and psychological foundations of sludge see Cass Robert Sunstein, *Sludge: What Stops Us from Getting Things Done and What to Do About It* (1 MIT Press 2021).

<sup>103</sup> Cf. above (II.1.).

<sup>104</sup> Cass Robert Sunstein and Julien L. Gosset (2020) 70 Duke Law Journal Online 74 cited in Mills (‘deceptive choice architecture’ 79) 1427; for a concrete examples of Sludge see DG JUST Study (n 45) 291, 292.

<sup>105</sup> Cf. e.g. OECD (n 51) 48; for a definition of ‘dark patterns’ see below (II.2.2).

<sup>106</sup> Mills (‘deceptive choice architecture’ n 79) 1427.

<sup>107</sup> See below (III.1.2. and III.1.4.).

<sup>108</sup> UK CMA (n 50).

<sup>109</sup> UK CMA (n 50).

## 2.2. Dark patterns and deceptive patterns

A third term to refer to OCA is ‘dark patterns,’ also referred to as ‘deceptive patterns’.

Much of discourse about OCA and regulatory intervention globally refers to these terms.<sup>110</sup>

This includes research into OCA by the European Parliament<sup>111</sup> and the European Commission<sup>112</sup>, but also explicit mention of ‘dark patterns’ in the Recitals of European Regulations, specifically Recital 67 of the Digital Services Act<sup>113</sup> and Recital 39 of the Data Act.<sup>114</sup> However, the Recitals are non-binding and the term lacks both a uniform definition applicable across legal instruments of the EU and a universally recognized definition in scholarship.<sup>115</sup>

Nevertheless, many practices are very consistently identified as ‘dark patterns’ in legal scholarship. The 2022 Behavioral Study on dark patterns by the DG for Justice and Consumers, stated that the 10 most prevalent dark patterns found in terms of total patterns across websites and apps were the following in order of their prevalence:<sup>116</sup>

(1) ‘Preselection’: refers to patterns presenting default options, meaning preselected choices without the participation of the user.<sup>117</sup> These leverage ‘status quo bias,’ making it more likely

---

<sup>110</sup> Including in the USA, see FTC Bureau of Consumer Protection of the United States of America ‘Bringing Dark Patterns to Light’ (2022) Staff Report September 2022 <[https://www.ftc.gov/system/files/ftc\\_gov/pdf/P214800%20Dark%20Patterns%20Report%2009.14.2022%20-%20FINAL.pdf](https://www.ftc.gov/system/files/ftc_gov/pdf/P214800%20Dark%20Patterns%20Report%2009.14.2022%20-%20FINAL.pdf)> accessed 16.01.2025; see also the UK CMA (n 50).

<sup>111</sup> See for example the European Parliamentary Research Service (n 48); Public Hearing on Dark Patterns by the IMCO, see Committee on the Internal Market and Consumer Protection ‘Dark patterns and how such practices can harm consumers and the digital single market’ (2022) Public Hearing 16 March 2022 European Parliament, Spinelli (SPA AK 3C50).

<sup>112</sup> See DG JUST Study (n 45); European Commission ‘Sweep on dark patterns’ (2022) <[https://commission.europa.eu/live-work-travel-eu/consumer-rights-and-complaints/enforcement-consumer-protection/sweeps\\_en](https://commission.europa.eu/live-work-travel-eu/consumer-rights-and-complaints/enforcement-consumer-protection/sweeps_en)> accessed 16.01.2026.

<sup>113</sup> DSA (n 11) Recital 67.

<sup>114</sup> Regulation (EU) 2023/2854 of the European Parliament and of the Council of 13 December 2023 on harmonized rules on fair access to and use of data and amending Regulation (EU) 2017/2394 and Directive (EU) 2020/1828 OJ L2023/2854 (Data Act).

<sup>115</sup> Busch and Fletcher for CRRE (n 1) 11 – 12.

<sup>116</sup> DG JUST Study (n 45) 45.

<sup>117</sup> Leiser, Santos and Doshi, ‘Types of deceptive patterns’ Deceptive Patterns.org <<https://www.deceptive.design/types>> accessed 06.05.2025.

for a person to follow the chosen option<sup>118</sup> and add friction for a person to choose an option less beneficial for the choice architect,<sup>119</sup> thereby leveraging bounded willpower.<sup>120</sup>

(2) ‘Hidden information and false hierarchy’ were just as common as preselection and grouped together for purposes of the chart with most common dark patterns, but are generally differentiated.<sup>121</sup> ‘Hidden information’ refers interface design that makes information less noticeable, for example by using small fonts, low contrast or obscure placement on the interface.<sup>122</sup> In turn, ‘false Hierarchy’ patterns refers to interface design that nudges users to make certain choices to the advantage of the choice architect, for example by making it much more prominent on the page.<sup>123</sup> The presentation of information has been demonstrated to steer decision-making, for example increasing the likelihood of making a purchase.<sup>124</sup>

(3) ‘Nagging’, is used to describe persistent requests to complete the same specific task.<sup>125</sup> A prevalent example of this is a persistent offer to buy recommended products,<sup>126</sup> or turn on their notifications.<sup>127</sup> This has a steering effect on the user’s choice for reasons of bounded willpower<sup>128</sup> and limited time.<sup>129</sup>

(4) ‘Roach Motel’/ ‘hard to cancel’, are terms to refer to a dark nudge/sludge combination<sup>130</sup> which allows the user to sign up to a service very easily, but imposes frictions to cancellation.<sup>131</sup> This is also referred to as ‘obstruction’.<sup>132</sup> An example of this would be allowing subscription

---

<sup>118</sup> OECD (n 51) 9.

<sup>119</sup> Cf. sludge above (II.2.1.3.); on the preselection and imposed hurdles see also DG JUST Study (n 45) 37.

<sup>120</sup> On bound willpower, see above (II.1.).

<sup>121</sup> DG JUST Study (n 45) 45; on differentiation cf. DG JUST Study (n 45) 45, 39.

<sup>122</sup> For concrete examples of how information can be presented, but in ways that make it harder to notice and consider information in different ways see the DG JUST Study (n 45) 180, 281, 282.

<sup>123</sup> For concrete examples see DG JUST Study (n 45) 57, 241, 242, 244.

<sup>124</sup> Cf. OECD (n 51) with further references; see also DG JUST Study (n 45) 35.

<sup>125</sup> Cf. DG JUST Study (n 45) 30; OECD (n 51) 10.

<sup>126</sup> DG JUST Study (n 45) 47.

<sup>127</sup> OECD (n 51) 10.

<sup>128</sup> Cf. above (II.1.).

<sup>129</sup> On why nagging effects choice see OECD (n 51) 10.

<sup>130</sup> Cf. definitions of dark nudging and sludge above (II.2.1.3.).

<sup>131</sup> Cf. DG JUST Study (n 45) 30, 32 (footnotes omitted); CRRE (n 1) 11; For further examples see DG JUST Study (n 45) 292, 51.

<sup>132</sup> OECD (n 51) 8.

on a mobile application, but requiring the search for the option to cancel ,which is available on the website.<sup>133</sup>

(5) ‘Forced Registration’ refers to patterns forcing the user to register or make an account, thereby disclosing personal data, to complete an action for which registration is not actually for example to make a purchase.<sup>134</sup>

(6) ‘Disguised ads’, refers to advertisements that are disguised as an interface element or native content. This might lead the user to view advertisements that are biased without their knowledge.<sup>135</sup> An example of ‘disguised ads’ as native content, would be to hide paid for results between valid results to a search query for the right product.<sup>136</sup>

(7) ‘Countdown timer/ limited time message’, refers to patterns misleading users by giving them fraudulent or exaggerated information.<sup>137</sup> Limited time messages indicate that a ‘deal will expire soon’, without always specifying when, which creates a sense of urgency.<sup>138</sup> They can also include false timers that pressure the consumer to make a choice, though the offer remains valid after supposed expiry.<sup>139</sup>

(8) ‘Toying with emotions’ refers to the emotionally manipulative interface design,<sup>140</sup> by displaying, for example, messages expressing sadness about losing a customer when a user is looking to deactivate their account,<sup>141</sup> or intimidatory statements, like threats about financial consequences of proceeding to make a choice.<sup>142</sup> ‘Confirmshaming’ is a less commonly identified related pattern,<sup>143</sup> framing the consumer as foolish for making a certain choice.<sup>144</sup>

---

<sup>133</sup> DG JUST Study (n 45) 51; for another example see also DG JUST Study (n 45) 292.

<sup>134</sup> For an example of forced registration see OECD (n 51) 50; see on their prevalence OECD (n 51) 17, 19.

<sup>135</sup> Cf. DG JUST Study (n 45) 36.

<sup>136</sup> See for the concrete example DG JUST Study (n 45) 38.

<sup>137</sup> DG JUST Study (n 45) 32.

<sup>138</sup> For examples of ‘countdown timer’ and ‘limited time’ as dark patterns, see DG JUST Study (n 45) 288-289.

<sup>139</sup> European Commission ‘Sweep on dark patterns’ (n 112).

<sup>140</sup> Colin M Gray and others ‘The dark (patterns) side of UX design’ (2018) In Proceedings of the 2018 CHI conference on human factors in computing systems 1 *cited in* DG JUST Study (n 45) 30.

<sup>141</sup> Example of Amazon Shopping, Corte Ongles in DG JUST Study (n 45) 48.

<sup>142</sup> Example of deleting a Google Account in DG JUST Study (n 45) 56.

<sup>143</sup> Sometimes subsumed under toying with emotions, cf. DG JUST Study (n 45) 27.

<sup>144</sup> 16<sup>th</sup> most commonly identified by DG JUST Study (n 45) 45; see for example DG JUST Study (n 45) 98.

(9) ‘Hidden Costs’ refers to patterns hiding charges or taxes.<sup>145</sup> They might either be visually obscured on the interface and therefore less noticeable, or disclosing them until the moment the user is about to make the purchase.<sup>146</sup> An example of the related pattern ‘Hidden subscription’ would be displaying information about future costs only after an additional button labeled inconspicuously with terms like ‘learn more’ has been clicked.<sup>147</sup>

(10) ‘Intermediate currency’ refers to patterns obscuring the real cost of a purchase, by using virtual currencies instead of common European currencies,<sup>148</sup> which was the most prominent dark pattern on gambling and gaming websites.<sup>149</sup> They can be difficult to compare with common currencies and distort perception of the real price being paid.<sup>150</sup>

For purposes of the 2022 sweep on dark patterns<sup>151</sup> by the CPC network<sup>152</sup> under the direction of the Commission, three of these were investigated across websites, namely fake countdown timers, false hierarchy, and hidden information.

This variety of prevalent dark patterns illustrates the wide range of related practices. With the changing nature of the digital environment and new possibilities for their design, they are constantly evolving and new ones are being developed.<sup>153</sup> Therefore, defining elements applicable across different online choice architectural designs must be identified.

---

<sup>145</sup> Cf. DG JUST Study (n 45) 30, 32, 296.

<sup>146</sup> Cf. DG JUST Study (n 45) 32, 296.

<sup>147</sup> DG JUST Study (n 45) 297, 32.

<sup>148</sup> Cf. DG JUST Study (n 45) 51, 30.

<sup>149</sup> DG JUST Study (n 45) 55.

<sup>150</sup> Cf. DG JUST Study (n 45) 51, 55.

<sup>151</sup> European Commission ‘Sweep on dark patterns’ (n 112).

<sup>152</sup> Cooperation Protection Cooperation of national enforcement, governed by Regulation (EU) 2017/2394 of the European Parliament and of the Council of 12 December 2017 on cooperation between national authorities responsible for the enforcement of consumer protection laws and repealing Regulation (EC) No 2006/2004 (2017) OJ L345/1.

<sup>153</sup> OECD (n 51) 11.

The term dark patterns was coined by Brignull,<sup>154</sup> who used the term on a website to refer to interface designs, which are ‘manipulative, coercive or deceptive’.<sup>155</sup> On the original website that has popularized the concept, the term dark patterns has recently been changed to ‘deceptive patterns’ in an effort to ‘avoid language that might inadvertently carry negative associations or reinforce harmful stereotypes.’<sup>156</sup> The European Data Protection Board cites similar reasons for a change in terminology, in their Guidelines on ‘deceptive design patterns.’<sup>157</sup> The term dark patterns is used in this thesis not as a contrary political statement, but because it is more common in scholarship, used in legislative texts and Commission guidance documents and to avoid confusion, as deception is not a necessary element for OCA to be considered a dark pattern, ‘nagging’ being an example of a pattern that does not.<sup>158</sup>

In fact, dark patterns do not necessarily correspond to the three characteristics of deception, coercion and manipulation specifically, but is still commonly associated with Brignull’s more encompassing description of the concept as ‘tricks used in websites and apps that make you do things you didn’t mean to do like buying something or signing up to something’.<sup>159</sup>

Across other taxonomies for dark patterns which have been developed in scholarship<sup>160</sup> it is widely recognized as a concept for online choice architecture linked to an adverse effect on or harm for the user.<sup>161</sup> Accordingly, the OECD Committee on Consumer Policy has suggested to define dark patterns under the nomenclature of ‘dark commercial patterns’, from the B2C

---

<sup>154</sup> Harry Brignull is the founder of darkpatterns.org now found under <https://www.deceptive.design>, a user interface and user experience expert with a PHD in cognitive sciences.

<sup>155</sup> Mark Leiser, Christina Santos, Kosha Doshi ‘History’ Deceptive Patterns <<https://www.deceptive.design/about-us>> accessed 16.01.2026.

<sup>156</sup> Ibid.

<sup>157</sup> European Data Protection Board, ‘Guidelines 03/2022 on Deceptive design patterns in social media platform interfaces: how to recognize and avoid them’ (2023) Version 2.0 adopted on 14 February 2023.

<sup>158</sup> Cf. OECD (n 51) 15; Busch and Fletcher for CRRE (n 1) 11; cf. ‘nagging’ above in this same section.

<sup>159</sup> Mark Leiser, Christina Santos, Kosha Doshi ‘What are deceptive patterns?’ Deceptive Patterns <<https://www.deceptive.design/>> accessed 16.01.2026; Brignull’s definition has informed legislative efforts with a view to the DSA (n 11) and the Data Act (n 101), see Public Hearing on Dark Patterns by the IMCO (n 111).

<sup>160</sup> For examples of different taxonomies developed by different authors see for example the 7 taxonomies proposed by DG JUST Study (n 45) 29-39.

<sup>161</sup> Cf. Fabrizio Esposito and Thaís Maciel Cathoud Ferreira, ‘Addictive Design as an Unfair Commercial Practice: The case of Hyper-Engaging Dark patterns’ (2024) 15 European Journal of Risk Regulation published by Cambridge University Press 1000, 1006 (footnote referencing scholarship omitted); OECD 14-15.

perspective<sup>162</sup>, in the following way: ‘Dark commercial patterns are business practices employing elements of digital choice architecture, in particular in online user interfaces, that subvert or impair consumer autonomy, decision-making or choice. They often deceive, coerce or manipulate consumers and are likely to cause direct or indirect consumer detriment in various ways, though it may be difficult or impossible to measure such detriment in many instances.’<sup>163</sup>

Yet, the harm caused by dark patterns on an individual and collective have been empirically proven, for most dark patterns including that they ‘undermine individual autonomy’ referring to ‘capacity to have meaningful control over their choices and make free, informed, and meaningful choices or decisions.’<sup>164</sup> Dark patterns have been shown to have a heightened manipulative effect on decision-making as opposed to analogue choice architecture, for reasons of personalization to individuals or groups, data analysis with algorithms and more possibilities to model the choice environment, as discussed for digital nudging.<sup>165</sup>

The effects-based perspective reflected across differing definitions for dark patterns is what can be identified to be the most widely accepted consensus about dark patterns, both in scholarship,<sup>166</sup> Union legislation<sup>167</sup> the use of the term by the European Commission.<sup>168</sup>

---

<sup>162</sup> OECD (n 51) 90.

<sup>163</sup> Ibid (n 51) 5.

<sup>164</sup> Cristiana Santos, Viktorija Morozovaite and Silvia De Conca, ‘No harm no foul: how harms caused by dark patterns are conceptualized and tackled under EU data protection, consumer and competition laws’ (2025) 34 *Information & communications technology law* 329 published by Taylor & Francis Online <<https://www.tandfonline.com/doi/full/10.1080/13600834.2025.2461958>> accessed 16.01.2026, 3.1.1.

<sup>165</sup> See above on personalization to individuals or groups (II.2.1.) and with the aid of algorithms (II.2.1.2.); see also OECD (n 51) 12 with further references.

<sup>166</sup> Cf. Esposito and Ferreira (n 161)1006; OECD 14-15; DG JUST Study (n 45) 29-39.

<sup>167</sup> Cf. DSA (n 11) Recital 67.

<sup>168</sup> European Commission, ‘New Consumer Agenda. Strengthening consumer resilience for sustainable recovery’ COM (2020) 696 final, 10; see also European Commission, ‘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) OJ C526/01, 99.

Most dark patterns are based in insights on behavioral psychology.<sup>169</sup> Therefore wide parts of legal scholarship mention restraints in the leveraging these insights on influences on decision-making like biases and heuristics.<sup>170</sup> Dark patterns that are based in these insights also correspond to the most commonly accepted definition for digital nudging<sup>171</sup>. However as opposed to nudging, this is not a defining element of dark pattern, they may for example also outright force the user to complete an action, such as to register and make an account, for which arguably no such insight is required.<sup>172</sup>

Both the effects-based approach rooted in efforts for identifying the need for regulatory intervention and the approach of defining operative conduct of dark patterns more closely aligned with the origin of choice architecture with reference to nudging<sup>173</sup> remain relevant for the current efforts of defining dark patterns.

---

<sup>169</sup> Cf. Mario Martini and others, ‘Dark Patterns: Phänomenologie und Antworten der Rechtsordnung’ (2021) 1 ZfDR 47, 49-50.

<sup>170</sup> For instance by the OECD (n 51); and apparent when comparing the 7 taxonomies proposed by proposed by the DG for Justice and Consumers in their Report (n 45) 29-40.

<sup>171</sup> Cf. above (II.2.1.).

<sup>172</sup> Mills (‘deceptive choice architecture’ n 79) 1427; see for example OECD (n 51) 8, 50.

<sup>173</sup> Cf. above (II.1.).

### **III. Existing legal framework for online choice architecture in traditional EU consumer law and the Digital Services Act**

The legal framework for OCA is fragmented. This section of the thesis analyses applicable instruments of European consumer law and the Digital Services Act<sup>174</sup> and identifies the sources for persistent uncertainty.

#### **1. Bearing of horizontal instruments of EU consumer law on the legal assessment and legal uncertainty of online choice architecture**

To achieve an understanding of the bearing EU Consumer law instruments have on the legal assessment of OCA, this section will analyze the applicability of the Unfair Commercial Practices Directive 2005/29/EC, the Consumer Rights Directive 2011/83/EU and the Unfair Contract Terms Directive 93/13/EEC and their current respective sources for persistent legal uncertainty.

##### **1.1. Unfair Commercial Practices Directive**

As part of the Commission's 2020 Consumer Agenda, seeking to target practices that abusively leverage biases and distort decision-making including dark patterns,<sup>175</sup> the 2021 Guidance on the application of the Unfair Commercial Practices Directive 2005/29/EC<sup>176</sup> was set to be the soft law instrument that clarifies the applicability of the Unfair Commercial Practices Directive to 'data-driven practices and dark patterns.'<sup>177</sup>

---

<sup>174</sup> DSA (n 11).

<sup>175</sup> COM (2020) 696 (n 4) 10.

<sup>176</sup> UCPD Guidance (n 8).

<sup>177</sup> Ibid (n 8) 99.

Online choice architectural design is prohibited by the Unfair Commercial Practices Directive 2005/29/EC<sup>178</sup> (UCPD), if it is an ‘unfair commercial practice’ in the sense of the directive.<sup>179</sup>

The UCPD determines the fairness of a practice through a twofold approach of broad principle-based restrictions and additionally a number of per se prohibitions of specific practices in Annex I of the UCPD.<sup>180</sup> Both apply horizontally to all B2C commercial practices in the offline as well as the online environment.<sup>181</sup> The UCPD Guidance also further clarifies that the directive is ‘technology-neutral and applies regardless of the channel, medium or device used to implement’ a practice, thereby especially including algorithms and AI.<sup>182</sup>

First it is evaluated, whether the practice figures in Annex I UCPD and is prohibited under all circumstances pursuant to Art. 5(5) UCPD. If it does not, the practice is evaluated by case-by-case assessment against the criteria set out in Articles 5 to 9.<sup>183</sup> The following analysis will follow this order of the functioning of the UCPD.

Provided that the Guidance reveals the Commission’s understanding but is not binding and national courts do not always interpret the UCPD in accordance with it,<sup>184</sup> diverging interpretations of the UCPD will also be part of this assessment.

---

<sup>178</sup> Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market and amending Council Directive 84/450/EEC, Directives 97/7/EC, 98/27/EC and 2002/65/EC of the European Parliament and of the Council and Regulation (EC) No 2006/2004 of the European Parliament and of the Council (2005) OJ L149/22 (Unfair Commercial Practices Directive).

<sup>179</sup> Ibid Art. 5 (1).

<sup>180</sup> Cf. Mark Leiser and Mireille-Martine Caruana, ‘Dark Patterns: Light to be Found in Europe’s Consumer Protection Regime’ (2021) 6 EuCML 237, 245.

<sup>181</sup> UCPD Guidance (n 8) 86.

<sup>182</sup> UCPD Guidance (n 8) 86.

<sup>183</sup> DG JUST Study (n 45) 71 with references to case-law of the ECJ.

<sup>184</sup> See or example judgments on attention capture practices as transactional decision contrary to the Commission Guidance in European Commission Working Staff Document, ‘Fitness Check of EU consumer law on digital fairness’ (2024) SWD 230 final, 154 (footnote on national judgments omitted).

### **1.1.1. Fundamental questions about the material scope of the Directive as it imports to the question of Regulation of OCA in EU acquis**

A prerequisite for the application of the UCPD is found in Art. 1 of the Directive, which excludes all practices that are not harming ‘economic interests’<sup>185</sup> of the consumer from its material scope, owed to the adoption of the UCPD on the grounds of Art. 114 TFEU.<sup>186</sup>

This has implications for the answer to the question of the extent to which online choice architectural design is subject to regulation by the UCPD, which are difficult to determine.

The UCPD is based on the full harmonization principle and Member States may not adopt diverging regulation, even to ensure a higher level of protection to the consumer.<sup>187</sup>

The 2021 UCPD Guidance explicitly specifies that ‘national rules intended to protect interests which are *not* of an economic nature’<sup>188</sup> are not covered by the UCPD, and Member States may therefore regulate commercial practices with regard to other non-economic concerns.<sup>189</sup>

This distinction between the regulation of economic harms and non-economic harms therefore determines whether a practice falls within the scope of the Directive and thus within the harmonized EU acquis.

However, the distinction between the regulation of practices that cause economic harm and the regulation of practices that cause other harms, proves difficult with regard to practices of choice architectural design.

---

<sup>185</sup> UCPD (n 5) Art. 1.

<sup>186</sup> For further analysis of the delimitation of legislative competences, see Natali Helberger and others ‘EU Consumer Protection 2.0 Structural asymmetries in digital consumer markets’ (2021) BEUC, 52-58.

<sup>187</sup> On the interpretation of Art. 4 UCPD (n 5); ECJ joined cases C-261/07 and C-299/07 *VTB-VAB NV v Total Belgium and Galatea BVBA v Sanoma Magazines Belgium* (2009) OJ C141/05, para. 52.

<sup>188</sup> UCPD Guidance (n 8) 1.1.1. [emphasis added].

<sup>189</sup> *Ibid* (n 8).

Pertaining to the question of economic harm that is caused by OCA , while a link between online choice architectural design and economic harm is generally presumed<sup>190</sup> there is an absence of data demonstrating concrete proof for most designs.<sup>191</sup>

Consumers may experience economic harm from OCA, either by being charged more to purchase the same product or by being manipulated to purchase a product, that the consumer would never have bought in the absence of such manipulative architecture.<sup>192</sup> Literature exploring economic harm caused by OCA most commonly refers to ‘financial loss’.<sup>193</sup>

Financial loss has been proven for the two dark patterns ‘hidden costs’ and ‘subscription traps.’<sup>194</sup> Research also indicates financial loss to be caused by ‘a combination of dark patterns.’<sup>195</sup> The absence of data providing concrete proof could be a result of the inherent difficulty to assess such loss for online choice architectural design, specifically if it remains concealed from the consumer.<sup>196</sup>

Additionally, the exact scope of the notion of economic harm in the sense of the UCPD remains uncertain<sup>197</sup>, specifically as it regards more indirect economic harm, caused by effects on the consumer’s time and ‘negative consequences to their mental health.’<sup>198</sup> This results in uncertainties for the legal evaluation of online choice architectural designs, for which a causal link can be established to these harms of a more indirectly economic nature, such as OCA underpinned by addictive design,<sup>199</sup> such as ‘hyper-engaging dark patterns’<sup>200</sup>, which are hybrids of hypernudges and dark patterns’.<sup>201</sup>

---

<sup>190</sup> OECD (n 51) 24 (footnotes of literature identifying financial loss omitted).

<sup>191</sup> Cf. Ibid (n 51) 25.

<sup>192</sup> Cf. Santos, Morozovaite and De Conca (n 164) 3.2.2.

<sup>193</sup> Ibid (n 164) 3.2.2.

<sup>194</sup> OECD (n 51) 24.

<sup>195</sup> Ibid (n 51) 24.

<sup>196</sup> Ibid (n 51) 24.

<sup>197</sup> DF Fitness Check (n 184) 154-155; Busch and Fletcher for CRRE (n 1) 31-32.

<sup>198</sup> Ibid (n 184) 154.

<sup>199</sup> On harm by additive design, see DF Fitness Check (n 184) 153-154.

<sup>200</sup> Esposito and Ferreira (n 161) 1003-1004.

<sup>201</sup> For an extensive discussion of the definition of hyper-engaging dark patterns, as a form of hypernudging dark pattern, see Esposito and Ferreira (n 161) 1004-1006.

Consequently, the applicability of the UCPD to addictive designs that cause more indirect economic harm remains uncertain. This uncertainty also remains with regard to the transactional decision test, which frames the UCPD's material scope<sup>202</sup> and will be further examined in section III.1.1.3.1 of this thesis, as part of the case-by-case assessment of the principles-based prohibitions.

However, one fundamental clarification in this regard has been offered by the ECJ, concerning the question of the applicability of national consumer legislation transposing the UCPD to certain data exploitation strategies subject to regulation by the General Data Protection Regulation (GDPR).<sup>203</sup> This related to the question of whether the EU has competence to regulate data-exploitation strategies under a Directive adopted on the grounds of Art. 114 TFEU, which underpins the limitation to economic harm in Art. 1 of the UCPD. One source for uncertainty concerned the fact that data exploitation strategies concern not only economic harm, but other 'societal interests' as well.<sup>204</sup> Furthermore, the GDPR is also applicable to these strategies and there were remaining questions about whether the substantive and procedural rules pertaining to data privacy policies were to be centralized in the GDPR, thus to exclusion of the UCPD.<sup>205</sup> In 2022<sup>206</sup> the ECJ specified that national consumer law transposing the UCPD<sup>207</sup> is applicable, without referring to the question of economic or other harm,<sup>208</sup> by

---

<sup>202</sup> DF Fitness Check (n 184) 45.

<sup>203</sup> 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 (2016) OJ L119/1.

<sup>204</sup> Cf. Helberger and others for BEUC (n 186) 52-55.

<sup>205</sup> Ibid (n 229) 57 .

<sup>206</sup> ECJ C-319/20 *Meta Platforms Ireland Limited v Bundesverband der Verbraucherzentralen und Verbraucherverbände - Verbraucherzentrale Bundesverband eV*. (2022) OJ C237/07.

<sup>207</sup> The case concerned §3a UWG, which was adopted with the purpose of transposing the UCPD into German national law, as apparent from the legal reasoning of for the adoption of §3a UWG see the proposal for the law BT-Drs. 18/4535 Entwurf eines Zweiten Gesetzes zur Änderung des Gesetzes gegen den unlauteren Wettbewerb, 5 (pertaining to Zweites Gesetz zur Änderung des Gesetzes gegen den unlauteren Wettbewerb BGBl I 2015 Nr.49).

<sup>208</sup> Since the question subject to the preliminary ruling did not concern the elements but rather the interplay of the GDPR and the UCPD, however with incidence for this question as a whole as specified by Helberger and others for BEUC (n 186) 56-58.

clarifying that the applicability of the GDPR does not exclude that of the national law transposing the UCPD. This imports specifically to OCA tailoring the choice environment based on data, like hypernudging,<sup>209</sup> but also very prevalent dark patterns aimed at having the consumer disclose more personal data.<sup>210</sup>

Setting aside the question of the regulation of OCA within the harmonized field of EU law in European law, it is important to mention that while Art. 1 of the UCPD excludes other harms than economic harm from the scope of its application, the UCPD does not require the consumer to establish a causal link to any harm.<sup>211</sup> The UCPD can be applied to a practice in court if the conditions for a practice to fall within the scope of the UCPD pursuant to Art. 3 (1) of the UCPD are fulfilled. The material scope of the UCPD covers B2C ‘commercial practices [...] before, during and after a commercial transaction in relation to a product’<sup>212</sup> which are unfair in the sense of Art. 5 of the UCPD.<sup>213</sup>

Both the definition of a commercial practice<sup>214</sup> and the definition of a product<sup>215</sup> are very wide in scope and the UCPD therefore covers most practices related to OCA.<sup>216</sup> As many online choice architectural designs are designed for promotion, particularly relevant is that the UCPD applies during that phase, irrespective of the existence of a contractual relationship.<sup>217</sup> Furthermore, the definition of a product, as including ‘any good or service including immovable property, digital service and digital content, as well as rights and obligations’

---

<sup>209</sup> Cf. above (II.2.2.).

<sup>210</sup> On prevalence of dark pattern having the data disclose unnecessary data, see OECD (n 51) 25; Santos, Morozovaite and De Conca (n 164) 3.3.1.; see also Leiser and Caruana (n 180) 244; see for a concrete example the dark pattern ‘forced registration’ above (II.2.2.).

<sup>211</sup> DF Fitness Check (n 184) 29.

<sup>212</sup> UCPD (n 5) Art. 3 (1).

<sup>213</sup> Ibid (n 5).

<sup>214</sup> Ibid (n 5) Art. 2 (d).

<sup>215</sup> Ibid (n 5) Art. 2 (c).

<sup>216</sup> DG JUST Study (n 45) 70.

<sup>217</sup> Cf. DG JUST Study (n 45) 70.

pursuant to the 2019 Omnibus modernization Directive,<sup>218</sup> also allows for many practices related to online architectural design to be covered.<sup>219</sup>

The 2021 UCPD Guidance has additionally clarified that the UCPD is applicable to online choice architectural design that can be defined as dark patterns and to data-driven practices,<sup>220</sup> the latter being an important precondition for the applicability of the UCPD to architecture that can be defined as hypernudging.<sup>221</sup>

### **1.1.2. Per se prohibitions of choice architectural design**

Notwithstanding the absence of an explicit reference to dark patterns or other choice architectural design, there are multiple per se prohibitions of Annex I UCPD, ‘unfair’ and therefore prohibited under all circumstances pursuant to Art. 5(5) UCPD, that could apply to forms of online choice architectural design.

The horizontal applicability of the UCPD online and offline<sup>222</sup> includes the per se prohibitions of Annex I. There is no reference to digital interface design in Annex I UCPD.

The UCPD Guidance designates several Annex I per se prohibitions as applicable, respectively the following. First, Annex I Nr.6 UCPD to the pattern ‘bait and switch’, involving the promotion of products at a specified price despite undisclosed reasonable ground for non-supply or subsequent refusal to accept orders or deliver, ‘with the intention of promoting a

---

<sup>218</sup>Art. 3(1)(c) of Directive (EU) 2019/2161 of the European Parliament and of the Council of 27 November 2019 amending Council Directive 93/13/EEC and Directives 98/6/EC, 2005/29/EC and 2011/83/EU of the European Parliament and of the Council as regards the better enforcement and modernisation of Union consumer protection rules (2019) OJ L328/7 (Omnibus modernization Directive).

<sup>219</sup> Cf. Leiser and Caruana (n 180) 244.

<sup>220</sup> UCPD Guidance (n 8) 101.

<sup>221</sup> On data-driven OCA and hypernudging see above (II.2.1.2.).

<sup>222</sup> Ibid (n 8) 101.

different product.<sup>223</sup> Secondly, Annex I Nr.7 UCPD to the dark patterns ‘countdown timer’ or ‘limited time message.’<sup>224</sup> Furthermore, Annex I Nr.18 applies to patterns ‘inaccurate information on market conditions or on the possibility of finding the product with the intention of inducing the consumer to buy the product at less favourable conditions.’<sup>225</sup>

Moreover, Annex I Nr.19 and 31 as prohibitions applicable to dark patterns, for ‘claiming that the consumer has won a prize, without awarding the prizes described or a more reasonable equivalent.’<sup>226</sup> Additionally, Annex I Nr. 26 to the dark pattern ‘nagging.’<sup>227</sup>

A special prohibition of ‘direct exhortations of children’ under Annex I Nr. 28 is also mentioned in the context of dark patterns.

Lastly, the UCPD Guidance designates the prohibited practice of falsely ‘describing a product as “gratis, “free”” or “”without charge”” of Annex I Nr. 20 to be applicable to dark patterns. Annex I Nr.20 of the UCPD could gain further relevance, depending on a future ruling of the ECJ. In September of 2025, the German Federal Court of Justice has submitted the question of whether ‘the term “charges” in the sense of Annex I read in conjunction with Art. 5(5) of Directive 2005/29/EC, also encompass[es] the disclosure of personal data and the consent for their use for commercial purposes’.<sup>228</sup> The answer of the ECJ, especially if affirmative, could change the legal assessment of online choice architectural designs that present the consumer with the choice of either continuing to use a free-of-charge service and in turn disclosing personal data or choosing to make pecuniary payments under the UCPD and entail a per se prohibition of the practice. The facts of the case subject to a preliminary ruling also specifically

---

<sup>223</sup> Ibid (n 8) 101.

<sup>224</sup> Cf. Ibid (n 8) 101 and definition 7<sup>th</sup> most commonly identified dark pattern above (II.2.2.).

<sup>225</sup> Ibid (n 8) 101.

<sup>226</sup> Ibid (n 8) 102.

<sup>227</sup> Cf. Ibid (n 8) 102.

<sup>228</sup> Request for a preliminary ruling referred to the ECJ by the German Federal Court of Justice, BGH I ZR 11/20 *Kostenlose Registrierung* Decision of the 25.09.2025.

concern a need for the consumer to register themselves on the website in order to keep using the service, which can amount to the commonly identified dark pattern referred to as ‘forced registration’ in legal scholarship.<sup>229</sup>

The UCPD Guidance does not provide the rationale for the applicability of the therein selected restrictions of Annex I to dark patterns, besides the fact that they ‘are often labelled as “dark patterns.”’<sup>230</sup> The UCPD Guidance defines dark patterns as ‘ a type of malicious nudging’.<sup>231</sup> This definition closely resembles the definition of sludge as defined by Sunstein and Thaler.<sup>232</sup> However, the UCPD Guidance also specifies that dark patterns ‘*could*’ leverage biases and heuristics.<sup>233</sup> This can be interpreted as an effort not to exclude dark patterns that do not leverage insights from behavioral psychology from the provided definition, but the use of the term nudging remains ambiguous.

It is surprising that the Guidance does not mention the applicability of Annex I Nr. Nr. 23b and 23c UCPD following an amendment in 2019<sup>234</sup> are not designated as applicable to dark patterns. They prohibit the representation of consumer reviews, that have either been commissioned or not verified with reasonable steps, while claiming that they originate from customers who have actually used or purchased the product. This is a practice designated as a dark pattern under the nomination of ‘social proof.’<sup>235</sup> Social Proof can be defined as a dark pattern, as it leverages biases of the consumer with biased and deceptive information about the opinion of others on the product or service in question.<sup>236</sup> This definition accords with that of ‘malicious nudging’ provided in the UCPD Guidance.

---

<sup>229</sup> Cf. above 5<sup>th</sup> most commonly identified dark pattern (II.2.2.).

<sup>230</sup> UCPD Guidance (n 8) 101.

<sup>231</sup> UCPD Guidance (n 8) 101.

<sup>232</sup> Cf. definition of sludge above (II.2.1.3.).

<sup>233</sup> UCPD Guidance (n 8) 101 [emphasis added].

<sup>234</sup> Art. 3(7)(b) Omnibus modernization Directive (n 218).

<sup>235</sup> Likewise Busch and Fletcher for CRRE (n 1) 19.

<sup>236</sup> Cf. DG JUST Study (n 45) 36 example 2, for a concrete example see 257; OECD (n 85) 8,11, 53 with further references.

Further it is a missed opportunity that the UCPD Guidance does not provide clarifications as to how Annex I Nr.11 UCPD is applicable to dark patterns.<sup>237</sup> It could have aided in identifying how the extensive range of online advertising implementations may avoid disguised advertising in the sense of Annex I Nr.11 UCPD.<sup>238</sup>

In conclusion, the number of dark patterns prohibited by the per se restrictions of Annex I UCPD remains very limited.<sup>239</sup> Additionally, there has been very little case law on the applicability of the UCPD to dark patterns so far<sup>240</sup> and the 2021 Guidance provides no aid in interpreting different possibilities for online implementation of practices that could be considered prohibited by Annex I UCPD, like the circumstances for labeling of advertisements on a website.

Better Guidance on the application of Annex I to digital practices in soft law, but especially the extension of the blacklist to cover more implementations of OCA would be beneficial to provide greater legal certainty of these practices,<sup>241</sup> as their case-by-case assessment proves complicated, which will be further examined in the following. The Digital Fairness Fitness Check also noted that blacklists lend themselves particularly well to technical measures for law enforcement, like automated checks, well suited for digital practices.<sup>242</sup>

---

<sup>237</sup> Commonly identified as applicable, though after the 2021 Guidance, see DG JUST Study (n 45) 67; CRRE (n 1) 18; OECD (n 51) 70.

<sup>238</sup> Cf. dark pattern ‘disguised ads’ above (II.2.2.).

<sup>239</sup> Likewise DF Fitness Check (n 184) 148; Inge Graef, ‘The EU Regulatory Patchwork for Dark Patterns: An Illustration of an Inframarginal Revolution in European Law?’ in (ed Ramsi A. Woodcock) *Toward an Inframarginal Revolution, Redistributing Gains from Trade* (1 Cambridge University Press 2025)

<sup>240</sup> DF Fitness Check (n 184) 149.

<sup>241</sup> Likewise Mark Whittle and others for DG JUST ‘Study to support the Fitness Check of EU consumer law on digital fairness and the report on the application of the Modernisation Directive (EU) 2019/2161’ (2024) final report part 1, 346; Several stakeholders and authorities consulted for DF Fitness Check (n 184) 149.

<sup>242</sup> DF Fitness Check (n 184) 149.

### 1.1.3. Principle-based restrictions

A commercial practice of on online choice architectural design that is not subject to an absolute prohibition pursuant to Annex I UCPD, may be prohibited by the UCPD, if it is evaluated as unfair by case-by-case assessment of the practice.<sup>243</sup>

The fairness of the practice is evaluated first<sup>244</sup> against the particular conditions for misleading practices under articles 6 and 7 UCPD or aggressive practices under articles 8 and 9 UCPD. Additionally, Art. 5(2) serves as a fallback provision<sup>245</sup>, for practices that materially distort or are likely to distort the behavior of an average or vulnerable<sup>246</sup> consumer, if more specific requirements for aggressive and misleading practices are not fulfilled.

#### 1.1.3.1. The scope of the notion of a transactional decision determining the material scope of all principle-based prohibitions

One common central requirement for the unfairness of a commercial practice subject to case-by-case assessment, is that it must be a practice that ‘causes or is likely to cause [the consumer] to take a transactional decision that he would not have taken otherwise.’<sup>247</sup> This requirement frames the material scope of the UCPD<sup>248</sup> and is enshrined in all provisions pertaining to the specific requirements for misleading and aggressive commercial practices, as well as the general benchmark of unfairness of a commercial practice.<sup>249</sup>

---

<sup>243</sup> DG JUST Study (n 45) 71.

<sup>244</sup> Ibid (n 34) 71.

<sup>245</sup> ECJ C-435/11 *CHS Tour Services GmbH v Team4 Travel GmbH* (2013) OJ C344/11, par.45; see also UCPD Guidance (n 8) 25.

<sup>246</sup> UCPD (n 5) Art. 5 (3).

<sup>247</sup> UCPD (n 5) Art. 6 (1); Art. 7 (1); Art. 8; Art. (5) (b) read in conjunction with Art. 2 (e) UCPD.

<sup>248</sup> Cf. Art. 3(1) UCPD (n 5); DF Fitness Check (n 184) 45.

<sup>249</sup> UCPD (n 5) Art. 6 (1); Art. 7 (1); Art. 8; Art. Art. (5) (b) read in conjunction with the definition of material distortion in Art. 2 (e); further designated as congruent in the UCPD Guidance (n 8) 32.

The notion of a transactional decision is therefore essential. The term ‘transactional decision’ of defined in Art. 2 (k) UCPD as concerning any decision the consumer takes, including ‘how and on what terms to purchase’, modalities of payment, ‘whether to retain or dispose of a product’, the exercise of contractual rights and ‘whether the consumer decides to act or refrain from acting’. The 2021 UCPD Guidelines specify that the notion of a transactional decision is to be interpreted broadly and ‘encompasses pre-purchase and post-purchase decisions,’<sup>250</sup> in agreement by the case-law of the ECJ.<sup>251</sup>

Therefore, all forms of choice architecture could pass the transaction test, including not only negatively connotated dark patterns, but irrespective of whether they have an adverse effect on the decision.<sup>252</sup>

With particular relevance to OCA that tailors the choice environment based on data or aim at having the consumer disclose more data than needed for a counter-performance, the 2021 Guidance expressing the Commission’s view, specifies that the UCPD is applicable to ‘agreements to processing personal data and the use of personal data for delivering personalized content,’<sup>253</sup> and the applicability of the UCPD to personal data has been implicitly confirmed by the ECJ.<sup>254</sup>

---

<sup>250</sup> Ibid (n 173) 32.

<sup>251</sup> ECJ C-281/12 *Trento Sviluppo and Centrale Adriatica v AGCM* (n 424) para. 36.

<sup>252</sup> Cf. CRRE (n 1) 31.

<sup>253</sup> UCPD Guidance (n 8) 99.

<sup>254</sup> In *Meta v Verbraucherzentrale Bundesverband* (n 206) the ECJ decided that the applicability of the GDPR to cases involving personal data does not exclude the application of national law transposing the UCPD and the UCPD is subject to full harmonization.

The Guidance also further identifies commercial practices that capture the consumers attention as susceptible to induce transactional decisions, exemplified by ‘decisions such as continuing to using the service (e.g. scrolling through a feed), to view advertising content or to click on a link.’<sup>255</sup> They also expressly exemplify ‘decisions to click on a link through a website’ as a pre-purchase decision and thus transactional decision.<sup>256</sup>

This interpretation of the term transactional decision is particularly relevant to online choice architectural designs underpinned by addictive design such as ‘hyper-engaging dark patterns,’<sup>257</sup> a form of OCA ‘at a crossroads between hypernudges and dark patterns’.<sup>258</sup> With reference to the previously discussed uncertainties regarding the material scope of the UCPD and these specific online choice architectural designs<sup>259</sup> an interpretation of the notion of a transactional decision that encompasses them, could also reflect on the material scope of the UCPD and the question of a requirement for direct economic harm, or satisfaction by more indirectly economic harms.

However, the scope of the notion of a transactional decision remains subject to legal uncertainty,<sup>260</sup> especially with respect to attention capture practices. The UCPD Guidelines are merely soft law instruments and have not succeeded in compensating for the lacking clarity of the legislative text, as the scope of the notion of a transactional decision has continued to be subject to diverging interpretations by national courts.<sup>261</sup> Consequently, the legal assessment of addictive-design OCA could be subject to differing legal consequences between the Member States for reasons of the transactional decision test, though subject to full harmonization under

---

<sup>255</sup> UCPD Guidance (n 8) 100.

<sup>256</sup> Ibid (n 8) 100.

<sup>257</sup> Esposito and Ferreira (n 161) 1003-1004.

<sup>258</sup> For an extensive analysis of hyper-engaging dark patterns, as a form of hypernudging dark pattern, see Esposito and Ferreira (n 161) 1004-1006.

<sup>259</sup> See above (III.1.1.1.).

<sup>260</sup> Cf. DF Fitness Check (n 184) 45 and 154; Hacker (n 34) 159; CRRE (n 1) 31-32.

<sup>261</sup> DF Fitness Check (n 184) 154 (footnote on national judgment omitted).

the UCPD. This uncertainty has further implications on the legal assessment of OCA, as it creates uncertainties with regard to the applicability of the DSA.<sup>262</sup>

Besides these uncertainties with regard to the notion of a transactional decision, the question of when the practice ‘causes or is at least likely to cause’ the consumer to take a transactional decision also remains uncertain, which touches on the average consumer standard, discussed in section III.1.1.3.5. of this thesis.

### **1.1.3.2. Prohibition of misleading commercial practices pursuant to Art. 6 and 7 UCPD and relevance to OCA**

A commercial practice is unfair for being misleading if it amounts to a misleading action pursuant to Art. 6 UCPD or a misleading omission pursuant to Art. 7 UCPD.

A practice amounts to a misleading action in the sense of Art. 6 UCPD , if it ‘contains false information and is therefore untruthful in any way, *including overall presentation*, deceives or is likely to deceive the average consumer, even if the information is factually correct.’<sup>263</sup> Many online choice architectural designs are susceptible to be captured by this provision, to the exclusion of OCA that solely manipulates the consumer’s decision through personalization.<sup>264</sup> It is particularly relevant that the ‘overall presentation’ is explicitly taken into account to determine whether the practice is misleading, as many online choice architectural designs achieve a steering effect on decision-making through the presentation of information, without outright lying. For example, a timer may be shown without explicitly stating that an offer will

---

<sup>262</sup> On the coordination between the scope of the DSA and UCPD see section below (III.2.1.).

<sup>263</sup> UCPD (n 5) Art. 6 (1) [emphasis added].

<sup>264</sup> Cf. data-driven personalization, which do both but might only manipulate decision-making through personalization, see above (II.2.1.2.).

expire when the timer is off, yet be positioned to imply expiration, though in reality the offer will remain valid.<sup>265</sup> The misleading action must only further relate to elements of Art. 6 (1a) to 6 (1g), which cover a very large scope of practices and do not exclude the applicability of the provision to common presentations of online choice architectural design. For instance, depending on the particular presentation of information, this includes the dark patterns<sup>266</sup> for preselection,<sup>267</sup> disguised ads,<sup>268</sup> countdown timers/limited time messages<sup>269</sup> and toying with emotion,<sup>270</sup> which are among the most commonly identified online choice architectural designs.<sup>271</sup>

Article 6 of the UCPD is therefore particularly relevant to the question of the regulation of online choice architecture in EU law.

According to Art. 7 of the UCPD, a practice amounts to a misleading omission, if material information is omitted that the average consumer needs to make ‘an *informed* transactional decision’,<sup>272</sup> taking into account the context and ‘all features and circumstances and the limitations of the communication medium’. The Digital Fairness Fitness Check notes that many dark patterns ‘empirically proven to appreciably impair the consumer’s ability to take an informed decision.’<sup>273</sup> Furthermore pursuant to Art. 7(2), similarly to Art. 6 the presentation of information has to be considered, thereby including OCA that does not outright omit information, but hides it through the various possibilities of interface design.<sup>274</sup>

---

<sup>265</sup> Creates a false sense of urgency thereby forcing a quick decision, cf. Countdown timer above (II.2.2.).

<sup>266</sup> Cf. their definition and how they achieve their manipulative effect above (II.2.2.).

<sup>267</sup> Likewise DG JUST Study (n 45) 64; OECD (n 51) 70.

<sup>268</sup> Likewise DG JUST Study (n 45) 65; OECD (n 51) 69.

<sup>269</sup> Likewise DG JUST Study (n 45) 66; OECD (n 51) 70.

<sup>270</sup> Likewise DG JUST Study (n 45) 66; OECD (n 51) 69.

<sup>271</sup> As identified in 2022 by DG JUST Study (n 45) 45 above (II.2.2.).

<sup>272</sup> UCPD (n 5) Art.7(1) [emphasis added].

<sup>273</sup> DF Fitness Check (n 184) 147.

<sup>274</sup> Cf. ‘hidden information’ and ‘hidden costs’ above (II.2.2.).

Additionally, Art. 7(2) also renders the failure ‘to identify the *commercial intent* of the commercial practice if not already apparent from the context’ a misleading omission.<sup>275</sup> This is also relevant to some online choice architectural designs, that are specifically designed to hide the commercial intent behind steering the consumer to make a choice, like disclosing personal data.<sup>276</sup>

Further, Art. 7(4)(a) UCPD introduced by the 2019 modernization Directive<sup>277</sup> is of particular interest as it specifically references the online interface and introducing a positive design-based obligation. Applicable to ‘online marketplaces and price comparison tools’<sup>278</sup> general information about the main parameters for ranking must be provided in a ‘specific section of the online interface that is directly and easily accessible from the page where the query results are presented.’<sup>279</sup> This addresses the many possibilities to hide information on online pages, especially in stating that information must be ‘directly’ accessible.<sup>280</sup> Notably ranking systems that are driven by black-box AI algorithms to hypernudge the consumer by displaying highly personalized offers are thereby subjected to transparency requirements that would have to reveal the personalized offers and it would be prohibited to omit such information.<sup>281</sup>

Additionally owing to the ‘technology-neutral’<sup>282</sup> approach of the UCPD, Art. 6 and 7 prohibit misleading actions or omissions of commercial practices delivered through so-called ‘cyborg technologies.’<sup>283</sup> These include Internet of Things (IoT) devices like implants, hearing aids and

---

<sup>275</sup> UCPD (n 5) Art.7 (2) [emphasis added].

<sup>276</sup> Cf. Leiser and Caruana (n 180) 247; on possible implications of labelling as ‘free’ services with data as the consideration as prohibited by Annex I see above (III.1.1.2.).

<sup>277</sup> 2019 Omnibus modernization Directive (n 218) Art. 3(4)(b).

<sup>278</sup> UCPD Guidance (n 8) 91; Art. 7(4a)UCPD (n 5) reads ‘with the possibility to search for products offered by different traders or by consumers on the basis of a query in the form of a keyword.’

<sup>279</sup> UCPD (n 5) Art. 7(4a).

<sup>280</sup> On remaining uncertainties regarding online choice architectural design of rankings see below (III.1.2.2.).

<sup>281</sup> Cf. AI-driven recommender systems as hypernudges above (II.2.1.2.).

<sup>282</sup> UCPD Guidance (n 8) 86.

<sup>283</sup> Clubbs Coldron and others (n 56) 208.

smart headphones.<sup>284</sup> The prohibition of misleading omissions pursuant to Art. 7 can, for instance, arguably be applicable to the omission of personalization ‘through Things,’<sup>285</sup> meaning IoT devices.

Like the prohibition of misleading actions, the prohibition of omissions pursuant to Art. 7 UCPD is also susceptible to be applicable to many other and very prominent online choice architectural designs, including designs for hidden information,<sup>286</sup> hard to cancel,<sup>287</sup> disguised ads<sup>288</sup> and hidden costs,<sup>289</sup> which are among the most common designs that have been able to be identified.<sup>290</sup>

In conclusion, the prohibition of misleading actions and omissions pursuant to Art. 6 and 7 of the UCPD are both very relevant provisions that are part of the regulatory framework for online choice architecture.<sup>291</sup> They provide greater legal certainty for the evaluation of OCA than the prohibition of aggressive practices.<sup>292</sup>

Notably, the prohibitions of misleading practices pursuant to Articles 6 and 7 are not subject to a materiality threshold,<sup>293</sup> contrary to the prohibition of aggressive practices<sup>294</sup> and the

---

<sup>284</sup> Ibid (n 56) 208; see also above (III.2.1.1.).

<sup>285</sup> Ibid (n 56).

<sup>286</sup> DG JUST Study (n 45) 64.

<sup>287</sup> Ibid (n 45) 62.

<sup>288</sup> Ibid (n 45) 65.

<sup>289</sup> Ibid (n 45) 63.

<sup>290</sup> For the most commonly identified online choice architectural designs see above (II.2.2.).

<sup>291</sup> It can be observed that many legal scholars consider the prohibition of misleading practices to be unfit to address online choice regulation and tend to emphasize the role of the prohibition of aggressive practices over misleading practices. However, this different emphasis is undertaken from the perspective of the best suited way to address OCA and the fact that information requirements are not seen as effective in protecting consumers. The efficiency critique of Consumer law is beyond the scope of this thesis. For an overview of the discussion see Ferretti (n 36) 135-143; see also Helberger and others for BEUC (n 186).

<sup>292</sup> Cf. below (III.1.1.3.2.).

<sup>293</sup> On the yardstick for misleading practices and cognitive bias see Franz Hofmann, ‘EuGH: Verbraucherleitbild im Lauterkeitsrecht – Was kann der homo oeconomicus (nicht)?’ (2025) 4 ZEuP 881, 894.

<sup>294</sup> Art. 8 UCPD requires a ‘significant’ impairment of freedom of choice or conduct.

general fairness assessment.<sup>295</sup> Therefore, what is a source of legal uncertainty for them does not apply to the evaluation pursuant to Articles 6 and 7 UCPD.

It can be added that uncertainties related to the assessment of misleading practices, which is generally undertaken from the perspective of the average consumer standard remain, as will be discussed in section III.1.1.3.5. of this thesis. Nevertheless, the ECJ has provided the most interpretative guidance on the influence of decision-making of the average consumer, as it pertains to the prohibition of misleading commercial practices.

### **1.1.3.3. Prohibition of aggressive practices pursuant to Art. 8 and 9 UCPD and diverging interpretations of undue influence**

A commercial practice is also subject to the prohibition of unfair practices if it amounts to an aggressive practice, pursuant to Articles 8 and 9 UCPD. The relevant decisive elements for the evaluation of an aggressive practice will be discussed in succession, to identify sources of persistent legal uncertainty.

For a practice to amount to an aggressive practice, it must first ‘significantly impair’ or ‘be likely to significantly impair’ the consumer’s freedom of choice and conduct.<sup>296</sup>

To be characterized as aggressive, the steering effect of the practice must therefore pass a certain threshold of ‘significan[ce].’<sup>297</sup> The possibilities for implementation of choice architecture in the digital environment have been shown to impair ‘control over [consumer’s]

---

<sup>295</sup> Material distortion, which is a central element of the second cumulative condition for the unfairness of a practice pursuant to Art. 5 UCPD, requires ‘appreciable’ impairment.

<sup>296</sup> UCPD (n 5) Art. 8; see also Helmut Köhler and Jörn Feddersen, *Beck’sche Kurzkommentare Band 13a Gesetz gegen den unlauteren Wettbewerb* (43 CH Beck 2025) para. 1.33.

<sup>297</sup> Cf. Hans-Wolfgang Micklitz and Monika Namysłowska, *Münchener Kommentar zum Lauterkeitsrecht* (3 CH Beck 2020) para.28.

choices and make free, informed, and meaningful choices or decisions.’<sup>298</sup> Nevertheless, the legal threshold for the significant impairment of choice or conduct of the consumer by practices in the digital environment in the sense of the UCPD remains subject to legal uncertainty.<sup>299</sup> Pursuant to Art. 8 UCPD, the threshold for the significant impairment of freedom of choice or conduct is assessed against the benchmark of the average consumer standard of protection. The average consumer is expected to use their own cognitive capabilities and resources to be ‘reasonably well-informed and reasonably observant and circumspect’.<sup>300</sup> Hence the threshold is inferred from expectations of the average consumer’s decision-making process and what is expected to be a hurdle to freedom of choice or conduct, that the consumer is not expected to be able to overcome by fulfilling their own responsibilities.<sup>301</sup> It remains unclear in how far the current consumer standard expects the consumer to counteract their behavioral biases, heuristics and mental shortcuts, which are targeted by most of online choice architectural designs.<sup>302</sup> In *Compass Banca* the ECJ has denied the requirement of the average consumer to demonstrate perfectly rational decision-making,<sup>303</sup> but has emphasized the requirement of a commercial practice that induces behavioral biases or unspecified other ‘constraints’ on decision-making to reach a certain materiality threshold in order to be prohibited under the UCPD.<sup>304</sup> Yet, the question of where that threshold lies and how national courts or administrative bodies should determine it remains unanswered.<sup>305</sup>

---

<sup>298</sup> Santos, Morozovaite and De Conca (n 164) 3.1.1. ‘Loss of autonomy.’

<sup>299</sup> Cf. Hans-Wolfgang Micklitz, ‘Unfair Commercial Practices, Digital Asymmetry and Reversal of Burden of Proof’ in Reto Hilty (ed) *Kreation Innovation Märkte – Creation Innovation Markets* (1 Springer Nature 2024) 1085 and 1089.

<sup>300</sup> Recital 18 of the UCPD, incorporating long-standing case law of the ECJ, see above (III.1.1.3.5.).

<sup>301</sup> In principle, the normative understanding of the average consumer guiding the understanding of what is beyond the consumer’s own responsibilities and the threshold of materiality for what is negligible are two distinct constitutive elements of the UCPD. That said, the ECJ does not seem to clearly delineate between the two in *Compass Banca* and they are certainly interlinked, see the analysis of Hofmann (n 293) 894 – 895.

<sup>302</sup> See above on how these are insights are leveraged by OCA (II.1.) ; on remaining uncertainties regarding the average consumer see below (III.1.1.3.5.).

<sup>303</sup> ECJ C-646/22 *Compass Banca SpA v Autorità Garante della Concorrenza e del Mercato [AGCM]* (2024) OJ C/2025/127, paras. 53 and 59.

<sup>304</sup> *Ibid* para. 57.

<sup>305</sup> Cf. Daniel Köhl, ‘Das Leitbild des Durchschnittsverbrauchers im Spannungsverhältnis mit Erkenntnissen der Verhaltensökonomik’ (2025) 23 GRUR 1794, 1798-1799; see also Hofmann (n 293) 893-895.

However, this legal uncertainty does not apply to all online choice architectural designs. Some dark patterns outright force the consumer to make a certain choice, through their system architecture,<sup>306</sup> thereby not only impairing to a certain degree, but preventing free choice; this is certainly a significant impairment.<sup>307</sup>

To be considered aggressive in the sense of the UCPD, the practice must further be characterized ‘by harassment, coercion, including the use of physical force, or undue influence.’<sup>308</sup> Art. 9 UCPD further specifies circumstances that must be considered to determine whether harassment, coercion, or undue influence have been used. The exhaustive character of this list has been subject to debate in legal scholarship, but seems refuted in light of the fact that the ECJ has considered different circumstances to those enumerated in Art. 9 to determine whether a practice is unfair pursuant to Art. 8 of the UCPD.<sup>309</sup>

Art. 9 (d) is particularly relevant to a specific form of online choice architectural designs, as it provides for the consideration of ‘non-contractual barriers’ imposed ‘where a consumer wishes to exercise rights under a contract.’ Such non-contractual barriers could present as a form of online environment named sludge, where the design of a website makes it hard to exercise certain rights, by so-called frictions.<sup>310</sup>

Art. 9 (c) provides for the exploitation of any ‘specific misfortune or circumstance of such gravity as to impair’ the judgment of the consumer, by a trader who is aware of these circumstances, to also be considered in the assessment of unfairness. This is particularly

---

<sup>306</sup> See above (II.2.2.).

<sup>307</sup> Free choice of the consumer is an obligation pursuant to Art. 8 UCPD, see ECJ Joined cases C-54/17 and C-55/17 *Autorità Garante della Concorrenza e del Mercato [AGCM] v Wind Tre SpA and Vodafone Italia SpA* (2018) OJ C408/13, 45; however this currently only concerns a very limited number of dark patterns.

<sup>308</sup> UCPD (n 5) Art. 8.

<sup>309</sup> The ECJ considered circumstances like a practice causing the consumer to be confused and uncomfortable, see ECJ C-628/17 *Prezes Urzędu Ochrony Konkurencji i Konsumentów v Orange Polska S.A* (2019) OJ C263/4, par. 47 and *Compass Banca v AGCM* (n 303) para. 74; likewise of Esposito and Ferreira (n 161) 1010.

<sup>310</sup> For a definition of sludge and how it is characterized by so called frictions, see above (II.2.1.3.).

relevant to online choice architectural designs that personalize their choice environment based on behavioral data of the consumer.<sup>311</sup>

Besides providing for some of the circumstances to be considered for the evaluation of harassment, coercion and undue influence in Art. 9 UCPD, only undue influence has received a definition by the UCPD. However, in *Compass Banca* the ECJ has clarified that the terms are to be given ‘the usual meaning which those terms have in everyday language’,<sup>312</sup> which provides some certainty as many online choice architectural designs are ordinarily interpreted as coercive<sup>313</sup> and some may even amount to harassment.<sup>314</sup>

While ‘undue influence’ is the only one of the three ways a practice can be aggressive pursuant to Art. 8 of the UCPD that is defined in the UCPD, its interpretation has been particularly extensively discussed in scholarly discussion of the regulation of OCA and different manipulative practices in the digital environment in general. This is both due to the persistent ambiguity of the concept that is partially owed to missing conclusive interpretative guidance offered in judgments that concerned undue influence by the ECJ<sup>315</sup> and due to the fact that the interpretation of undue influence is decisive over the legal evaluation of manipulative practices like OCA that is data-driven, underpinned by AI, or both.<sup>316</sup>

In Art. 2 (j) UCPD, the term undue influence is defined as the exploitation of a position of power ‘in relation to the consumer so as to apply pressure, even without using or threatening

---

<sup>311</sup> Cf. above (II.2.1.2.).

<sup>312</sup> *Compass Banca v AGCM* (n 303) para. 72.

<sup>313</sup> Coercion is a defining element of dark patterns specifically, cf. for example OECD (n 51) 5.

<sup>314</sup> For an example of harassment by OCA, see DG JUST Study (n 45) 61 ‘nagging’.

<sup>315</sup> Micklitz (n 299) 1085.

<sup>316</sup> Cf. On different data exploitation strategies Micklitz (n 299); on manipulation by algorithms Hacker (n 34) 150-152; on the overall importance of the concept of undue influence to the legal assessment of online manipulation see DF Fitness Check (n 184) 149.

to use physical force, in a way which significantly limits the consumer's ability to make an informed decision'. The 2021 UCPD Guidance states that manipulation of the consumer based on 'information about the vulnerabilities of specific consumers or a group of consumers'<sup>317</sup> is 'likely to have an effect on the' transactional decision of the consumer and may amount to a prohibited aggressive commercial practice on account of undue influence.<sup>318</sup> This renders the prohibition of aggressive practices in the guise of undue influence particularly relevant to choice architectural designs, that target specific consumers based on data about the consumers' internal attributes.<sup>319</sup> This includes personalized digital nudging, based on data about them individually or their affiliation with a group of consumers, by means of segmentation and selection of consumers.<sup>320</sup>

First, the interpretation of undue influence remains uncertain with regard to the specific circumstance that are to be considered for the evaluation of aggressive commercial practices according to Art. 9 (c) UCPD. The provision explicitly refers to the awareness of the trader, who exploits a consumer's misfortune or circumstance.

Parts of legal scholarship have argued for the requirement of a certain degree of intentionality by the trader pursuant to Art. 9 (c) UCPD, to know that the decision-making of the consumer will be impaired in a specific situation, while an obligation to know and a thereby resulting violation for negligence would have to be denied.<sup>321</sup> For many digital nudges and dark patterns, the awareness of the trader can often be affirmed, as the choice environment is modeled to the

---

<sup>317</sup> UCPD Guidance (n 8) 100.

<sup>318</sup> Ibid (n 8) 100.

<sup>319</sup> Cf. Micklitz (n 299) 1084, on data exploitation strategies underpinning OCA as aggressive practices .

<sup>320</sup> For an explanation the use segmentation and selection for OCA see above (II.2.1.1.).

<sup>321</sup> Cf. Hacker (n 34) 151 (footnotes from German legal doctrine in support of the requirement of intentionality omitted).

consumer based on insights from behavioral psychology<sup>322</sup> and A/B testing<sup>323</sup> that allow the choice architect to predict the effects of their design.

However, this could also exclude the affirmation of undue influence regarding an increasing number of online choice architectural designs, for which the choice architect employs certain algorithms<sup>324</sup>, that autonomously model the choice environment. The trader might purposefully employ stochastic algorithms that operate as black-boxes and where the choice architect can therefore not predict the output.<sup>325</sup> Furthermore, if intentionality of the trader is required for their behavior to be characterized as undue influence, many choice architectural designs based on data about the consumer,<sup>326</sup> could not constitute aggressive practices, as the majority of traders did not conceive of how to deploy big data<sup>327</sup> and instead rely on a few sources who actually are able to process these amounts of data.<sup>328</sup>

However, other parts of legal scholarship have denied any requirement of intentionality by the one with the dual capacity of trader and choice architect, based on the textual analysis of Art. 8 UCPD<sup>329</sup> and the fact that the ECJ has not taken into account the trader's intention in rulings pertaining to aggressive commercial practices.<sup>330</sup> The interpretation of aggressive practices as a strict liability offense, would imply that many more online choice architectural designs and specifically including those for which the choice architect unknowingly manipulates the consumer by employing an algorithm or OCA developed by a third company, could violate the prohibition of aggressive commercial practices of the UCPD on account of undue influence.<sup>331</sup>

---

<sup>322</sup> See above (II.2.2.).

<sup>323</sup> OECD (n 51) 12.

<sup>324</sup> On the use of algorithms for OCA see above (II.2.1.2.); on algorithmic targeting and undue influence cf. Hacker (n 34) 15.

<sup>325</sup> On stochastic patterns in the context of OCA, see above (II.2.1.2.).

<sup>326</sup> Like digital nudges such as hypernudges and dark patterns, see section II.2.

<sup>327</sup> For the role of big data in the design of OCA, see above (II.2.1.2), see also Yeung (n 58).

<sup>328</sup> On consequences intentionality requirement on data exploitation strategies, see Micklitz (n 299) 1086-1087.

<sup>329</sup> Cf. Leiser and Caruana (n 180) 247 who completely deny intentionality; see also Micklitz (n 299) 1086-1087 who reaches a conclusion against intentionality while not excluding alternative interpretations.

<sup>330</sup> Cf. Esposito and Ferreira (n 161) 1010.

<sup>331</sup> OCA often uses coercion, harassment or undue influence, see Leiser and Caruana (n 180) 247.

Further, the ECJ has offered some more conclusive interpretative guidance on specific behaviors that can be characterized as undue influence, which renders the prohibition of aggressive practices pursuant to Articles 8 and 9 particularly relevant to specific dark patterns. In *Orange Polska* the ECJ clarified, that practices that make the consumer ‘feel uncomfortable and thus to confuse his thinking in relation to the transactional decision to be taken’ can amount to an aggressive practice in the sense of Articles 8 and 9 of the UCPD.<sup>332</sup> In *Compass Banca* the ECJ specified that both behaviors of the trader that make the consumer ‘feel uncomfortable or confuse his thinking’<sup>333</sup> can be characterized as undue influence. In light of this clarification specifically the dark patterns that manipulate consumers’ choices with emotions, such as the patterns of ‘toying with emotions’ or ‘confirmshaming’<sup>334</sup> may amount to undue influence. Conversely, *Compass Banca* has also provided a clarification that excludes them from being characterized as undue influence. Before *Compass Banca* uncertainty persisted as to whether the consideration of confusion would imply that practices exploiting behavioral bias or emotional susceptibility would regularly constitute undue influence if the consumer was confused by the practice.<sup>335</sup> However, in the recent *Compass Banca* ruling, the ECJ denied for a practice to be considered undue influence on account of creating a bias through framing, specifically since undue influence implies the use of pressure.<sup>336</sup> This is not surprising, as permitted commercial communications have routinely been capitalizing on effects on cognition and emotions of the consumer, including through the use of framing techniques.<sup>337</sup> Still, the *Compass Banca* ruling gave indications for the delineation between permitted and undue influence, emphasizing the central role of pressure.

---

<sup>332</sup> *Orange Polska* (n 309) par. 47.

<sup>333</sup> *Compass Banca v AGCM* (n 303) para. 74 [emphasis added].

<sup>334</sup> DG JUST Study (n 45) 27.

<sup>335</sup> Cf. Hacker (n 34) 151.

<sup>336</sup> *Compass Banca v AGCM* (n 303) paras. 73-75, with reference to *Orange Polska* (n 309) para.33.

<sup>337</sup> Cf. Hacker, article released before *Compass Banca*, on longstanding practices (n 34) 159 .

What remains uncertain is the question of how pressure has to manifest in the digital environment. In *Compass Banca* the ECJ stated that the ‘forced conditioning of the consumers will’ through ‘a certain degree of pressure’ is the defining element of an aggressive practice pursuant to Art. 8.<sup>338</sup>

Conversely, the ECJ has not clarified a very consequential question to the legal evaluation of OCA that is not perceived by the consumer, like hypernudging.<sup>339</sup>

The use of pressure can be interpreted to be preconditioned by the perceptibility of the manipulation, that made the consumer feel pressured.<sup>340</sup> The affirmation of undue influence would thereby be excluded for hypernudges, as they are concealed in the system architecture and the consumer cannot perceive them on the online interface.<sup>341</sup>

The question of the required visibility of a practice is not exclusive to the element of pressure or aggressive commercial practices but applies to the UCPD more generally as this sort of more invisible influence of the consumer is a novum created by the digital environment, an influence that the UCPD was not designed to regulate.<sup>342</sup>

An additional uncertainty regarding undue influence pursuant to Art. 2 (j) and the invisibility of influence by OCA is the ‘exploitation of a *position of power*,’<sup>343</sup> which remains to be clarified by the ECJ with regard to the average consumer in the digital environment.<sup>344</sup> The average consumer is the general standard of reference for a possible imbalance of power.<sup>345</sup>

---

<sup>338</sup> Pressure was confirmed a defining element since *Orange Polska* (n 309) para.33.

<sup>339</sup> On the imperceptibility of hypernudging corresponding dark patterns see above (II.2.1.2.).

<sup>340</sup> For a supporting view of perceptibility as a necessary element of pressure see Hacker (n 34) 151.

<sup>341</sup> On the imperceptibility or hiddenness of hypernudging see above (II.2.1.2.).

<sup>342</sup> Cf. Monika Namysłowska, ‘The Silent Death of EU Consumer Law and Its Resilient Revival: Reinventing Consumer Protection Against Unfair Digital Commercial Practices’ (2025) 48 *Journal of Consumer Policy* 317, 322.

<sup>343</sup> UCPD (n 5) Art.2 (j) [emphasis added].

<sup>344</sup> Micklitz (n 299) 1081.

<sup>345</sup> The average consumer standard as the benchmark of assessment is referenced in Art. 8 and the vulnerable consumer benchmark is of only exceptional character, see below (III.1.1.3.5. and III.1.1.3.5.).

Since Art. 1 UCPD proclaims that the protection of consumers from economic harm is the purpose of the directive, parts of legal scholarship have interpreted the notion of power as referring to economic power.<sup>346</sup> Legal scholars have also debated about a general power imbalance in the sense of Art. 2 (j), hinging upon a general ‘digital asymmetry,’<sup>347</sup> meaning the realities of the digital environment create a structurally weaker position of all consumers, including the average consumer.<sup>348</sup> However, this discourse is part of a larger discussion of still only potential interpretations of Consumer law for the digital environment.<sup>349</sup>

Consumer law traditionally perceives information asymmetries as the main source of power imbalances between the consumer and the trader.<sup>350</sup> The connection of the threshold for a significant limitation with the ‘ability to make an *informed* decision’<sup>351</sup> in Article 2 (j) UCPD mirrors this. A power imbalance for reasons of the structural design of OCA that underlies the exploitation of a position of power is more certainly established for practices that directly exercise control over and hinder the average consumer’s ability to inform themselves. However, the exact contours of a position of power even in relation to information remain uncertain in reference to OCA like hypernudges, which impair this ability through algorithms they cannot perceive.<sup>352</sup> This relates back to the fact that the UCPD was conceived to address more ‘visible’ and ‘traceable’ sources of power imbalances.<sup>353</sup>

---

<sup>346</sup> Micklitz (n 299) 1085.

<sup>347</sup> The term ‘digital asymmetry’ was coined by Helberger and others for BEUC (n 186).

<sup>348</sup> On the relation between digital asymmetry and the exploitation of a power imbalance pursuant to Art. 2(j) UCPD see Micklitz (n 299) 1080-1082.

<sup>349</sup> See Ibid (n 299) 1080-1082; , for an overview of different proposed ways for reform of consumer law or newer interpretations without full reform in reference to power imbalances and influence on the average consumer’s decisions see Ferretti (n 36).

<sup>350</sup> For a detailed analysis of the information paradigm see Sibony and Helleringer (n 39) 616 – 621.

<sup>351</sup> [emphasis added].

<sup>352</sup> Cf. Namysłowska (n 342) 322.

<sup>353</sup> Ibid (n 342) 322.

Besides the persistent legal uncertainty as to the application of the prohibition of aggressive practices, it may be applicable to some of the most commonly identified online choice architectural designs,<sup>354</sup> including nagging,<sup>355</sup> roach motel<sup>356</sup> and forced registration.<sup>357</sup>

To conclude, the prohibition of aggressive practices pursuant to Art. 8 and 9 of the UCPD is relevant to the regulation of online choice architecture, though a considerable amount of legal uncertainty for application to digital practices undermines the clear determination of legal consequences.<sup>358</sup> The 2024 Digital Fairness Fitness Check has also stated that the prohibition of aggressive practices ‘remains largely unexplored through enforcement’.<sup>359</sup>

#### **1.1.3.4. General prohibition of unfair commercial practices pursuant to Art. 5 (2) UCPD**

Lastly, if more specific requirements of misleading or aggressive practices are not fulfilled, the commercial practice is assessed against the general benchmark of unfairness.<sup>360</sup> According to Art. 5 (2) UCPD a commercial practice is unfair if two cumulative conditions are fulfilled. The practice must be (a) ‘contrary to the requirements of professional diligence’ and (b) at least be likely to materially distort the economic behavior of an average consumer under particular circumstances. Both conditions for the assessment of an unfair practice pursuant to Art. 5(2) entail sources of legal uncertainty as to their application to OCA, which will be explored in the following two sections.

---

<sup>354</sup> See above (II.2.2.).

<sup>355</sup> DG JUST Study (n 45) 61; OECD (n 51) 68.

<sup>356</sup> DG JUST Study (n 45) 62; OECD (n 51) 68.

<sup>357</sup> DG JUST Study (n 45) 66; OECD (n 51) 70.

<sup>358</sup> Likewise concluding a ‘debatable reach’ of Art. 8 and 9, Micklitz (n 299) 1087.

<sup>359</sup> DF Fitness Check (n 184) 149.

<sup>360</sup> *CHS Tour Services v Team4 Travel* (n 245) par.45; see also UCPD Guidance (n 8) 25.

#### **1.1.3.4.1. Diverging interpretations of the standard of professional diligence and implications for online choice architectural design**

The first condition of unfairness pursuant to Art. 5 (2)(a) UCPD, the requirement of professional diligence, can be interpreted to imply a positive duty, in contrast to the negative requirements for unfair practices.

Art. 5 (h) of the UCPD defines professional diligence as conduct the trader ‘may reasonably be expected to exercise towards consumers, commensurate with honest market practice and/or the general principle of good faith in the trader’s field of activity’.

The 2021 UCPD Guidance clarifies that the Commission understands this duty to entail ‘appropriate measures to ensure that the design of their interface does not distort the transactional decisions of consumers.’<sup>361</sup> Parts of legal scholarship have interpreted the requirement professional diligence as a positive duty for ‘fairness by design’,<sup>362</sup> in the design of OCA. The broad scope of the standard could imply a violation of professional diligence by a wide variety of online choice architectural designs,<sup>363</sup> especially as the obligation for ‘fairness by design’ would apply from the promotional stage until after the transaction.<sup>364</sup> However, it is mostly acknowledged that a positive duty for fairness by design would amount to a reinterpretation or at least novel interpretation of professional diligence.<sup>365</sup> Professional diligence has also been interpreted as a prohibition of the targeting of individual cognitive biases and emotional fragility with hidden influence,<sup>366</sup> irrespective of intentionality and thereby including unintended effects of an algorithm, imposing an obligation of diligence to

---

<sup>361</sup> UCPD Guidance (n 8) 101.

<sup>362</sup> See for example Graef (n 239) 5-6; DG JUST Study (n 45) 122; DF Fitness Check (n 184) 53.

<sup>363</sup> Cf. Graef (n 239) 6.

<sup>364</sup> DF Fitness Check (n 184) 53.

<sup>365</sup> Cf. Christine Riefa, ‘Protecting Vulnerable Consumers in the Digital Single Market’ (2022) 33 *European Business Law Review* 607, 609 and 631, with reference to proposals of Helberger and others for BEUC (n 186); DF Fitness Check (n 184) 53; Whittle and others for DG JUST (n 241) 345.

<sup>366</sup> Cf. Hacker (n 34) 153-154.

use algorithms with care.<sup>367</sup> This could concern many choice architectural designs, modeled after data about individual consumers,<sup>368</sup> especially also those who are designed with the help of algorithms<sup>369</sup> that the consumer cannot perceive, such as hypernudges.<sup>370</sup> Thereby, these practices that do not amount to aggressive practices pursuant to Art. 8 UCPD, because the requirement of the use of pressure is not fulfilled,<sup>371</sup> would be caught by the fallback provision of Art. 5 (2) UCPD. Nevertheless, this interpretation of professional diligence has been criticized as inconsistent with the current regulatory approach of the UCPD, which ‘does not require fault’ and thus contrary to the ‘insertion of negligence requirements.’<sup>372</sup>

There remains a general legal uncertainty as to the application of the standard of professional diligence to practices in the digital environment,<sup>373</sup> whether it actually implies ‘fairness by design’<sup>374</sup> and the duties for the trader in the digital environment pursuant to this obligation.<sup>375</sup> Both interpretative guidance provided by case-law and enforcement actions remain sparse.<sup>376</sup> A clarification of the implications of professional diligence for digital practices could restore legal certainty, especially if guidance on how ‘fair design’ is actually implemented would be provided.<sup>377</sup> Newer design-based Union legislation acknowledges the need to complement prohibitions with affirmative obligations,<sup>378</sup> but with a provision in the UCPD with a much

---

<sup>367</sup> For a detailed development of this interpretation and a discussion of possible legal consequences see Hacker (n 34) 153-159.

<sup>368</sup> This interpretation hinges on differentiation of ‘the targeting of individual emotions by technical means’ as opposed to permitted practices that target emotions, Hacker (n 34) 153 -154.

<sup>369</sup> For a discussion of the use of algorithms for OCA see above (II.2.1.2.).

<sup>370</sup> For the lack of perceptibility/hiddenness of hypernudging see above (II.2.1.2.).

<sup>371</sup> For the link between pressure, perceptibility and aggressive practices see above (III.1.1.3.3.).

<sup>372</sup> Micklitz (n 299) 1088; Helberger and others for BEUC (n 186) 73.

<sup>373</sup> Likewise DF Fitness Check (n 184) 53-54.

<sup>374</sup> Ibid (n 184) 53.

<sup>375</sup> For uncertainties of traders see also DG JUST Study (n 45) 122.

<sup>376</sup> DF Fitness Check (n 184) 53.

<sup>377</sup> Likewise Whittle and others for DG JUST (n 241) 345, 348; Riefa (n 365) 625-626, 627.

<sup>378</sup> See below on Art. 11a CRD (III.1.2.4.) and Art. 31 DSA (III.2.1.2.).

wider scope, guidance on how fair design is actually implemented in view of the numerous and evolving ways to steer consumer behavior online would offer greater certainty.

#### **1.1.3.4.2. Interpretation of the material distortion of economic behavior**

The second cumulative condition for the general unfairness benchmark is pursuant to Art. 5(2)(b) UCPD. The commercial practice must ‘materially distort’ or be ‘likely to materially distort the economic behavior of the average consumer.’ The material distortion of economic behavior is defined in Art. 2(e) UCPD, consisting of the appreciable impairment of the ability to make an informed decision and the transactional decision test. The notion is thus comprised of two elements whose application in the digital environment remains unsettled.

The first source of uncertainty with regard to the notion of the material distortion of economic behavior, concerns the transactional decision test, underpinning all principle-based prohibitions and raising the afore-discussed uncertainties, especially with regard to addictive-design OCA.<sup>379</sup>

Additionally important to the assessment of general unfairness according to Art. 5 (2) UCPD, the material distortion of economic behavior must pass a certain materiality threshold to ‘appreciably’ impair the ability to make an informed decision.

The second source of uncertainty concerns the standard of protection from which the thereby defined material distortion of economic behavior is assessed.

---

<sup>379</sup> For the persistent uncertainties with regard to ‘transactional decisions’ see above (III.1.1.3.1.).

In accordance with Art. 5 (2)(b), the ability to make an ‘informed decision’ is generally assessed from the standard of the average consumer, in contrast to the only exceptional character<sup>380</sup> of a higher level of protection to be granted to the vulnerable consumer pursuant to Art. 5 (3) UCPD. The average consumer standard determines the perspective for evaluation of the entire UCPD<sup>381</sup> and Consumer law more generally.<sup>382</sup>

Since the average consumer is the standard for protection afforded under the UCPD, the appreciable impairment of the average consumer’s *ability* to make an informed decision is also the determining perspective for the required materiality threshold. The ability to make an informed decision is determined not only by the trader’s conduct, but must be weighed against the consumers own responsibility to use their cognitive capabilities and resources to be ‘reasonably well-informed and reasonably observant and circumspect’.<sup>383</sup> Recital 18 UCPD also emphasizes that this formula to describe the expectation of the average consumer is used ‘in line of the principle of proportionality’ and Recital 6 further adds that a certain materiality threshold serves to protect the same principle and that ‘in some cases the impact on consumers may be negligible’. Hence the threshold is inferred from expectations of the average consumer’s decision-making process and what is expected to be a hurdle to informed choice, that the consumer is not expected to be able to overcome by fulfilling their own responsibilities.<sup>384</sup> It remains unclear in how far the current consumer standard expects the consumer to counteract their behavioral biases, heuristics and mental shortcuts, which are

---

<sup>380</sup> On the exceptional character of Art. 5(3) UCPD Micklitz and Namysłowska (n 297) *cited in* Helberger, Sax and Micklitz (n 65) 178; Micklitz (n 299)1080 (footnotes of supporting literature omitted).

<sup>381</sup> Cf. Reference to the average consumer in Articles 6 and 7 on misleading practices, Art. 8 on aggressive practices and Art. 5(2)(b) on the general unfairness assessment.

<sup>382</sup> See below for the CRD (III.1.2.2.) and UCTD (III.1.3.2.).

<sup>383</sup> Recital 18 of the UCPD, incorporating case-law of the ECJ, see below (III.1.1.3.5.).

<sup>384</sup> In principle, the normative understanding of the average consumer standard for assessment and the threshold of materiality for what is negligible are two distinct constitutive elements of the UCPD. That said, the ECJ does not seem to clearly delineate between the two in *Compass Banca* and they are certainly interlinked, see the analysis of Hofmann (n 293) 894 – 895.

targeted by most online choice architectural designs.<sup>385</sup> As afore mentioned in the context of aggressive practices, in *Compass Banca* the ECJ has denied the requirement of the average consumer to demonstrate perfectly rational decision-making, but has emphasized the requirement of a commercial practice that induces behavioral biases or unspecified other ‘constraints’ on decision-making, to reach a certain materiality threshold in order to be prohibited under the UCPD.<sup>386</sup>

Yet, the question of where that threshold lies and how national courts or administrative bodies should determine it remains unanswered by ECJ.<sup>387</sup>

This delineation is relevant to most OCA, which is based in leveraging these insights from behavioral psychology;<sup>388</sup> only certain dark patterns do not.<sup>389</sup>

#### **1.1.3.5. Average consumer standard and consumer law normative framework as a source of legal uncertainty**

For evaluation under the UCPD, all commercial practices which are not prohibited by Annex I UCPD, but instead subject to case-by-case analysis, are subjected to the transactional-decision test<sup>390</sup> which is generally assessed against the benchmark of the average consumer standard, while the standard of the vulnerable consumer is of only exceptional character.<sup>391</sup>

---

<sup>385</sup> Cf. above conceptualization of choice architecture (II.1.) and amplified possibilities online (II.2.), targeted by all ‘nudges’ and most dark patterns (II.2.2.).

<sup>386</sup> *Compass Banca v AGCM* (n 303) par. 57.

<sup>387</sup> Cf. Köhl (n 456) 1798-1799; Hofmann (n 293) 893-895.

<sup>388</sup> On how choice architectures leverage these insights see above (II.1.) and amplified possibilities to do so online see above (II.2.).

<sup>389</sup> On dark patterns that do not leverage these insights see above (II.2.2.).

<sup>390</sup> On the transactional decision test, see above (III.1.1.2.1.).

<sup>391</sup> On the exceptional character of the vulnerability of the consumer, see Helberger, Sax, and Micklitz (n 65) 178 referencing Micklitz and Namysłowska (n 297) ; see also Micklitz (n 299)1080 (footnotes omitted).

The average consumer standard touches on a discussion very prominently featured in scholarship<sup>392</sup> debating its application to practices in the digital environment.<sup>393</sup> This debate also directly relates to the effects of COA on the consumer as triggers for regulatory control.<sup>394</sup> The basis of this debate is in the understanding of the average consumer and their decision-making, which is understood to traditionally be reflected in consumer law.<sup>395</sup> Parts of legal scholarship say for European Consumer law to be conceived on the basis of an understanding of the average consumer as the ‘homo economicus’<sup>396</sup>, who reaches decisions in a perfectly rational manner by competently assessing all available information and options.<sup>397</sup> This understanding is contrary to insights from behavioral psychology, which have disproven the rational choice model.<sup>398</sup> Other parts of legal scholarship have assessed Consumer law to have only appeared to ignore insights on behavioral psychology for reasons of the ‘internal market rationale that underpins EU law,’ but agreed on the fact that ‘seeds of a behaviorally sound approach’ have not been implemented in the past.<sup>399</sup> For purposes of discussing the average consumer standard, insights from behavioral psychology that contradict perfectly rational choice, are often summarized as ‘bounded rationality’ of the consumer.<sup>400</sup> In short, this term refers to behavioral biases, heuristics and mental-shortcuts that the average person has been demonstrated to often display in their decision-making.<sup>401</sup>

---

<sup>392</sup> On the prominence of this discussion, DF Fitness Check (n 184) 45-46.

<sup>393</sup> For a detailed discussion of the average consumer standard in the digital environment, see Namysłowska (n 342) 322; Ferretti (n 36); for a discussion relating more specifically to OCA see Helberger, Sax, and Micklitz (n 65); Micklitz (n 299).

<sup>394</sup> Cf. Helberger, Sax, and Micklitz (n 65); Micklitz (n 299).

<sup>395</sup> Cf. DF Fitness Check (n 184) 46.

<sup>396</sup> Ferretti (n 36) 124; DF Fitness Check (n 184) 46.

<sup>397</sup> Cf. Ferretti (n 36) 124-125.

<sup>398</sup> On the contradiction between the average consumer benchmark and insights from behavioral psychology and empirical research see Sibony and Helleringer (n 39) 616-617; see also DG JUST Study (n 45) 91; on relevant insights contrary to the rational choice model and OCA above (II.1.).

<sup>399</sup> Cf. Sibony and Helleringer (n 39) 613.

<sup>400</sup> See for example Ferretti (n 36); Köhl (n 456); Hofmann (n 293); Gelbrich and Legner (n 37), see above (II.1.).

<sup>401</sup> On these insights on decision-making see above (II.1.).

Notably, it is precisely these contrary insights of behavioral psychology that underpin most of OCA, which been demonstrated to allow the choice architect to manipulate the decision-making of the consumer,<sup>402</sup> except for a small number of few dark patterns that outright force the consumer to complete certain actions.<sup>403</sup>

If the average consumer benchmark for protection that every principle-based prohibition is assessed against reflects a normative model of the consumer with perfectly rational decision-making, and most OCA manipulates consumers' decision-making by capitalizing on the fact that is not perfectly rational, the question therefore becomes, whether most online choice architectural design must be permitted under the UCPD, so long as the exceptional specific requirements of Art. 5(3) are not met and as is not prohibited by Annex I of the UCPD.

To answer this question, the notion of the average consumer must be examined, to determine whether it does correspond to the homo economicus, or which behavioral insights may be incorporated, notably in light of the recent *Compass Banca* ruling, wherein the ECJ has emphasized grounds of a more nuanced understanding of the average consumer.

To summarize the relevant parts of the normative framework of EU consumer law, the initial considerations serve as a reference point. EU consumer law was conceived as an instrument to rebalance bargaining power to the benefit of the consumer who is perceived to be more vulnerable, with the economic aim to establish a well-functioning market.<sup>404</sup> Since the 1990s the main underlying cause for the perceived vulnerability of the consumer was identified to lie in information asymmetries.<sup>405</sup> The ECJ continues to emphasize this and pertaining more

---

<sup>402</sup> Santos, Morozovaite and De Conca (n 164) 3.1.1. 'Loss of autonomy'.

<sup>403</sup> See above (II.2.2.).

<sup>404</sup> Cf. Ferretti (n 36) 125-126 (footnotes of supporting literature omitted).

<sup>405</sup> For an overview of the development of the guiding normative framework of consumer law with reference to the digital environment see Gelbrich and Legner (n 37) 8 and 13-15.

specifically to the UCPD has explicitly stated that the UCPD ‘relies on the assumption that, in relation to a trader, the consumer is in a weaker position, particularly with regard to the level of information.’<sup>406</sup> While some underlying normative ideals of consumer law have expanded over time, the main instrument of EU consumer law therefore continues to be information and transparency obligations.<sup>407</sup> These are intended to protect the average consumer’s ability to make active choices, while it remains the consumer’s responsibility to guard their interests by using their cognitive capabilities and resources to assess information.<sup>408</sup>

Building on this understanding of the average consumer, by contrast, the vulnerable consumer of Art. 5(3) of the UCPD, is an exceptional case, granted a higher level of protection, for not disposing of the faculties needed to take on the same responsibility to protect their interests as the average consumer.<sup>409</sup> The opposition of the average and vulnerable consumer illustrate the balancing of consumer protection and empowerment;<sup>410</sup> the perceived consumer’s need for protection is the reference point.

In light of this normative understanding of the faculties of the average person and the expectations the average consumer should fulfill to preserve their own interests, the ECJ has defined the average consumer as ‘reasonably well-informed and reasonably observant and circumspect.’<sup>411</sup> This formula has set a precedent in consumer law case-law<sup>412</sup> and the average consumer has been codified as the benchmark for unfair practices under the UCPD,<sup>413</sup> with Recital 18 restating the formula in view of harmonization of national assessments with common

---

<sup>406</sup> *AGCM v Wind Tre and Vodafone Italia* (n 378) para. 54, referencing ECJ C-388/13 *Nemzeti Fogyasztóvédelmi Hatóság v UPC Magyarország kft.* (2015) OJ C304/07 para.53.

<sup>407</sup> Cf. Ferretti (n 36) 126 (footnotes on supporting literature omitted).

<sup>408</sup> Cf. *Ibid* (n 36) 126; Helberger, Sax and Micklitz (n 65) 175.

<sup>409</sup> Riefa (n 365) 611; Helberger, Sax and Micklitz (n 65) 178; see also UCPD Guidance (n 8) 35.

<sup>410</sup> Cf. Helberger, Sax, and Micklitz (n 65) 178.

<sup>411</sup> ECJ C-210/96 *Gut Springenheide GmbH and Rudolf Tusky v Oberkreisdirektor des Kreises Steinfurt - Amt für Lebensmittelüberwachung* (1998), para. 31.

<sup>412</sup> Ferretti (n 36) 127 (footnotes on case-law using the formula of the average consumer omitted).

<sup>413</sup> Cf. references to the average consumer in Articles 6 and 7 on misleading practices, Art. 8 on aggressive practices and Art. 5(2)(b) on the general unfairness assessment.

grounds for evaluation in the Member States.<sup>414</sup> This average consumer is understood to be based on the *homo economicus* that underpins from an economic perspective.<sup>415</sup>

In alignment with this understanding of the average consumer as the reference point for the level of protection afforded, it is (only) the *ability* to make an informed decision that is the protected legal interest.

Nevertheless, Annex I Nr. 7 of the UCPD prohibiting false time-limits has formed part of the Directive since it was first adopted and can be interpreted as a deviation from perfectly rational choice, by acknowledging the effects of scarcity on consumer decision-making.<sup>416</sup>

Furthermore, Recital 18 stresses that ‘the average consumer test is not a statistical test’ but instead must be interpreted in light of the case-law of the ECJ and the national courts’ and authorities’ own ‘faculty of judgment’.<sup>417</sup>

The ECJ has recently ruled in favor of incorporating findings on decision-making that deviate from perfectly rational choice into the average consumer image to a limited extent, while clearly rejecting a fundamental revision of the ‘reasonably well-informed and reasonably observant and circumspect’ consumer.<sup>418</sup>

In *Compass Banca*, the Court answered the question of whether the average consumer standard should be interpreted in light of scientific findings of ‘bounded rationality’ which have

---

<sup>414</sup> DF Fitness Check (n 184) 46.

<sup>415</sup> Hofmann (n 293) 891 (footnote omitted); Ferretti (n 36) 124.

<sup>416</sup> Sibony and Helleringer (n 39) 623 read in conjunction with footnote 92.

<sup>417</sup> The ECJ is the authority with the decisive interpretation of the standard, hence ‘the standard applied is thereby withdrawn from the judicial influence of the individual Member States’, see Köhl (n 456) 1798 with further references.

<sup>418</sup> Likewise Hofmann (n 293) 893 and 896; Gelbrich and Legner (n 37) 10; Köhl (n 456) 1798 with reference to and agreeing with Gelbrich and Legner.

demonstrated that consumer decision-making is impacted by ‘limitations imposed on cognitive capacity by the number of stimuli received, the ability to sustain attention over time and the ability to memorize all the information received’, instead of only acknowledging the ‘homo economicus’, who displays perfectly rational decision-making.<sup>419</sup>

In its answer to this question the ECJ has not explicitly rejected the notion of the average consumer in referencing the ‘homo economicus’ model, but instead plainly stated that cognitive biases may be considered, if they are likely to affect the ‘reasonably well-informed and reasonably observant and circumspect person.’<sup>420</sup> The formula continues to be the standard of reference, but it does ‘not [...] exclude the possibility that an individual’s decision-making capacity may be impaired by constraints, such as cognitive biases’.<sup>421</sup> This can be read as a reinterpretation of the fact that the consumer must not be “perfectly” or even “particularly” but ‘reasonably’ informed, observant and circumspect, as the Advocate General pointed out.<sup>422</sup>

The ECJ thereby indicates that the reference for protection in the UCPD is not founded in perfectly rational decision-making. However, since the ECJ has not referred to the scientific concept of ‘bounded rationality’ to be incorporated into the average consumer standard, but instead has referenced cognitive biases and a ‘series of (other) constraints,’ it remains uncertain which ‘constraints’ on decision-making other than cognitive biases are acknowledged.

For some time, the ECJ has ruled to incorporate in the standard that determines the level of protection afforded to the consumer, elements that deviate from the idea that the ability of their

---

<sup>419</sup> *Compass Banca v AGCM* (n 303) para. 42.

<sup>420</sup> *Ibid* (n 303) para. 53.

<sup>421</sup> *Ibid* (n 303) para. 59.

<sup>422</sup> *Compass Banca v AGCM* (n 303) Opinion of AG Emiliou, para. 42 with reference to the Commission’s view.

decision-making is perfectly rational. Some of these rulings are mentioned in *Compass Banca* and can be interpreted to exemplify ‘other constraints’ on decision-making.<sup>423</sup>

First, the Court noted that the consumer has been acknowledged to be deceivable and in case of deception is not held to the standard of making perfectly informed decisions or making them ‘in an effective manner’, referencing *Trento Sviluppo and Centrale Adriatica*.<sup>424</sup> This delivers an important reference for evaluation of OCA under Articles 6 and 7 UCPD.<sup>425</sup>

The ECJ then referenced *Lloyd Schuhfabrik Meyer*, in which the Court had held that the consumer is expected to display a leveling degree of attention, in accordance with the goods or services in question.<sup>426</sup> This reference is pertinent as *Lloyd Schuhfabrik Meyer* can be interpreted as a reference to the behavioral scientific lesson that consumers are influenced by the context of their decision,<sup>427</sup> which defines the choice environment that is designed for OCA. Further, the Court referenced *Canal Denmark*, to note that ‘erroneous perceptions’ of information may be ‘suggested’ to the consumer.<sup>428</sup> The ECJ had ruled that the division of a price of a product ‘into several components and highlighting one of them’ is misleading in the sense of Art. 6 (1) UCPD, since it would likely give the ‘false *impression* that he has been offered a favorable price’<sup>429</sup> and can therefore be prohibited if passes the transactional decision test.<sup>430</sup> This is irrespective of the fact that all information has been made available to the

---

<sup>423</sup> Likewise Agnieszka Jabłowska and Tom Bouwman, ‘Cognitive biases of the average consumer’ (2024) ConsumerID Blog published by the University of Leiden <<https://consumerid.eu/blogs/the-cognitive-biases-of-the-average-consumer>> accessed 16.01.2026.

<sup>424</sup> ECJ C-281/12 *Trento Sviluppo and Centrale Adriatica v Autorità Garante della Concorrenza e del Mercato [AGCM]* (2013) OJ C53/13, paras. 34 and 38 cited in *Compass Banca v AGCM* (n 303) para.54 .

<sup>425</sup> See above (III.1.1.3.2.).

<sup>426</sup> ECJ C-342/97 *Lloyd Schuhfabrik Meyer & Co. GmbH v Klijsen Handel BV*.(1999), paras. 25 and 26 cited in *Compass Banca v AGCM* (n 303) para.55.

<sup>427</sup> Sibony and Helleringer (n 39) 625 and 626 read in conjunction with footnote 113.

<sup>428</sup> ECJ Case C-611/14 *Canal Digital Danmark A/S* (2016) OJ 2017 C6/09 paras. 41 and 42 cited in *Compass Banca v AGCM* (n 303) para. 56.

<sup>429</sup> ECJ Case C-611/14 *Canal Digital Danmark A/S* (2016) OJ 2017 C6/09 para. 49 [emphasis added].

<sup>430</sup> *Ibid* para 49.

consumer and is merely presented in a certain manner.<sup>431</sup> An average consumer as the homo economicus, could be argued to be capable of assessing the provided information, so as to not be influenced by the presentation. The ruling can be interpreted as a reference, albeit implicit, to the bounded rationality of the consumer.<sup>432</sup> Furthermore, similarly to *Lloyd Schuhfabrik*, it has also been interpreted as a nod to context-dependent decision-making.<sup>433</sup>

This delivers another important reference for evaluation of OCA under Articles 6 and 7.<sup>434</sup>

Finally, the ECJ references *Wind Tre and Vodafone Italia*.<sup>435</sup> The facts of the case concerned Wind and Vodafone, which had marketed SIM cards that charged the consumer for certain services by default, unless they were actively deactivated.<sup>436</sup> They had failed to inform the consumer about these services in advance.<sup>437</sup> In *Compass Banca* the ECJ referenced parts of the ruling, in which it was held that the average consumer would not know about the reactivation of certain services and their cost<sup>438</sup>, and that it is irrelevant that the consumer would have been able to deactivate them, since it was unlikely that they would make use of that option without priorly being informed about it<sup>439</sup> and additionally that they would be ‘sufficiently technically capable’ to do so.<sup>440</sup> In *Compass Banca* the Court concluded that it had therefore acknowledged that ‘it is unlikely that, in certain fields, the average consumer is technically capable of understanding all the details of any offer in order to make a choice in a fully rational way’.<sup>441</sup>

---

<sup>431</sup> Cf. Hofmann (n 293) 892.

<sup>432</sup> Cf. Ibid (n 293) 892 and 893.

<sup>433</sup> Ibid (n 293) (footnote of supporting literature omitted).

<sup>434</sup> See above (III.1.1.3.2.).

<sup>435</sup> *AGCM v Wind Tre and Vodafone Italia* (n 307) paras. 50 and 52 cited in *Compass Banca v AGCM* (n 303) para.56.

<sup>436</sup> *AGCM v Wind Tre and Vodafone Italia* (n 307) para. 23.

<sup>437</sup> Ibid (n 307) para. 23.

<sup>438</sup> Ibid (n 307) para. 52.

<sup>439</sup> Ibid (n 307) para. 50.

<sup>440</sup> Ibid (n 307) para. 52.

<sup>441</sup> *Compass Banca v AGCM* (n 303) para.56.

A pertinent point of this ruling is the evaluation of default settings under the UCPD, which are among the most commonly identified dark patterns.<sup>442</sup>

Additionally, linking the recognized power imbalance to the disadvantage of the consumer, which in *Wind Tre* was mainly grounded in differing information and expertise,<sup>443</sup> directly to the average consumer's inability to make a rational choice, could prove important to the regulation of OCA more generally. *Wind Tre* can be interpreted as a recognition of a certain 'structural' power imbalance,<sup>444</sup> similarly to the 'structural'<sup>445</sup> or 'systemic'<sup>446</sup> imbalance to the disadvantage of the consumer that legal scholarship attributes to online choice architecture.<sup>447</sup> The imbalance created by online choice architecture scholarship says to stem from a 'digital asymmetry',<sup>448</sup> which is multidimensional, but amongst other sources of this imbalance is underpinned by informational asymmetry to the benefit of the trader who has a better comprehension and more insight into the commercial practices they deploy in the digital environment.<sup>449</sup> However, this interpretation under the UCPD continues to only be potential.

Besides these rather specific examples, it remains to be seen which insights on decision-making deviating from perfectly rational choice could be incorporated into the average consumer standard under the guise of other 'constraints' on decision-making than cognitive biases.

Cognitive biases on the other hand are part of the well-known and well-studied insights from behavioral psychology that underpin the very conceptualization of nudging and choice

---

<sup>442</sup> DG JUST Study (n 45) 45; on defaults see 'preselection' dark pattern above (II.2.2.).

<sup>443</sup> *AGCM v Wind Tre and Vodafone Italia* (n 307) para. 54.

<sup>444</sup> Cf. Micklitz (n 299) 1086.

<sup>445</sup> Cf. Helberger and others for BEUC (n 186) 4 and 6-7; Micklitz (n 299).

<sup>446</sup> Riefa (n 365) 619.

<sup>447</sup> *Ibid* (n 365) 619.

<sup>448</sup> A term coined by Helberger and others for BEUC (n 186).

<sup>449</sup> Cf. Namysłowska (n 342) 326.

architecture.<sup>450</sup> Many dark patterns<sup>451</sup> have been found to leverage biases,<sup>452</sup> including among others ‘default bias,’ ‘social proof bias’ and the ‘framing bias’<sup>453</sup> that was the discussed bias created in *Compass Banca*.<sup>454</sup> These designs therefore are susceptible of materially distorting the economic behavior of the average consumer.

Overall, *Compass Banca* has fundamentally added to the certainty that the average consumer in the sense of the UCPD does not bear the responsibility of resisting any manipulation from most online choice architectural designs, which are based on insights from behavioral psychology. The question of whether all online choice architectural designs are ultimately permitted under the principle-based prohibitions of the UCPD, for the reason of being assessed against a standard of protection of the consumer that requires the consumer to make perfectly rational decisions, must be answered negatively. OCA and specifically dark patterns that leverage biases specifically are at least acknowledged to be able to manipulate the average consumer.

However, the Court also emphasizes the requirement for the impairment of decision-making of the consumer by ‘a series of constraints, such as cognitive biases’ to reach a certain materiality threshold.<sup>455</sup> In light of the lack of conclusive interpretative guidance on the threshold for manipulation by digital practices like OCA, it therefore remains uncertain, even in the case of OCA that leverages biases specifically, to what extent the ‘average consumer’ is

---

<sup>450</sup> For the conceptualization of OCA on the basis of these insights see above (II.1.).

<sup>451</sup> To be noted that the term dark patterns in these cases also corresponds to digital nudging, see above (II.2.2.).

<sup>452</sup> OECD (n 51) 8 and 9; DG JUST Study (n 45) 20.

<sup>453</sup> OECD (n 51) 9.

<sup>454</sup> *Compass Banca v AGCM* (n 303) paras. 70 and 75.

<sup>455</sup> Likewise Hofmann (n 293) 895.

expected to withstand influence.<sup>456</sup> National courts must ‘determine the typical reaction of the average consumer in a given case.’<sup>457</sup>

This can be interpreted as the consumers responsibility to resist ‘multiple manipulation strategies’<sup>458</sup> including ‘systemic design-based harm’,<sup>459</sup> as long as the materiality threshold for impairment of their decision-making is not reached. National courts must ‘determine the typical reaction of the average consumer in a given case.’<sup>460</sup> Nevertheless, in the absence of further specifications of the ECJ on how cognitive bias is determined and where exactly the threshold for material impairment of choice by cognitive biases or ‘a series of (other) constraints’ lies, it remains uncertain how national courts and authorities should determine these elements.<sup>461</sup>

#### **1.1.3.6. Evaluation of the decision-making of the vulnerable consumer in exceptional cases**

The vulnerable consumer standard pursuant to Art. 5(3) of the UCPD must be understood from the point of view of the considerations that underpin the average consumer standard.<sup>462</sup> The vulnerable consumer is afforded a higher level of protection by deviation from the general principle of enabling the consumer to protect themselves,<sup>463</sup> because they are not perceived as

---

<sup>456</sup> Cf. Daniel Köhl, ‘Das Leitbild des Durchschnittsverbrauchers im Spannungsverhältnis mit Erkenntnissen der Verhaltensökonomik’ (2025) 23 GRUR 1794, 1798-1799; see also Hofmann (n 293) 893-895.

<sup>457</sup> *Canal Digital Danmark* (n 512) para. 39 cited in *Compass Banca v AGCM* (n 303) para. 58.

<sup>458</sup> Hofmann (n 293) 895 [translation by the author]; see also above (III.1.1.3.3.) the issue of the lack of conclusive interpretative guidance for the materiality threshold.

<sup>459</sup> Namysłowska (n 342) 326.

<sup>460</sup> *Canal Digital Danmark* (n 512) para. 39 cited in *Compass Banca v AGCM* (n 303) para. 58.

<sup>461</sup> For an analysis of the problems national courts and administrative bodies could face in interpreting the average consumer standard in light of findings of behavioral psychology, see also Köhl (n 456) 1798-1800.

<sup>462</sup> Cf. Riefa (n 365) 611; Helberger, Sax, and Micklitz (n 65) 178; see also Helberger and others for BEUC (n 186) 3; UCPD Guidance (n 8) 35.

<sup>463</sup> See also Ferretti on ‘consumer empowerment’ (n 36) 126-128.

capable of taking on the same responsibilities of the average consumer. This alternative standard of protection is assessed instead from the perspective of a member of the vulnerable group of consumers. The relevant question here is whether personalized OCA that targets the specific vulnerabilities of a consumer to manipulate them to take transactional decisions they would not have taken otherwise, would be assessed from this perspective, or whether the consumer is expected to withstand it.<sup>464</sup>

Concerning first the definition of vulnerability, Art. 5 (3) of the UCPD assesses the vulnerability of a consumer for reasons of their affiliation to a ‘clearly identifiable group’ of consumers, for reasons of ‘their mental or physical infirmity, age or credulity’. The 2021 Commission Guidance emphasizes that Recital 19 of the Directive clarifies that this list of characteristics is non-exhaustive and expresses that instead ‘context-dependent vulnerabilities’, which are ‘particularly acute in the digital environment’ are covered.<sup>465</sup> The Guidance cites a Study the Commission published in 2016,<sup>466</sup> which mentions as sources of vulnerability ‘socio-demographic characteristics’, ‘personal situation’, ‘market environment’ and ‘behavioral characteristics.’

The Commission’s proposition of a definition for vulnerability that encompasses ‘context-dependent’ vulnerabilities, based on the understanding in the 2016 Study cited, would present a real reinterpretation of the originally more static definition of vulnerability under the UCPD and imply a much wider application of the standard to digital practices, including OCA.<sup>467</sup>

---

<sup>464</sup> On how OCA can be tailored to manipulate the consumer see above (II.2.1.).

<sup>465</sup> UCPD Guidance (n 8) 35.

<sup>466</sup> London Economics, VVA Consulting and Ipos Mori consortium, ‘Consumer vulnerability across key markets in the European Union’ (2016) Publications Office of the European Commission *cited in* UCPD Guidance (n 8) 35 read in conjunction with footnote 146.

<sup>467</sup> For a detailed analysis of vulnerability in EU consumer law and the significance of this new interpretation see Mateusz Grochowski, ‘Consumer Vulnerability: a Genealogy’ in Stefan Grundmann and Pietro Sirena (eds) *European Contract Law and Future Challenges* (1 Larcier Intersentia 2025).

Generally, vulnerability in the sense of the UCPD is understood to be intrinsic to the person, based on attributes that are inherent, like the listed examples of age or mental infirmity.<sup>468</sup>

The ‘architectural vulnerability’<sup>469</sup> created by OCA is mostly<sup>470</sup> external<sup>471</sup> and not inherent to the consumer.

Under the broader definition provided by the UCPD Guidance, personalized OCA could be considered to target vulnerabilities in the sense of the UCPD, especially if based on the consumer’s affiliation with a certain group of consumers, via practices like segmentation and selection, that could also affect members of ‘a clearly identifiable group’, since it is the trader who identified and selected them.<sup>472</sup> Furthermore, regarding the use of AI, Art. 5 (3) UCPD does not require the intention of the trader,<sup>473</sup> whereby the opaqueness of certain algorithms<sup>474</sup> that could be employed could not exonerate the trader on the grounds that the algorithm’s achieved effect was not their intention.<sup>475</sup>

A question that is still not answered by the intended clarifications of the Commission is whether vulnerability in the sense of the Guidance comprises vulnerabilities that are created by the OCA. The vulnerability to manipulation by dynamic personalization of the choice environment by OCA like hypernudges, stems from dynamic targeting of context-specific and situational vulnerabilities like emotions, which amplify their manipulative effect through continuous readjustment and the subsequent presentation of the most effective choice environment at targeting the consumer at the time.<sup>476</sup>

---

<sup>468</sup> Cf. *Ibid*; Helberger, Sax and Micklitz (n 65) 178-179; see also Fletcher and Busch for CRRE (n 1) 26

<sup>469</sup> Helberger, Sax, and Micklitz (n 65).

<sup>470</sup> ‘Cyborg consumers’ for whom lines between human and machine are being blurred via IoT devices are an exception to this, as these vulnerabilities can become internal, see Clubbs Coldron and others (n 49) 214.

<sup>471</sup> Helberger, Sax, and Micklitz (n 65) 195; Ferretti (n 36) 130 (footnote on supporting literature omitted).

<sup>472</sup> On the personalization of OCA via segmentation and selection, see above (II.2.1.1.).

<sup>473</sup> For a discussion on the degree of intentionality required by the trader see Micklitz and Namysłowska (n 297) para.79; for an additional view against intentionality as a requirement see Hacker (n 34) 162.

<sup>474</sup> On algorithms and their use for OCA, see above (II.2.1.2.).

<sup>475</sup> On no requirement of intentionality and algorithmic manipulation see Hacker (n 34) 162.

<sup>476</sup> On dynamic targeting of vulnerabilities see above (II.2.1.2.); for an analysis specifically from the perspective of not corresponding to vulnerability of the UCPD see Helberger, Sax, and Micklitz (n 65) 195; on algorithmic manipulation see Hacker (n 34) 162; on digital vulnerability see also Ferretti (n 36) 130 with further references.

Furthermore, the UCPD Guidance is not legally binding and cannot ensure legal certainty.<sup>477</sup> Multiple considerations contradict the understanding of the targeting of emotional bias and emotional states that cause deviations from rational decision-making as targeting a vulnerable consumer. First, the commercial practice must be likely to ‘only’ distort the economic behavior of these vulnerable consumers, which implies exclusivity.<sup>478</sup> It might prove difficult to assess that even personalized online choice architectural designs would affect only a particularly vulnerable group and that other consumers wouldn’t be affected. All consumers are susceptible to biases and bounded rationality,<sup>479</sup> and the ECJ has incorporated the possibility of the display of cognitive bias and other unspecified ‘constraints’ on decision making into the average consumer standard of protection.<sup>480</sup> Therefore such a broad interpretation would contradict the exceptional character of Art. 5(3) UCPD. This exceptional character is supported by legal scholarship and would be more in line with the ECJ’s tendency to interpret such exceptions more restrictively.<sup>481</sup>

It can also be noted that the 2030 Consumer Agenda and corresponding efforts by the European Parliament seem to align with the more original understanding of vulnerability. In the 2030 Consumer Agenda, the Commission announces plans to address the vulnerability of consumers tied to disabilities, age and income.<sup>482</sup> In relation to the digital environment and the upcoming Digital Fairness Act, which is slated to address dark patterns, the Commission emphasizes minors as ‘particularly vulnerable consumers’ and announces for this vulnerability to be one of the main focuses of the Digital Fairness Act. The Internal Market and Consumer Protection

---

<sup>477</sup> Cf. *Mark Whittle and others for DG JUST* (n 241) with further references to scholarship and studies conducted; see also Stakeholder opinions DF Fitness Check (n 184) 47.

<sup>478</sup> Likewise *Micklitz and Namysłowska* (n 297) para.78; *Hacker* (n 34) 162, *Helberger, Sax and Micklitz* (n 65).

<sup>479</sup> Cf. DG JUST Study (n 45) 91.

<sup>480</sup> *Compass Banca v AGCM* (n 303); see above (III.1.1.3.5.).

<sup>481</sup> On the ECJ’s tendency see *Hacker* (n 34) 162; on the exceptional character of the vulnerable consumer see also *UCPD Micklitz and Namysłowska* (n 297) *cited in Helberger, Sax and Micklitz* (n 65) 178; *Micklitz* (n 358)1080 (footnotes of supporting literature omitted).

<sup>482</sup> COM (2025) 848 (n 13) 2.

Committee of the European Parliament has furthermore adopted an own initiative<sup>483</sup> report on the ‘Online protection of minors,’ stressing that minors are particularly vulnerable to dark patterns.<sup>484</sup>

In conclusion, it can be said that the vulnerable consumer standard of protection in the prevailing understanding of its current definition is of rather limited importance to the assessment of online choice architectural designs.<sup>485</sup> A clarification of whether the standard does actually incorporate ‘context-dependent’ vulnerabilities like the Guidance states, could be beneficial to restore legal certainty, meaning that the targeting of specific vulnerabilities, independent of traits that can be grouped together, or whether attributes like displaying specific behaviors or emotions could actually be a ‘context-dependent’ group of consumers, though hardly ‘clearly identifiable’ to those without the personal data used to model the environment.

#### **1.1.4. Conclusion on the UCPD’s bearing on the legal assessment and uncertainty of OCA**

The analysis of the application of the UCPD to OCA has revealed that the most important instrument to the legal evaluation of online choice architecture of all forms establishes a legal regime that is characterized by consequential uncertainties that leave many online choice architectural designs in a legal grey zone.

Regarding the scope of the UCPD, although the Commission Guidance advocates for a broader interpretation, divergent national approaches persist as for addictive-design OCA, like ‘hyper-

---

<sup>483</sup> i.e. non-legislative.

<sup>484</sup> European Parliament, ‘Resolution of 26 November 2025 on the protection of minors online’ (2025) P10\_TA(2025)0299 [own initiative].

<sup>485</sup> On the generally limited significance of the vulnerable consumer standard see also Helberger, Sax and Micklitz (n 65) 179.

engaging dark patterns,' leaving them in a legal grey zone,<sup>486</sup> which is very notable and regrettable considering their prevalence in the digital environment.<sup>487</sup> The applicability of the UCPD to addictive-design OCA should be clarified,<sup>488</sup> ideally through an actual revision of the UCPD, at least in an additional Recital, as the Guidance has not proven effective in this regard.

Still, owed to its principles-based approach, the UCPD is applicable to the vast majority of B2C-online choice architectural designs.<sup>489</sup> However, while these provide the flexibility to be considered applicable, their broad wording and technology-neutral approach do not translate well to the manipulation of consumers in the digital environment, with increasing possibilities for the organization and design of the online interface and ultimately do not provide a clear basis to determine legal consequences for different practices.<sup>490</sup>

The normative benchmark of the average consumer still presents the most profound uncertainty. The growing research into OCA has been concerned with the application of the average consumer standard as derived from the homo economicus, displaying perfectly rational decision-making, conflicting with both the realities of human-decision making like bounded rationality,<sup>491</sup> but especially with the possibilities for manipulation in the digital environment.<sup>492</sup> While rejecting a departure from the average consumer standard in *Compass*

---

<sup>486</sup> Likewise, DF Fitness Check (n 184) 154 (footnote on national judgment omitted).

<sup>487</sup> On the prevalence of hyper-engaging dark patterns, see Esposito and Ferreira (n 161) 999; on addictive-design and prevalence see also Mark Whittle and others for DG JUST (n 241) 75,77-78.

<sup>488</sup> Likewise DF Fitness Check (n 184) 152.

<sup>489</sup> Similarly, DG JUST Study (n 45) 7; Leiser and Caruana (n 180) 248.

<sup>490</sup> Similarly about technology-neutral approach of consumer law instruments elaborated before *Compass Banca*, Constanța Roșca, *Digital Arms for Digital Consumer Harms: Mapping Legal and Technical Solutions for Dark Patterns in EU Consumer Law* (1 Maastricht University Press 2024) available under <<https://pubpub.maastrichtuniversitypress.nl/digital-arms-for-digital-consumer-harms>> accessed 16.01.2026, 9.2.2; Namysłowska (n 342) 322; on data exploitation strategies (like hypernudging) Helberger and others for BEUC (n 186) 74-75; Micklitz (n 299) 1085-1087; on algorithmic manipulation (like AI and algorithmic OCA that is personalized) Hacker (n 34) 165.

<sup>491</sup> On 'bounded rationality' see above (II.1.).

<sup>492</sup> See for example see Namysłowska (n 342) 322; Fletcher and Busch for CRRE (n 1) 31; Ferretti (n 36); for a discussion relating more specifically to OCA see Helberger, Sax, and Micklitz (n 65); Micklitz (n 299); on the

*Banca*, the ECJ has now brought the much anticipated explicit confirmation of the incorporation of deviations from rational decision-making into the standard of protection, but has failed to specify the recognized ‘other constraints’ besides biases of the average consumer and additionally, even where practices directly concern biases, failed to establish clarity of the materiality threshold.<sup>493</sup> Consequently, it still remains unsettled to what extent the average consumer is expected to withstand manipulation by online choice architecture. The result is hence legal uncertainty in both directions, the question of consumer protection and the question of how the trader is expected to comply in the design of interfaces.<sup>494</sup> As a result, the very limited number of dark patterns which outright force the user to make certain choices, as opposed to steering decision-making by leveraging behavioral insights like nudges and hypernudges can still be evaluated with much greater legal certainty and more effectively, contrary to the principle of the average consumer, which now incorporates such manipulation, serving as an efficient standard of protection.<sup>495</sup>

Therefore, though *Compass Banca* has provided a welcomed step moving the yardstick for the evaluation of fairness closer to one that is better suited to assess digital manipulation by OCA, it must be clarified which deviations from rational decision-making are recognized with bias and ‘a series of other constraints’ and to what extent the consumer is expected to withstand it.<sup>496</sup> This should be clarified in the UCPD, with reference to digital practices specifically, especially seeing as the UCPD is still the most important instrument to address OCA.<sup>497</sup> Such a clarification is preferable to shifting the manipulation by digital practices to be evaluated against the yardstick of the vulnerable consumer pursuant to Art. 5(3) UCPD, because all

---

technology-neutral approach and how the broad principles do not translate well especially with a view to the average consumer see before *Compass Banca*, Roşca (n 490) 9.2.2.; DF Fitness Check (n 184) 45, 47.

<sup>493</sup> Cf. Köhl (n 456) 1798-1799; see also Hofmann (n 293) 893-895.

<sup>494</sup> On the difficulty for the trader to assess how to comply with these obligations likewise Köhl (n 456) 1799-1800; Whittle and others for DG JUST (n 241) 31.

<sup>495</sup> By preventing free choice entirely, the uncertainties regarding the yardstick of the average consumer or the materiality threshold do not apply here, see above (III.1.1.3.3.).

<sup>496</sup> Similarly, Namysłowska (n 342) 326.

<sup>497</sup> Similarly, *Ibid*(n 418) 326; similarly although the *Compass Banca* ruling, DF Fitness Check (n 184) 151.

consumers are susceptible to manipulation by OCA,<sup>498</sup> which would contradict the functioning and the exceptional character of the provision.<sup>499</sup>

In this regard it is notable that the prohibition of misleading actions and omissions pursuant to Articles 6 and 7 UCPD, is not subjected to the same materiality threshold which eliminates at least one source of uncertainty for the evaluation of OCA susceptible to be captured by them, like the dark patterns ‘hard to cancel,’ ‘countdown timers/limited time messages’ and ‘hidden information.’ Even so regarding the latter, the uncertainty with regard to how to comply with transparency prohibitions in light of the possibilities to design interfaces remains.

The adequate application of the prohibition of aggressive practices pursuant to Art. 8 UCPD is undermined by the plethora of uncertainties with regard to application in the digital environment.<sup>500</sup> It is especially regrettable that the existent potential of Art. 8 UCPD to address OCA that personalizes the choice environment based on data about the consumer, including very manipulative hypernudges and AI-driven manipulation, is undermined by uncertainties regarding the application of ‘undue influence’ to digital practices.<sup>501</sup> The articulation of a position of power and the required the elements harassment, coercion, and above all ‘undue influence’ in the digital environment should be clarified.<sup>502</sup> This should ideally happen through an actual revision that clarifies applications to digital practices in the UCPD<sup>503</sup> as the Guidance as a soft law instrument has not proven effective in this regard.

---

<sup>498</sup> On how everyone is susceptible to manipulation by OCA, see above (II.1.-II.2.2.); for an analysis of this as a universal vulnerability see also Helberger, Sax and Micklitz (n 65) 175-176, 186-188.

<sup>499</sup> Additional questions in the functioning of the provision, such as how to group consumers as clearly identifiable, since all are susceptible to this manipulation; On vulnerability similarly Fletcher and Busch for CRRE (n 1) 27; Helberger, Sax and Micklitz (n 65) 195-196.

<sup>500</sup> Similarly, concluding a ‘debatable reach’ and advocating for a clarification for the element of pressure, Micklitz (n 299) 1086, 1087.

<sup>501</sup> Likewise Micklitz (n 299) 1087.

<sup>502</sup> Likewise DF Fitness Check (n 184) 150.

<sup>503</sup> Likewise DF Fitness Check (n 184) 150.

The per se prohibitions of Annex I provide more legal certainty, but only for a very limited number of dark patterns and even so with uncertainties of how to translate them into the digital environment. An inclusion of interface-design specific prohibitions of the Annex could remedy many uncertainties remaining for the principles-based prohibitions.<sup>504</sup>

To restore legal certainty for the evaluation of OCA under the UCPD, the standard of professional diligence, which has currently very unclear implications as regards the design of OCA<sup>505</sup> could be reinterpreted as a positive fairness by design obligation with best practice specifications that would be well suited to actually address the realities of interface design and complement the negative prohibitions, which often leave the question of what to do instead, in view of the many possibilities to design and organize online interfaces.<sup>506</sup>

---

<sup>504</sup> Similarly, from the perspective of advocating for higher consumer protection, Whittle and others for DG JUST (n 241) 346; DF Fitness Check (n 184) 151; see also Fletcher and Busch for CRRE (n 1) 43.

<sup>505</sup> Likewise DF Fitness Check (n 184) 53-54; DG JUST Study (n 45) 122.

<sup>506</sup> Likewise Mark Whittle and others for DG JUST (n 241) 62, 104-105, 130, 244 ; for a nuanced endorsement of such an obligation only in the Guidance and minding the principle of proportionality see Fletcher and Busch for CRRE (n 1) 29-30; for strong advocacy in favor from the perspective of consumer protection see Riefa (n 365) 625-633.

## 1.2. Consumer Rights Directive

The Consumer Rights Directive 2011/83/EU (CRD)<sup>507</sup> establishes requirements concerning B2C contracts and for the context of contract formation. It is another instrument of consumer law horizontally applicable<sup>508</sup> and based on the principle of maximum harmonization,<sup>509</sup> albeit subject to important carve-outs from the harmonized field to the question of the regulation of OCA in EU acquis.<sup>510</sup>

The most important provisions of the CRD for the legal evaluation of OCA include the regulation of consumer consent to payment obligations and their presentation, the extensive pre-contractual transparency obligations and rules pertaining to the exercise and interface presentation of the right to withdrawal. With particular relevance to the legal assessment of OCA, an amendment to the CRD was recently made with Directive 2023/2673,<sup>511</sup> explicitly addressing online choice architecture and introducing a prohibition of designs referred to as dark patterns in Recital 42 of Directive 2023/2673, which will enter into application in June of 2026, although the prohibition it is very limited in scope.

To gain an understanding of the assessment of online choice architectural designs under the CRD, relevant provisions and their respective bearing on the legal assessment of OCA and legal uncertainty in EU acquis will be examined.

---

<sup>507</sup> CRD (n 6).

<sup>508</sup> Ibid Art. 3.

<sup>509</sup> Ibid Art. 4.

<sup>510</sup> Relevant carve-outs from the harmonized field of the CRD will be discussed in the following.

<sup>511</sup> Directive 2023/2673 (n 10).

### 1.2.1. Applicability to OCA and extended scope by Directive 2023/2673

In comparison to the UCPD, the material scope of the CRD is narrower,<sup>512</sup> extending to consumer contracts, for which the consumer ‘pays or undertakes to pay the price’ and the circumstances of contract conclusion,<sup>513</sup> including particularly the pre-contractual phase.<sup>514</sup> Nevertheless, the CRD remains applicable to a variety of online choice architectural designs, which do occur in the context of consumer contracts.<sup>515</sup> Particularly, since the 2019 Omnibus Modernization Directive, which has extended the scope of the CRD to OCA in the context of the conclusion of contracts, where the consumer does not make pecuniary payments, but instead discloses personal data, that is not strictly necessary for the trader to provide the consumer with digital content or a digital service.<sup>516</sup> The CRD can therefore be applied to OCA like common dark patterns that aim at the disclosure of the consumer’s personal data,<sup>517</sup> like ‘forced registration’<sup>518</sup> regardless of whether the consumer makes a monetary payment. The question of a direct or at least indirect causal link of privacy harm to financial harm with regard to the harmonized field established by the CRD does not pose itself, like it does for the UCPD.<sup>519</sup> ‘Privacy loss’ as a harm that is caused by multiple specific online choice architectural designs,<sup>520</sup> is therefore in itself a trigger for protection under the CRD.

---

<sup>512</sup> On the material scope of the UCPD and its applicability to OCA see above (III.1.1.1.).

<sup>513</sup> Ibid Art. 3 (1) CRD as amended by Art. 4(2)(a) of the 2019 Omnibus modernization Directive (n 218).

<sup>514</sup> See below (III.1.2.2).

<sup>515</sup> For example the dark patterns ‘roach motel’, ‘intermediate currency’, ‘sneak into basket’, ‘hidden costs’, ‘hidden subscription’, ‘immortal account’, ‘personalized pricing and ranking’, for a short description of these patterns see DG JUST Study (n 45) 62-68; to the same effect and adding the example of ‘loot boxes’ see also OECD (n 51) 68-69 and 71.

<sup>516</sup> Art. 3 (1a) CRD as amended by Art. 4(2)(b) of the 2019 Omnibus modernization Directive (n 218).

<sup>517</sup> On prevalence of dark pattern having the data disclose unnecessary data, see OECD (n 51) 25; Santos, Morozovaite and De Conca (n 164) 3.3.1.; see also Leiser and Caruana (n 180) 244.

<sup>518</sup> On the dark pattern ‘forced registration’ see above (II.2.2.).

<sup>519</sup> On the material scope of the UCPD and the question of the harmonized field with regard to a causal link to economic loss of the consumer see above (III.1.1.1.).

<sup>520</sup> See for example the dark patterns described as ‘forced disclosure of personal data’ or ‘forced registration’ having the consumer disclose data through registration not necessary to provide the service, dark patterns of default settings aiming at having the consumer disclose personal data and accept cookies for data collection; see on their prevalence OECD (n 51) 17, 19; on OCA causing ‘privacy loss’ by making consumers share more data

Another notable amendment to the CRD's material scope is made by Directive 2023/2673, which will enter into application in June of 2026.<sup>521</sup> The scope of specific provisions of the CRD is expanded to cover financial services<sup>522</sup> which were previously excluded from the scope of applicability by Art.3 (d) of the CRD. This has rendered applicable the CRD to OCA practices that were previously excluded from its scope, although the provisions specifically addressing OCA were partially restricted to only apply to financial contracts.<sup>523</sup>

### **1.2.2. Transparency obligations and online interface presentation assessed by the average consumer standard**

Consistent with the central role of information in the normative framework of traditional Consumer law,<sup>524</sup> the CRD imposes transparency obligations on traders pursuant to Articles 6, 6a and 16a, which concern the pre-contractual phase 'before a consumer is bound'.<sup>525</sup> The pre-contractual information obligations imposed by the CRD are more extensive than those transparency obligations imposed by Art. 7 (4) of the UCPD.<sup>526</sup>

Importantly, as OCA concerns interface design and with particular relevance to OCA that hides or obscures information, thereby making it difficult for the consumer to process, notice and

---

or allowing their data to be used for more purposes see Santos, Morozovaite and De Conca (n 164) 3.3.1. ; see also Leiser and Caruana (n 180) 244.

<sup>521</sup> Art. 2 Directive 2023/2673 (n 10).

<sup>522</sup> Ibid Art. 1(1) amending Art. 3 of the CRD (n 6).

<sup>523</sup> On this provision see below (III.1.2.3.).

<sup>524</sup> On centrality information in the consumer law normative framework, see above (III.1.1.3.5.); on the CRD as an embodiment of the information paradigm see Sibony and Helleringer (n 39) 618-619.

<sup>525</sup> CRD (n 6) Art. 6, Art. 6a and Art. 16a as amended by Art. 1(4) of Directive 2023/2673 (n 10).

<sup>526</sup> UCPD Guidance (n 8) 1.2.3. 'Interplay with the Consumer Rights Directive.'

consider information before making a choice,<sup>527</sup> these transparency obligations also concern the presentation of information.

Regarding distance contracts that do not concern financial services or online marketplaces, Art. 6 (1) CRD obliges for information to be ‘clear and comprehensible’ and Art. 8(1) CRD further obliges for information required by Art. 6 (1) CRD to be provided in ‘plain and intelligible language’ and for it to be ‘legible,’ which is mirrored in Art. 8 (1) CRD on formal requirements. These notions like ‘clear and comprehensible’ that describe the way in which information is to be presented are not defined in the CRD. Only language requirements to ‘ensure that information is easily understood by the consumer’ are subject to a carve-out from full harmonization,<sup>528</sup> while the formal requirements of Art. 8 CRD are subject to full harmonization, excluding Member States from further clarifying requirements.

Art. 8 (2) CRD further contains another specific obligations, which is an online interface design-specific requirement to provide for an ‘order with obligation to pay button’, which must be unambiguously labeled as such. Important information<sup>529</sup> must be displayed ‘directly before a consumer places his order’ and the interface must be designed to display it in a ‘clear and prominent manner.’ Research has shown that the position of the order button has incidence on consumer choice and can increase likelihood of a purchase.<sup>530</sup> However, it remains unspecified how information must be displayed to be considered ‘prominent’, or how the button must be designed to be ‘easily legible’ on an online interface and case-law of the ECJ concerning the order button under Art. 8(2) has not addressed this question.<sup>531</sup>

---

<sup>527</sup> For example the dark patterns ‘intermediate currency’ and ‘hidden information’ see above (II.2.2.); see also DG JUST Study (n 45) 30.

<sup>528</sup> CRD (n 6) Art. 7.

<sup>529</sup> Information pursuant to Art. 6(1) (a) (e) (o) and (p) CRD (n 6).

<sup>530</sup> OECD (n 51) 12 (footnotes of supporting literature omitted).

<sup>531</sup> On uncertainties regarding the interpretation of Art. 8(2) CRD and OCA, specifically the dark pattern of ‘Hidden subscriptions’ see also Roşca (n 490) 6.5.3.B ‘Obfuscating subscription information’.

A first source of uncertainty regarding transparency obligations pursuant to Articles 6 and 8 CRD, therefore lies in the nuanced ways in which information can be presented in the digital environment. OCA can be designed in numerous ways, that technically present information, but impede on the consumer's capacity and likelihood to process or consider that information.<sup>532</sup> Examples reach from the display of information in an obscured manner, making information less noticeable due to font, color, size or placement of information on the interface,<sup>533</sup> to providing the consumer with too much additional information, thereby inducing information overload, meaning the consumer can no longer process information presented.<sup>534</sup> In light of the lack of conclusive interpretative guidance on notions like 'clear and comprehensible' or what constitutes 'prominent' display on the online interface offered in case-law by the ECJ, it remains ultimately unclear how online interfaces must be designed to comply with these obligations.<sup>535</sup>

A second source of uncertainty concerns the perspective from which these notions, such as information being 'comprehensible' must be determined. The emphasis on clarity of language opposing the vagueness of notions like 'clear and comprehensible' which describe presentation of information, can be understood as mirroring the traditional consumer image, which expects the consumer to procure and to be able to process and competently assess all available

---

<sup>532</sup> See for example dark patterns 'hidden information' and 'false hierarchy' above (II.2.2.); on the increasing likelihood to make a purchase see OECD (n 51) 12 with further references; see also DG JUST Study (n 45) 35.

<sup>533</sup> For concrete examples of how information can be presented, but in ways that make it harder to notice and consider information in different ways see the DG JUST Study (n 45) 180, 281, 282.

<sup>534</sup> Referring to additional information to requirements of the CRD. On how OCA can induce information overload see the DG JUST Study (n 45) 35 and 86; Information overload is often discussed with reference an efficiency critique of existing extensive transparency requirements beyond the scope of this thesis. For such an analysis see Rolf H Weber, 'The Disclosure Dream – Towards a New Transparency Concept in EU Consumer Law' (2023) 2 EuCML 67.

<sup>535</sup> Likewise Roşca (n 490) 6.5.3.B 'Obfuscating subscription information' and 6.9.2. 'The effectiveness of the current legal framework'.

information.<sup>536</sup> This contradicts insights from behavioral psychology.<sup>537</sup> Nonetheless and although the unlike the UCPD, the CRD has not codified the average consumer model as the standard for protection, it is consistently applied in case law of the ECJ.<sup>538</sup> Additionally even when not explicitly referring to the average consumer standard, the ECJ has adopted an according understanding of the standard of protection afforded to the consumer. For instance, while Art. 8 (2) prescribes that information must be displayed ‘directly before’ an order,<sup>539</sup> in *Tiketa* the ECJ ruled that the CRD ‘merely manages the content of the pre-contractual information to be provided to the consumer’<sup>540</sup> and inferred that information requirements pursuant to Art. 6 (1) CRD may therefore be presented in the terms and conditions on a website,<sup>541</sup> applying a standard that ignores that it is unlikely for the average person to read them, notably also after the Commission Guidance advocated for stricter rules on online presentation.<sup>542</sup> The very limited scope of the provisions of the CRD that provide more clarity on presentation of the online interface<sup>543</sup> or even present real deviations from the *traditional* consumer image<sup>544</sup> to only certain specific online contracts in very recent amendments to the

---

<sup>536</sup> Cf. Martin Brenneke, 'Regulating Dark Patterns' (2024) 14 Notre Dame J Int'l Comp L 39, 61; conversely the right to withdrawal granted to distance and off-premises contracts under Art. 9 CRD, could be interpreted as a departure from the traditional average consumer image and their capabilities to protect themselves, see to that effect Gelbrich and Legner (n 37) 9.

<sup>537</sup> For contradictory findings on how people process information and the role of the presentation of information on the interface, see for example OECD () 12; CRRE (n 1) 33; see also DG JUST Study (n 45) 35.

<sup>538</sup> For an analysis of the application of the average consumer law standard under the CRD see Joasia Luzak, ‘The Steady Creep of an Average Consumer as a Reference Consumer in the Assessment of the Transparent Provision of Mandatory Information’ (2025) Journal contribution to Tijdschrift voor Consumentenrecht & Handelspraktijken (first published in 2020) available under <<https://hdl.handle.net/10871/122942>> accessed 22.12.2025; for a recent example pertaining specifically to the presentation of information and using the same formula of the average consumer as ‘reasonably well informed and reasonably observant and circumspect’ see ECJ C-249/21 *Fuhrmann-2-GmbH v B.* (2022) OJ C213/20, para. 33.

<sup>539</sup> See also ‘displayed in the close vicinity of the confirmation’ Recital 39 CRD (n 6).

<sup>540</sup> ECJ C-536/20 *Tiketa UAB v M.S.* (2022) OJ C165/16; the ECJ refers to ECJ C-430/17 *Walbusch Walter Busch GmbH & Co. KG v Centrale zur Bekämpfung unlauteren Wettbewerbs Frankfurt am Main eV.* (2019) OJ C93/13, para.43, in which the ECJ had in fact applied average consumer standard, para.39.

<sup>541</sup> *Tiketa* (n 540) para.46.

<sup>542</sup> On the implications for the *Tiketa* ruling and possible implications for the legal evaluation of OCA see also Roşca (n 490) 6.5.3.B ‘Obfuscating subscription information.’

<sup>543</sup> Pursuant to 6a of the CRD as amended by Art. 4(5) of the 2019 Omnibus modernization Directive (n 218).

<sup>544</sup> Art. 16e affords the consumer a higher level of protection than would be needed to protect the *traditional* average consumer, instead mirroring the average consumer in *Compass Banca*, see above (III.1.1.3.5.) and *Compass Banca v AGCM* (n 303) Opinion of AG Emiliou, para. 42.

CRD, could also be interpreted as the intention of the legislator to maintain the average consumer standard for the majority of distance contracts.

However, in the recent *Compass Banca* ruling, the ECJ has adopted a more nuanced understanding of the average consumer image by acknowledging that cognitive biases and other unspecified ‘constraints’ on decision-making may affect consumer choice.<sup>545</sup> Still, it remains to be seen to what extent influences such as different presentation of information on interfaces are acknowledged as capable of affecting the average consumer. Although the ECJ has been in favor of a consistent application of the standard to different directives of consumer law,<sup>546</sup> the accommodation for effects of OCA as a specific influence remains questionable, considering that the CRD, unlike the UCPD, does specifically address certain online choice architectural designs, but the legislator has limited the scope of that protection to financial services, distinguished by their ‘complexity and inherent serious risks’.<sup>547</sup> Conversely, Art. 11a CRD also acknowledges the possible manipulation by presentation on the online interface and Art. 22 CRD acknowledges and protects the consumer from default bias,<sup>548</sup> whereby two provisions of the CRD with a wider scope also deviate from the traditional average consumer standard for protection.

More legal certainty in the evaluation of the presentation of OCA is afforded to contracts and the pre-contractual mandated information obligations the CRD imposes on online marketplaces, pursuant to Art. 6a CRD as inserted in 2019.<sup>549</sup> Art. 6a (1)(a) CRD obliges the

---

<sup>545</sup> *Compass Banca v AGCM* (n 303) para. 59; on the interpretation of the average consumer standard of protection in light of this ruling, see above (III.1.1.3.5.).

<sup>546</sup> Cf. Luzak (n 538) 19.

<sup>547</sup> Recital 41 Directive 2023/2673 (n 10).

<sup>548</sup> On Art. 22 and the integration of bias into the protected consumer image, see Brenncke (n 536 ‘Regulating Dark patterns’) 51-52.

<sup>549</sup> Art. 4(5) 2019 Omnibus modernization Directive (n 218).

trader to display required parameters for rankings, in a ‘specific section of the online interface that is directly and easily accessible from the page where the offers are presented.’

This complements the requirements of Art. 7(4)(a) UCPD, whose interplay provides a more certain legal framework for online choice architectural design of rankings.

Some uncertainty regarding the presentation of other additional information pursuant to Art. 6a does remain, as Art. 6a(1) restates the rather vague obligation to provide ‘clear and comprehensible’ information. To note here, that Art. 6a(2) CRD contains a carve-out from full harmonization, allowing Member States to adopt additional information requirements, so the presentation of additional information for online marketplaces is not exhaustively regulated in EU acquis; Member States are not kept from clarifying them in national law.

### **1.2.3. Specific online interface design obligations for financial services**

The most legal certainty for digital interface design is provided for the limited scope of financial services by Art. 16e CRD, which has been added to the CRD by Directive 2023/2673.<sup>550</sup> It is specifically tailored to address OCA and obliges Member States to prevent by law the design, organization or operation of interfaces that ‘deceives or manipulates consumers’ or ‘otherwise materially distorts or impairs their ability to make free and informed decisions.’

Regarding the assessment of deception and manipulation or ‘other’ impairment, while it is explicitly still only the ‘*ability* to make free and informed decisions’<sup>551</sup> that is protected, the provision represents a deviation from the traditional average consumer standard for protection,

---

<sup>550</sup> Art. 1(4) Directive 2023/2673 (n 10).

<sup>551</sup> [emphasis added]; On the relation of the protection of (only) the ability to make choices and the average consumer standard for protection, see above (III.1.1.3.5.).

in that the provision is intended to explicitly protect the consumer from biases,<sup>552</sup> with additional rules on how online interfaces must be designed, so as not to ‘distort or impair the consumer’s ability to make a free, *autonomous* and informed decision or choice’.<sup>553</sup> The provision is drafted in the same statutory language as Art. 25(1) DSA, which mirrors an understanding that does not mirror the *homo economicus*, but instead adopts a normative understanding of the consumer as displaying bounded rationality and willpower.<sup>554</sup> Recital 41 of Directive 2023/2673 acknowledges that consumers may be deceived or nudged, even where information is factually presented, through the design of the interface, including ‘by presenting choices in a non-neutral manner, such as giving more prominence to certain choices’, like for the dark pattern ‘false hierarchy.’<sup>555</sup> On the difference of the reflected consumer image as opposed to other provisions of the CRD, it can also be noted that Directive 2023/2673 does not only emphasize language requirements, but provides for a more detailed description of ‘clear and comprehensible’ on online interfaces and addresses details pertaining to the presentation of information that are left unclarified for other transparency obligations of the CRD.<sup>556</sup>

The Recitals of Directive 2023/2673 provide guidance on the appropriate way to implement OCA to comply with these provisions, specifically addressing different techniques that can be used. In Recital 30 it is clarified that the display of information in different sizes, and colors can diminish readability and that information hidden in small print or with hyperlinks ‘diminish the understanding of consumers.’ Recital 31 further addresses online interface designs for

---

<sup>552</sup> European Commission, ‘Proposal for a Directive of the European Parliament and of the Council amending Directive 2011/83/EU concerning financial services contracts concluded at a distance and repealing Directive 2002/65/EC’ COM (2022) 204 final, Explanatory Memorandum 1 and 5(2)(2)(c); see also the discussion of biases and influence of OCA on consumer choice in the accompanying European Commission Staff Working Document ‘Impact Assessment Report Accompanying the document Proposal for a Directive of the European Parliament and of the Council amending Directive 2011/83/EU concerning financial services contracts concluded at a distance and repealing Directive 2002/65/EC’ (2022) SWD 141 final, Annex 9 Glossary.

<sup>553</sup> Ibid Proposal, Explanatory Memorandum 1 and 5(2)(2)(c).

<sup>554</sup> On the Art. 25(1) DSA see below (III.2.1.); on bounded rationality and willpower see above (II.1.).

<sup>555</sup> On the dark pattern false hierarchy see above (II.2.2.).

<sup>556</sup> Thereby the consumer is not expected to be perfectly capable to process and competently consider all information technically presented, if it is presented in a manipulating manner.

mobile telephone screens and states that the most important information should be displayed prominently, which is clarified to mean it may not be layered on the interface. Recital 32 provides detailed information on the layering of information and ‘clear and comprehensible’ display of information and Recital 33 addresses the possibility of using a table of contents to provide the consumer with a better overview of important information and empower them to review it at their convenience.

The legislative text only implicitly refers to OCA, by referencing interface design and specific design choices. However, Recital 41 Directive 2023/2673 also refers explicitly to nudging and dark patterns and references the prohibition of dark patterns for service providers operating on online platforms of the DSA<sup>557</sup> to state that as a complementary act ‘this Directive should oblige Member States to prevent traders offering financial services at a distance from using such patterns when concluding contracts for such services.’

Beyond the general obligation to prevent dark patterns, Art. 16e(1)(a)-(c) CRD addresses multiple specific forms of dark patterns. First Art. 16e(1)(a) addresses those dark patterns that give ‘more prominence to certain choices when asking the consumers who are recipients of their service for a decision’. This addresses multiple uncertainties that remain in the other provisions pertaining to the presentation of information in the CRD, since this provision is applicable to many different ways interfaces can be designed to leverage biases and heuristics of the user even when information is technically presented but distorted, for example with different fonts, font sizes and colors.<sup>558</sup>

---

<sup>557</sup> For a discussion of the prohibition of dark patterns in the DSA (n 11) see below (III.2.1.).

<sup>558</sup> On the biases targeted and the psychological effects these techniques are based in see Martin Brenneke, ‘A Theory of Exploitation for Consumer Law: Online Choice Architectures, Dark Patterns and Autonomy Violations’ (2023) 47 *Journal of Consumer Policy* 2024 127, 142-144.

Art. 16e(1)(b) CRD further addresses repeated requests where a choice has already been made, ‘especially by presenting pop-ups that interfere with the user experience.’ This pertains to ‘nagging’ dark patterns, which ‘exploit the consumer’s limited willpower or time.’<sup>559</sup>

Lastly, Art. 16e(1)(c) CRD aims at all dark patterns that make ‘the procedure for terminating a service more difficult than subscribing to it’, thereby addressing dark patterns, designed in different ways that fall under the pattern of ‘hard to cancel’, otherwise referred to as ‘roach motel’.<sup>560</sup>

However, beyond the general prevention of dark patterns, Art. 16e CRD does not oblige Member States to adopt provisions pertaining to all three of the specific practices of Art. 16e(1)(a)-(c) CRD, but only to address one of the three practices. As Art.16e(1) CRD clarifies that it is without prejudice to the UCPD, thereby practices that are not subject to the specific rules pursuant to Art. 16e(1)(a)-(c) of the CRD are subject to case-by-case assessment of the UCPD.<sup>561</sup> Further, Art. 16e(2) CRD provides for a carve-out from full harmonization, leaving the possibility to adopt more ‘more stringent provisions’ in conformity with other Union law to the discretion of the Member States.

Lastly, it must be noted that the three practices are covered by the scope of the UCPD and the interplay of these provisions is not clarified.<sup>562</sup>

---

<sup>559</sup> OECD (n 51) 10; on nagging see above (II.2.2.); see also ‘bound willpower’ above (II.1.).

<sup>560</sup> On ‘the dark patterns hard to cancel’ and ‘roach motel’ see above (II.2.2.).

<sup>561</sup> Cf. DF Fitness Check (n 184) 54-55.

<sup>562</sup> Whittle and others for DG JUST (n 241) 317.

#### **1.2.4. Presentation of the right to withdrawal for contracts concluded via online interface**

The right to withdrawal pursuant to Art. 9 of the CRD offers a legal remedy to manipulation by all forms of choice architectural designs occurring before or during contract conclusion implicitly, by offering the possibility of withdrawal ‘without giving any reason’.<sup>563</sup> The condition for a consumer to exercise that right would however necessarily be the perceptibility of the practice, which often excludes hypernudging,<sup>564</sup> and that the consumer would become aware of having been manipulated. Nevertheless, if the consumer recognizes having been manipulated, the right to withdrawal can prevent the consumer from unsuitable products and especially financial loss<sup>565</sup> caused by certain dark patterns like hidden costs the consumer only notices after contract conclusion<sup>566</sup> or ‘sneak into basket’.<sup>567</sup>

Having touched on the right to withdrawal as implicitly addressing the effects of certain choice architectural designs, the exercise of the right to withdrawal in the digital environment is itself also subject to different possibilities of choice architectural design, that can make it easier or more difficult for the consumer to exercise that right.

Directive 2023/2673 has introduced Art. 11a to the CRD, which is not part of the additional Chapter IIIa on rules concerning financial contracts like Art. 16e CRD, its scope extends to the conclusion of other distance contracts concluded on online interfaces within the scope of the

---

<sup>563</sup> On the right to withdrawal as a remedy to algorithmic manipulation see Hacker (n 34) 170.

<sup>564</sup> On the imperceptibility or hiddenness of hypernudging see II.2.1.2.

<sup>565</sup> On ‘sneak into basket’ and ‘hidden costs’ as causal for financial loss, see OECD (n 51) 24 .

<sup>566</sup> On the dark pattern ‘hidden costs’ see above (II.2.2.).

<sup>567</sup> ‘Sneak into basket’ is a pattern, that added items to the basket of the consumer without their active participation, on the definition of ‘sneak into basket’ see DG JUST Study (n 45) 30 and 32, and for concrete examples 49 Figure 6 and 296; see also the reference to consumer organizations evaluation of the right to withdrawal as pivotal in this context in Impact Assessment Report SWD 141 final (n 518) Annex II 4),d).

CRD as well.<sup>568</sup> Pursuant to Art. 11a(1) CRD traders are obligated to offer a withdrawal function, which must contain unambiguous labeling and be easily legible. Further, the function must be ‘continuously available throughout the withdrawal period’ and ‘prominently displayed on the online interface and easily accessible to the consumer’.

The provision addresses OCA that can be defined as ‘sludge.’<sup>569</sup> These design or organize the online interface in a way that makes it unnecessarily difficult for consumers to exercise their right of withdrawal. Thereby they nudge them not to do so, albeit possible for the homo economicus, not subject to bounded willpower and limited time.<sup>570</sup> Recital 37 of Directive 2023/2673 provides the example of having to perform the additional task of downloading an application to find or access the withdrawal function, when the contract was concluded on a website. Further, Recital 36 proposes the more precise obligation to make the right of withdrawal ‘not more burdensome than the procedure for the conclusion of the distance contract’, which would directly address the dark pattern ‘hard to cancel’ albeit non-binding.<sup>571</sup> Art. 11a(1) CRD also adopts a different consumer image than the traditional average consumer standard implies, in that the consumer is not expected to competently assess and process all provided information, irrespective of its presentation on the interface. This is supported by Recital 37 of Directive 2023/2673, which provides that the function is intended to ‘increase awareness and simplify the possibility’ for the consumer to exercise their right of withdrawal.

While Art. 11a(1) CRD therefore offers more detailed requirements on presentation for the right to withdrawal and is an online interface-design specific provision, similarly to the question of how the order button pursuant to Art. 8 (2) CRD must be displayed to be considered

---

<sup>568</sup> Art. 11a (1) CRD as introduced by Art. 1(3) Directive 2023/2673 (n 10); see also further clarification by Recital 37 of Directive 2023/2673.

<sup>569</sup> On sludge and frictions see above (II.2.1.3.).

<sup>570</sup> On bounded willpower see above (II.1.).

<sup>571</sup> On the dark pattern ‘hard to cancel’ otherwise referred to as ‘roach motel’ see above (II.2.2.).

prominently placed, it remains unclear how the withdrawal button must be placed to be ‘easily accessible.’<sup>572</sup>

### **1.2.5. CRD Consent obligations and online choice architectural design**

OCA referred to as the dark pattern ‘preselection’ or ‘defaults,’ leverage ‘status quo bias’ making it more likely for a person to follow the chosen option<sup>573</sup> and add friction for a person to choose a less beneficial option to the choice architect,<sup>574</sup> thereby leveraging bounded willpower.<sup>575</sup>

Art. 22 of the CRD addresses these choice architectural designs by subjecting payment obligations that are additional to the main contractual obligation to the ‘express consent’ of the consumer, thereby excluding the possibility of inferring consent from default options ‘the consumer is required to reject.’ The Consumer is in these cases entitled to reimbursement. This provision is applicable to the dark patterns of preselection<sup>576</sup> in combination with the pattern hidden costs.<sup>577</sup> Art. 22 CRD especially can apply to hidden costs under circumstances, where legal evaluation under Art. 6(1)(e) CRD which prohibits hidden costs might be unclear, because the costs are being presented, but in ways that make it difficult for the consumer to consider them.<sup>578</sup> In the case of the dark pattern hidden costs in combination with preselection, more

---

<sup>572</sup> Likewise CRRE (n 1) 36.

<sup>573</sup> OECD (n 51) 9.

<sup>574</sup> Cf. sludge above (II.2.1.3.).

<sup>575</sup> On bound willpower see above (II.1.); on preselection and hurdles to undoing the default option see also DG JUST Study (n 45) 37 .

<sup>576</sup> Likewise OECD (n 51) 69; DG JUST Study (n 45) 73; Similarly Fletcher and Busch for CRRE (n 1) 20.

<sup>577</sup> Likewise Leiser and Caruana (n 180) 244; OECD (n 51) 69; on the dark patterns ‘preselection’ and ‘hidden costs’ see above (II.2.2.).

<sup>578</sup> On uncertainties regarding the legal evaluation presentation of information see above (II.1.2.2.).

legal certainty is therefore afforded than for other dark patterns. However, the scope is ultimately limited, as only applying to additional costs.

#### **1.2.6. Conclusion on the CRD's bearing on the legal assessment and uncertainty of OCA**

The analysis of the CRD reveals two different approaches, characterized by vague principles-based obligations that incorporate a normative understanding of the consumer closer to the homo economicus<sup>579</sup> and provisions that incorporate the findings of behavioral psychology that underpin the manipulative effect of online choice architecture.

The primary source of legal uncertainty lies again in the broad wording of the principles-based transparency requirements and the application of the average consumer standard to transparency requirements. Though not codified, it serves as a yardstick for evaluation entirely on the basis of case law of the ECJ.<sup>580</sup> Even requirements like the order button pursuant to Art. 8 (2) CRD, which seemingly incorporated insights from behavioral psychology, in *Tiketa* the ECJ has ruled to apply the average consumer standard, which counteracts this, notably a year after the CRD Commission Guidance had advocated for an interpretation in favor of stricter rules on online transparency. In this specific case this has more nuanced implications for the legal uncertainty that otherwise characterizes the standard, because it has clearly allowed for information requirements to be presentenced in the terms and conditions. The implications of *Compass Banca* remain unclear.

---

<sup>579</sup> Similarly Brenneke (n 536 'Regulating Dark patterns') 61, although not using the term homo economicus.

<sup>580</sup> On the application of the average consumer law standard under the CRD see Luzak (n 538) 5-12.

The CRD includes positive obligations, which lend themselves better to the determination of how interfaces must be designed, than negative prohibitions. The specific design mandates incorporating behavioral insights, pursuant to Art. 22 CRD addressing the specific patterns of ‘hidden costs’ combined with ‘preselection’<sup>581</sup> and especially the newly inserted positive design obligation for the withdrawal button pursuant to Art. 11a CRD addressing OCA that can be defined as ‘sludge’<sup>582</sup> offer much more conclusive regulation, that actually allows evaluation of the realities of digital design, albeit still not entirely clear.<sup>583</sup> Notions like ‘prominent’ display on online interfaces should be clarified.

The most notable evaluation regarding regulation that is equipped to assess the realities of OCA is Art. 16e CRD, which directly addresses dark patterns. However, the limited scope renders Art.16e less determinative in the assessment of the legality of OCA in EU law. Given the certainty this provision could have afforded to the legal evaluation of OCA, through explicitly recognizing the concept, it is regrettable that this provision has not been extended to the full scope of the CRD. Ideally, it would have been inserted in the UCPD,<sup>584</sup> which would have provided a standard to assess the steering effects of digital practices for the vast majority of OCA. It would have also aided in avoiding the persistent uncertainties after *Compass Banca* on implications the integration of deviations from rational decision-making into the average consumer standard have on the assessment of digital manipulation.<sup>585</sup>

The choice to instead limit the scope of the provision, and mention of the heightened need for protection in light of the ‘complexity and inherent serious risks’<sup>586</sup> of financial services could

---

<sup>581</sup> On the dark patterns ‘preselection’ and ‘hidden costs’ see above (II.2.2.).

<sup>582</sup> On the definition of ‘sludge’ see above (II.2.1.3.).

<sup>583</sup> Similarly CRRE (n 1) 20, 29.

<sup>584</sup> Likewise in favor of the insertion of a duty by design provision Whittle and others for DG JUST Study (n 45) 345; see also CRRE (n 1) 20-21; see also DF Fitness Check (n 184) 150.

<sup>585</sup> See above (III.1.1.3.5.); see also CRRE (n 1) 20-21.

<sup>586</sup> Recital 41 Directive 2023/2673 (n 10).

instead point to the intention not to intergrade this standard, but in this case the application average consumer standard in favor of more design freedom of the trader should be clarified.

### **1.3. Unfair Contract Terms Directive**

The Unfair Contract Terms Directive 93/13/EEC (UCTD)<sup>587</sup> is another instrument of consumer law, horizontally applicable to consumer contracts across ‘all sectors of economic activity’.<sup>588</sup>

The UCTD, conversely to the UCPD and CRD, is based on the principle of *minimum* harmonization, allowing Member States to provide for a higher level of consumer protection, with more stringent or detailed provisions than those of the UCTD, or their transposition into national law with a broader scope.<sup>589</sup> Therefore, the legal assessment of online choice architecture under the UCTD is not conclusively regulated on the European level but necessarily requires the consideration of the national law of Member States.<sup>590</sup>

The UCTD adopts a principles-based approach<sup>591</sup> to assess the fairness of contract terms ‘which have not been individually negotiated’,<sup>592</sup> providing for the non-binding nature of unfair contract terms.<sup>593</sup> It also provides for certain rules on the presentation of contract terms to be considered for the assessment of fairness.<sup>594</sup>

To gain an understanding of the bearing that the UCTD has on the assessment of online choice architecture and sources for uncertainty, this chapter assesses the scope and applicability of the

---

<sup>587</sup> UCTD (n 7).

<sup>588</sup> ECJ C-290/16 *Air Berlin plc & Co. Luftverkehrs KG v Bundesverband der Verbraucherzentralen und Verbraucherverbände - Verbraucherzentrale Bundesverband eV* (2017) OJ C283/10, para.44.

<sup>589</sup> Art. 8 UCTD (n 7); see also European Commission, ‘Guidance on the interpretation and application of Council Directive 93/13/EEC on unfair terms in consumer contracts’ (2019) OJ C323/4 (UCTD Guidance), 18.

<sup>590</sup> Cf. UCTD Guidance Ibid 6.

<sup>591</sup> Ibid 6.

<sup>592</sup> Art. 3 UCTD (n 7); Member States can choose to expand the scope of the transposing national law.

<sup>593</sup> Ibid Art. 6(1).

<sup>594</sup> Ibid Articles 4(2) and 5.

UCTD to OCA and the legal evaluation of OCA under transparency requirements for contract terms.

### **1.3.1. Scope and applicability to online choice architecture**

The UCTD has a different scope than the CRD in that it concerns the content of contractual terms and is conditioned on the existence of a contractual relationship.<sup>595</sup> Consequently, the UCTD only has a bearing on the assessment of OCA if a contractual relationship has been established.

Since the employment of OCA is often aimed at obtaining personal data of the consumer, irrespective of monetary compensation,<sup>596</sup> an essential question is that of whether the disclosure of personal data is treated as a ‘consideration’ of the consumer.

In the absence of a provision that regards monetary compensation as comparable to the disclosure of data as provided for in the CRD<sup>597</sup>, the question must be answered with regard to the interpretation of the ECJ. The ECJ has not explicitly addressed the applicability of the UCTD to contracts that obligate the consumer to disclose personal data.

Yet, the ECJ has applied the UCTD to considerations that were not monetary, as likewise pointed out by the Commission Guidance.<sup>598</sup> In the UCTD Guidance the Commission thereby deduces that the UCTD applies to contracts where the ‘consideration for the services consists in consumer generated content and profiling’.<sup>599</sup> Initiatives by the Commission against the

---

<sup>595</sup> Art. 4(1) UCTD (n 7) circumstances to be considered ‘at the time of conclusion of the contract’.

<sup>596</sup> Cf. OECD (n 51) 25; Santos, Morozovaite and De Conca (n 164) 3.3.1.; Leiser and Caruana (n 180) 244.

<sup>597</sup> Art. 3 (1a) CRD as amended by Art. 4(2)(b) of the 2019 amending modernization Directive (n 262).

<sup>598</sup> UCTD Guidance (n 589) 12 (footnotes on case-law of the ECJ omitted).

<sup>599</sup> Ibid (n 589) 12.

contract terms of social media platforms that pertain to the disclosure of personal data and judgments following similar initiatives on the national level of Member States have adopted this understanding, applying the UCTD to such terms, whether monetary consideration was part of the contractual relationship or not.<sup>600</sup> Accordingly, this seems to be the prevalent understanding. The EU General Data Protection Regulation<sup>601</sup> can also be interpreted in favor of the applicability of the UCTD to not-individually negotiated data-processing clauses, that have the consumer as the data subject provide consent for the processing of their personal data.<sup>602</sup>

Besides the limitation on the bearing that the UCTD may have on the legal assessment of OCA owed to the necessity of an established contractual relationship, the UCTD remains applicable to online choice architecture in two expressions. First, the UCTD is applicable to the presentation of the non-individually negotiated contract terms themselves, that constitute OCA.<sup>603</sup> Additionally the assessment of the fairness of contractual terms may further include manipulation of the consumer by online choice architectural design on interfaces like websites outside of the contract terms themselves, if they ‘at the time of the conclusion of the contract’ formed part of ‘all the circumstances attending the conclusion of the contract and to all the other terms of the contract or of another contract on which it is dependent’ pursuant to Art. 4(1) UCTD.<sup>604</sup>

---

<sup>600</sup> Cf. Mateja Durovic and Joseph Poon ‘Consumer Vulnerability, Digital Fairness, and the European Rules on Unfair Contract Terms: What Can Be Learnt from the Case Law Against TikTok and Meta?’ (2023) 46 *Journal of Consumer Policy* 419 <<https://link.springer.com/content/pdf/10.1007/s10603-023-09546-7.pdf>> accessed 05.12.2025.

<sup>601</sup> Art. 6 (1) interpreted in light of Recital 42 GDPR (n 203).

<sup>602</sup> Cf. Martin Ebers and Karin Sein, ‘Data-driven Technologies: Challenges for Privacy and EU Data Protection Law’ in Martin Ebers and Karin Sein (eds) *Privacy, Data Protection and Data-driven Technologies* (1 Routledge 2025), 10 (footnote on national judgments to that effect omitted).

<sup>603</sup> Cf. DG JUST Study (n 45) 22 and 74-15; OECD (n 51) 31 and 68-70; DF Fitness Check (n 184) 189.

<sup>604</sup> Cf. Leiser and Caruana (n 180) 243.

### **1.3.2. Evaluation of OCA under fairness and transparency of contractual terms assessed by the average consumer standard**

The evaluation of the fairness of individual contract terms pursuant to Art. 3(1) as the core element of the UCTD is subject to a case-by-case assessment of ‘good faith, balance and transparency’.<sup>605</sup> As mentioned in the previous section, online choice architecture even outside of the contract for example on the website offering a service, may be an element of the assessment of fairness, if it has a manipulative or deceptive effect on the consumer.<sup>606</sup>

To facilitate the assessment of unfair contract terms, the Annex of the UCTD provides for an ‘indicative and non-exhaustive list of the terms which may be regarded as unfair.’<sup>607</sup> The Annex is not a binding list of terms that are to be regarded as unfair under all circumstances, conversely to the per se prohibitions of Annex I UCPD, as clarified by the ECJ.<sup>608</sup> Instead, the Annex serves as ‘an essential element’ of the case-by-case assessment<sup>609</sup> of terms by national courts. Nevertheless, in accordance with the principle of minimum harmonization, Member States may adopt more stringent ‘grey lists’ or even ‘blacklists’ of terms regarded as unfair under all circumstances.<sup>610</sup> Many Member States opted to adopt more stringent lists,<sup>611</sup> whereby corresponding terms to terms in the list might be more definitive to the evaluation of fairness in national law.

With particular relevance to OCA, Annex (1)(h) designates ‘terms which have the object or effect of’ automatic extension of a contract without reasonable time for the consumer to express

---

<sup>605</sup> ECJ C-26/13 *Árpád Kásler, Hajnalka Káslerné Rábai v OTP Jelzálogbank Zrt* (2014) OJ C194/05, para. 71 with reference to earlier case-law.

<sup>606</sup> Cf. *Leiser and Caruana* (n 180) 243.

<sup>607</sup> Art. 3(3) UCTD (n 7).

<sup>608</sup> ECJ C-471/10 *Nemzeti Fogyasztóvédelmi Hatóság v Invitel Távközlési Zrt* (2012) OJ C174/7, para.26.

<sup>609</sup> *Ibid* para.26.

<sup>610</sup> ECJ C-143/13 *Bogdan Matei, Ioana Ofelia Matei v SC Volksbank România SA* (2015) OJ C138/4, para.61.

<sup>611</sup> For examples of Member States with black or grey lists, see *DF Fitness Check* (n 184) 186.

their ‘desire not to extend the contract’. Two specific articulations of dark patterns are thereby indicated to be potentially unfair. First the dark pattern ‘hard to cancel’<sup>612</sup> and secondly the dark pattern ‘hidden subscription’,<sup>613</sup> which entails the automatic renewal of a contract, against the consumer’s wishes or knowledge.<sup>614</sup>

Other than the indicative Annex, as consistent with the normative framework of consumer law,<sup>615</sup> the UCTD imposes transparency obligations pursuant to Art. 4 (2) and 5 UCTD. The ECJ has clarified that the assessment of the fairness of a term by national courts must, besides the requirement of good faith and balance, always also include the evaluation of transparency requirements,<sup>616</sup> which is a decisive factor for the evaluation of fairness under Art. 3 UCTD.<sup>617</sup>

Pursuant to Articles 4(2) and 5 UCTD contract terms ‘must be drafted in plain and intelligible language’ and Art. 5 UCTD further provides for terms that leave ‘doubt about the[ir] meaning’ to be interpreted in the most favorable way to the consumer.

The Guidance clarifies that the ECJ has interpreted these requirements broadly.<sup>618</sup>

The ECJ often refers to ‘the weakness’ of the consumer as opposed to the seller or supplier regarding ‘bargaining power and knowledge’.<sup>619</sup> The Court has repeatedly emphasized the importance of information ‘before the conclusion of the contract’ to decide ‘whether he [the consumer] wished to be bound by the terms previously drawn up by the seller or supplier.’<sup>620</sup>

---

<sup>612</sup> Otherwise referred to as ‘roach motel’ on these dark patterns see above (II.2.2.); on the applicability of the UCTD likewise OECD (n 51) 68; DG JUST Study (n 45) 62; see also DF Fitness Check (n 184) 149.

<sup>613</sup> otherwise referred to as ‘forced continuity.’

<sup>614</sup> OECD (n 51) 69; DG JUST Study (n 45) 63; DF Fitness Check (n 184) 149.

<sup>615</sup> On centrality information in the consumer law normative framework, see section III.1.2.3.5. of this thesis.

<sup>616</sup> ‘settled case-law’ ECJ C-125/18 *Marc Gómez del Moral Guasch v Bankia SA* (2020) OJ C161/2, para. 44 and 46 with references to earlier case law.

<sup>617</sup> *Invitel* (n 608) paras.27 and 28.

<sup>618</sup> UCTD Guidance (n 589) 25.

<sup>619</sup> *Gómez del Moral Guasch* (n 616) para. 43.

<sup>620</sup> ‘settled case-law’ ECJ C-186/16 *Ruxandra Paula Andriciuc and Others v Banca Românească SA* (2017) OJ C-186/16, para.47 with references to earlier case-law.

Accordingly the ECJ has stated that transparency requirements cannot ‘be reduced merely to their being formally and grammatically intelligible.’<sup>621</sup> Instead, contract terms are to be drafted to transparently enough to provide ‘clear intelligible criteria’, allowing the consumer to evaluate especially ‘the economic consequences’ for them.<sup>622</sup>

Thereby the transparency requirements pursuant to Art. 4(2) and 5 UCTD make OCA in the contract, which visually obscures important parts of contract terms or otherwise manipulates the consumer by means of the presentation of contract terms, relevant to the fairness assessment under Art. 3(1) UCTD. They could also be interpreted differently to the benefit of the consumer if they cause ambiguity to the meaning of the term under Art. 5 UCTD.<sup>623</sup>

Online choice architectural designs in contracts susceptible to be evaluated as contrary to transparency requirements of the UCTD include the dark patterns referred to as ‘trick questions’<sup>624</sup> entailing ‘(i)ntentional or obvious ambiguity to confuse consumer,’<sup>625</sup> and the dark pattern ‘hidden costs.’<sup>626</sup> The dark patterns hidden costs especially directly undermine the obligation to enable consumers to assess the economic consequences of a contract or specific term before they are bound, an obligation repeatedly emphasized by the ECJ.<sup>627</sup>

The ECJ has also interpreted the transparency requirements pursuant to Art. 4(2) and 5 UCTD with referral to the Annex,<sup>628</sup> in particular to Annex (1) (i) indicating that the consumer should have the ‘opportunity of becoming acquainted with the contract’ before being bound, which is

---

<sup>621</sup> *Kásler and Káslerné Rábai* (n 605) para.71.

<sup>622</sup> *Andriuc* (n 620) para.45 referencing earlier case-law including *Kásler and Káslerné Rábai* (n 605) para.75.

<sup>623</sup> Cf. DF Fitness Check (n 184) 149 read in conjunction with footnote 231; DG JUST Study (n 45) 47.

<sup>624</sup> DG JUST Study (n 45) 65; OECD (n 51) 70.

<sup>625</sup> *Ibid* DG JUST Study (n 45) 65.

<sup>626</sup> On the dark pattern hidden costs see above (II.2.2.); on how they might contravene the transparency requirements if used in contract terms likewise DG JUST Study (n 45) 63; OECD (n 51) 69.

<sup>627</sup> E.g. *Andriuc* (n 620) para.45 with references to earlier case-law; DG JUST Study (n 45) 63 with reference to ECJ C-609/19 *BNP Paribas Personal Finance SA v VE* (2021) OJ C297/7.

<sup>628</sup> As pointed out by the UCTD Guidance (n 589) 26.

particularly relevant to the specific online choice architectural design of the dark pattern ‘forced registration.’<sup>629</sup>

Nevertheless, some uncertainties for the evaluation of OCA with regard to the transparency requirements remain, especially with regard to the many possibilities presentation of Terms of Use, Privacy Policies and the Terms and Conditions on online interfaces.<sup>630</sup> Contracts may be presented in varied ways on an online interface, which affect the consumer’s ability to discern important contractual obligations positively or negatively.<sup>631</sup> For example, if different parts of the contract are split up into different parts on the interface, layered with additional information, this could benefit the consumer’s understanding of their contractual rights and obligations should they decide to be bound, if additional visual aids like icons, clearly labeled headings and useful division of information with hyperlinks<sup>632</sup> or mouseovers,<sup>633</sup> are provided, which the consumer to better find and process important information.<sup>634</sup> In turn, information can also be hidden or obscured with the same techniques, for example with misleading headings that make it unclear which elements are additional and which are actually part of the contract and will bind the consumer.<sup>635</sup> The fulfillment of transparency requirements under the UCTD by online choice architectural design may be evaluated differently ‘between the Member States and even within Member States.’<sup>636</sup>

---

<sup>629</sup> See OECD (n 51) 70; DG JUST Study (n 45) 66.

<sup>630</sup> On uncertainties regarding the presentation online see Marco Loos and Josia Luzak, ‘Update the Unfair Contract Terms Directive for digital services’ (2021) Study by IPOL, 14-15 and 42-43; likewise concluding uncertainty DF Fitness Check (n 184) 189.

<sup>631</sup> Cf. Ibid (n 184) 14.

<sup>632</sup> Hyperlinks ‘provide the main information to consumers in a shorter text’ Luzak and Loos for IPOL of European Parliament (n 630) 43.

<sup>633</sup> Mouseovers display additional information ‘on the same webpage when a consumer moves the pointer on the screen over a particular trigger area’, Ibid (n 630) 43.

<sup>634</sup> Ibid (n 630) 42-43.

<sup>635</sup> Cf. Ibid (n 630) 14-15.

<sup>636</sup> Ibid (n 630) 42.

Additionally, the recurring uncertainties with regard to the average consumer standard underpinning EU consumer law<sup>637</sup> to an extent also apply under the UCTD. The assessment of unfairness under Art.3(1) UCTD is to be conducted with regard to the particular consumer to be bound by the contract.<sup>638</sup> The assessment of the fulfillment of transparency requirements is to be taken into account into the general fairness test under Art. 3(1) UCTD.<sup>639</sup> However, pursuant to case-law of the ECJ since first application of the average consumer standard in *Kásler and Káslerné Rábai*<sup>640</sup> the evaluation of transparency requirements is instead conducted on the basis of the ‘reasonably well informed and reasonably observant’ consumer.<sup>641</sup>

This may suggest that OCA making the interpretation of contracts ambiguous to the consumer could still satisfy transparency requirements for reasons of a high threshold for assessment.<sup>642</sup> However in light of the recent *Compass Banca ruling* under the UCPD, the ECJ has opened the average consumer standard to bias and ‘a series of (other) constraints’ on decision-making.<sup>643</sup> Even while the UCTD follows a different regulatory logic, since the ECJ has applied the average consumer standard in view of an overarching benchmark for different directives of consumer law,<sup>644</sup> there could be effects on the consumer image under the UCTD as well, although it remains uncertain to which extent the effects of online presentation are accommodated for.<sup>645</sup>

---

<sup>637</sup> On the average consumer standard and the evaluation of OCA, see above (III.1.1.3.5.) and (III.1.3.2.).

<sup>638</sup> Cf. Luzak and Loos for IPOL of European Parliament (n 630) 12; Luzak (n 538) 21.

<sup>639</sup> *Invitel* (n 608) paras.27 and 28.

<sup>640</sup> *Kásler and Káslerné Rábai* (n 605) para.74.

<sup>641</sup> On the incorporation of the average consumer standard as the yardstick for evaluation of transparency requirements, see Luzak (n 538) 4-5.

<sup>642</sup> See to that effect DF Fitness Check (n 184) 189.

<sup>643</sup> *Compass Banca v AGCM* (n 303) paras. 52 and 57.

<sup>644</sup> Luzak (n 538) 19.

<sup>645</sup> On remaining uncertainties regarding the average consumer standard and presentation of information, see above (III.1.2.2.).

### **1.3.3. Conclusion on the UCTD's bearing on the legal assessment and uncertainty of OCA**

The analysis of the UCTD's application to OCA reveals a limited bearing on the overall regulation of OCA in Union law due to its limited scope and minimum harmonization approach. The main source of legal uncertainty lies again the broad principles-based requirements in combination with the average consumer standard as the yardstick for evaluation of transparency requirements pursuant solely to case-law of the ECJ<sup>646</sup> following *Kásler and Káslerné Rábai*. The broad wording of the transparency requirements for contract terms does not allow for evaluation of the realities of design possibilities of online contracts.<sup>647</sup> It also again remains uncertain whether the *Compass Banca* ruling will be incorporated into future assessment of OCA and to what extent exactly deviations from rational decision-making would be accommodated for.

To remedy the persistent legal uncertainty the UCTD should be updated to incorporate references to the evaluation of digital design possibilities, whether through clarifying the principles-based requirements by specifying for instance whether contracts may be split up on the interface, which information must be immediately provided with the contract or which information provided per hyperlink,<sup>648</sup> or whether the trader actually is free to decide under a more restrictive understanding of the standard for protection of the average consumer.

The Annex of the UCTD currently has very different implications between the Member States, different terms being transposed as only indicative or determinative. Harmonizing the most

---

<sup>646</sup> On the incorporation of the average consumer standard as the yardstick for evaluation of transparency requirements, see Luzak (n 538) 4-5.

<sup>647</sup> Likewise DF Fitness Check (n 184) 189; Luzak and Loos for IPOL of European Parliament (n 630) 14-15 and 42-43.

<sup>648</sup> See to that effect Luzak and Loos for IPOL of European Parliament (n 630) 42-43.

consequential terms of the Annex, in light of ‘increasing globalization of contract terms’<sup>649</sup> could improve legal certainty.<sup>650</sup>

## **2. Bearing of the DSA on the legal assessment and legal uncertainty of online choice architecture and interplay with the UCPD**

The Digital Services Act is a Regulation and thus is based on the full harmonization principle.<sup>651</sup> It was tailored to address digital practices and even online choice architecture specifically, on the basis of a different normative ideal of providing a standard for protection that integrates the understanding that people are susceptible to online manipulation, extending to practices that leverage insights from behavioral psychology. The perspective taken is risk and harm mitigation, including from the perspective of protecting fundamental rights and ‘enhancing user agency in the online environment’.<sup>652</sup>

To gain an understanding of how the DSA approaches the regulation of OCA as opposed to the traditional consumer law instruments, the relevant provisions and their respective bearing on the legal assessment of OCA and legal uncertainty in EU acquis will be examined.

---

<sup>649</sup> Whittle and others for DG JUST (n 241) 346.

<sup>650</sup> Likewise, Luzak and Loos for IPOL of European Parliament (n 630) 12; also advocating for a blacklist specifically, Whittle and others for DG JUST (n 241) 346.

<sup>651</sup> See also DSA (n 11) Recital 2.

<sup>652</sup> European 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’ COM (2020) 825 final, 12.

## **2.1. General prohibition of dark patterns**

The DSA introduces with Art.25(1) DSA a specific prohibition of certain online choice architecture for providers of online platforms, dependent on the intended or achieved effect it has on the ‘recipient of their service’, which unlike the previously legislative instruments, does not apply only to consumers but any natural or legal person, pursuant to Art. 3 (e) DSA.<sup>653</sup>

### **2.1.1 Uncertain definition of dark patterns**

The legislative text refers to the design, organization or operation of online interfaces, which are prohibited from being manipulative, deceptive or to ‘otherwise’ materially distort or impair ‘the ability of the recipients of their service to make free and informed decisions’.

The reference to ‘online interfaces’ could capture all forms of online choice architectural design, especially in encompassing besides the design also operation and organization of the interface and the definition of Art. 3(m) DSA, encompassing the software beneath the interface that is displayed.<sup>654</sup>

Likewise, Recital 67 of the DSA frames the prohibition as a general prohibition of ‘dark patterns’ which are defined very broadly, with the same focus on the regarded negative effect on the recipient that widely characterizes the concept of ‘dark patterns’ in scholarship.<sup>655</sup> It is

---

<sup>653</sup> DSA (n 11) Art. 3(e).

<sup>654</sup> For an analysis in favor of a broad interpretation, see Katharina Kaesling, ‘Regulierung von Dark Patterns im Digital Services Act: Nutzer- und Verbraucherschutz im Internet’ (2024) 23 NJW 1609, 1610-1611; however, on doubts about Art. 25(1) DSA encompassing hypernudging see Leiser and Santos (n 81) 23.

<sup>655</sup> On the definition of dark patterns and the regarded negative effect as an overarching commonality of different conceptualizations, see above (II.2.2.).

flexible enough to cover many different choice architectural designs, including newly emerging dark patterns<sup>656</sup> and those based on algorithms and AI.<sup>657</sup> The prohibited three variants of either manipulation, deception or ‘otherwise’ are left undefined, which is a source of legal uncertainty.<sup>658</sup> This applies especially to the term manipulation and the term nudging in Recital 67, which would have to be defined to determine what influence remains permissible.<sup>659</sup> Prohibited influence is clearly to be delineated from the wider understanding of these terms as any influence on decision-making in Recital 67 DSA.<sup>660</sup> The prohibited forms of influence are centered on the material distortion or impairment of ‘the ability of the recipients of their service to make free and informed decisions,’ and as Recital 67 adds ‘either in effect or purpose,’ no intentionality is required.<sup>661</sup> Therefore, all forms of influence are subject to a materiality threshold, serving to delineate between the permissible and prohibited,<sup>662</sup> though it seems to be presumed for manipulation and deception.<sup>663</sup> However, the DSA does not specify where the materiality threshold lies, thereby failing to resolve the legal uncertainty of the vague notions delineating dark patterns from permitted influence.<sup>664</sup> In referencing biases<sup>665</sup> and regarding

---

<sup>656</sup> Cf. Mario Martini, Inken Kramme and Anton Kamke, ‘Dark Patterns im Scheinwerferlicht des Digital Services Act’ (2023) 5 MMR 323, 323.

<sup>657</sup> On the applicability of the DSA to AI see European Commission, ‘Impact Assessment accompanying the Proposal for a Regulation of the European Parliament and of the Council laying down harmonized rules on Artificial Intelligence’ (2021) SWD 84 final, 47.

<sup>658</sup> Likewise Leiser and Santos (n 81) 23; Brennecke (n 558 ‘Theory of exploitation’) 143; Mario Martini and Christian Drews, ‘Making Choice Meaningful – Tackling Dark Patterns in Cookie Consent Banners Through European Data Privacy Law’ (2022) 28-29 available at SSRN <<https://ssrn.com/abstract=4257979>> accessed 16.01.2025.

<sup>659</sup> On interpretations of the term manipulation and the definition of nudging see above (II.1.); on the use of the term nudging in the DSA see also Brennecke (n 558 ‘Theory of exploitation’) 142.

<sup>660</sup> ‘legitimate practices for example in advertising’ Recital 67 DSA (n 11); see also application in Dutch national judgment *Rechtbank Amsterdam*, judgment of 02.10.2025 C/13/774725 / KG ZA 25-687 MK/JD *Stichting Bits of Freedom v Facebook Netherlands and others*, para.4.31.

<sup>661</sup> Kaesling (n 654) 1610 with reference to Martini, Kramme and Kamke (n 656) 324, 323; CRRE (n 1) 29.

<sup>662</sup> Likewise Martini, Kramme and Kamke (n 656) 324; Brennecke (n 558 ‘Theory of exploitation’) 143; Martini and Drews (n 658) 29; others separate manipulation and deception from the requirement of meeting a threshold, still agreeing on legal uncertainty, see Kaesling (n 654) 1611; Leiser and Santos (n 81) 23.

<sup>663</sup> From the wording ‘or otherwise materially distort’; likewise Kaesling (n 654) 1611; Brennecke (n 558 ‘Theory of exploitation’) 142 footnote 7; however others separate manipulation and deception from the materiality threshold, see to that effect Leiser and Santos (n 81) 23.

<sup>664</sup> Likewise Kaesling (n 654) 1611; Martini and Drews (n 658) 29; Brennecke (n 558 ‘Theory of exploitation’) 155-156; Martini, Kramme and Kamke (n 656) 325 with further references.

<sup>665</sup> DSA (n 11) Recitals 67 and 94.

the reference to the autonomy of the recipient when making decisions,<sup>666</sup> the DSA clearly does not incorporate the *homo economicus*, expected to make rational decisions.<sup>667</sup> Although an instrument of consumer protection,<sup>668</sup> the DSA is based on a different normative framework than the instruments of traditional consumer law, that is not based on the business-consumer dichotomy, but instead on the ‘economic operator’ and those ‘affected’ by ‘(unconscious or conscious) biases.’<sup>669</sup> Yet, the benchmark of what the degree of influence the recipient of the service recipient who is clearly not based on the average consumer standard is expected to withstand with regard to dark patterns is not sufficiently elaborated,<sup>670</sup> the prohibition does only protect the recipient from ‘*unreasonabl(e)*’ bias according to Recital 67 DSA.<sup>671</sup>

The prohibition of dark patterns names three specific dark patterns in Art. 25(3)(a)-(c) DSA, two which are referred to as ‘hard to cancel’ and ‘nagging’ in scholarship,<sup>672</sup> and additionally the patterns of ‘giving more prominence to certain choices when asking the recipient of the service for a decision’, however these are too specific to derive from them a yardstick against which to evaluate the numerous possibilities of online choice architectural designs.<sup>673</sup> They necessitate further specification to be applied with legal certainty.<sup>674</sup>

An additional, but again only specific indication can be derived from the sole non-compliance decision of the Commission to date, concerning the ‘deceptive design’ of the ‘blue checkmark’

---

<sup>666</sup> DSA (n 11) Recital 67.

<sup>667</sup> DSA (n 11) Recitals 67 and 94; likewise Brenneke (n 536 ‘Regulating Dark patterns’) 48-49; before *Compass Banca* confirmed an incorporation of deviations from rational decision-making into the average consumer standard, it was even argued to have a spillover effect, see Quirin Weinzierl, ‘Neue Dark-Patterns-Verbote als Abschied vom *homo oeconomicus* im EU-Recht’ (2024) 8 *EuZW* 345.

<sup>668</sup> See DSA (n 11) Recital 1, 2,3.

<sup>669</sup> DSA Proposal COM (2020) 825 final, 12.

<sup>670</sup> Cf. Leiser and Santos (n 81) 23, although considering introduction of the average consumer standard.

<sup>671</sup> For a detailed analysis of the incorporation of bias in the standard of protection in the DSA, although with reference to the average consumer standard in the UCPD before *Compass Banca*, see Brenneke (n 536 ‘Regulating Dark patterns’) 48.

<sup>672</sup> For definitions of ‘hard to cancel’ and ‘nagging’ see above (II.2.2.).

<sup>673</sup> Cf. Martini and Drews (n 658) 29.

<sup>674</sup> For concrete examples of uncertainties for their applicability see Kaesling (n 654) 1613.

which was used for supposedly verifying the accounts of prominent public figures, but making the checkmark available to anyone in exchange for a price.<sup>675</sup>

The Commission has not made use of its power to issue Guidelines as soft law instruments to remedy persistent uncertainties, albeit uncertain whether soft law instruments would prove effective<sup>676</sup> and there has been no ruling on Art. 25 DSA by the ECJ to date.

### **2.1.2. Delineation of scope as a source of legal uncertainty**

The scope of the prohibition of dark patterns pursuant to Art. 25(1) DSA is first limited, in applying only to online platforms, in the sense of Art. 3(i) DSA, excluding its applicability to many dark patterns online.<sup>677</sup> Still, the more restricting limitation, is found in the exclusion of the applicability of the prohibition of Art.25(1) DSA to practices covered by the UCPD<sup>678</sup> and the General Data Protection Regulation (GDPR)<sup>679</sup> pursuant to Art. 25(2) DSA.

According to the recent Guidelines on the interplay between the DSA and the GDPR by the European Data Protection Board (EDPB), the GDPR is applicable to data-driven OCA,<sup>680</sup> which encompasses all forms of OCA that process personal data to tailor choice architecture and especially also the increasing amount of OCA driven by algorithms and AI based on

---

<sup>675</sup> European Commission, ‘Commission fines X €120 million under Digital Services Act’ (2025) Press release <[https://ec.europa.eu/commission/presscorner/detail/en/ip\\_25\\_2934](https://ec.europa.eu/commission/presscorner/detail/en/ip_25_2934)> accessed 16.01.2026; this exploits the ‘social proof bias’, see Leiser and Santos (n 81) 23.

<sup>676</sup> Soft law instruments have not always proven efficient, diverging national judgments have persisted in the case of the material scope of the UCPD, see above (III.1.1.4.) and in case-law of the ECJ in the case of transparency requirements under the CRD, see above (II.1.2.6.).

<sup>677</sup> Cf. Leiser and Santos (n 81) 22.

<sup>678</sup> UCPD (n 5).

<sup>679</sup> GDPR (n 203).

<sup>680</sup> European Data Protection Board, ‘Guidelines 3/2025 on the interplay between the DSA and the GDPR’ (2025) Version 1.1. Adopted on 11 September 2025, para.44.

data,<sup>681</sup> of which hypernudging is just an example.<sup>682</sup> This exemption is especially consequential, as the AI Act has refrained from regulating ‘manipulative and exploitative practices enabled by algorithms that are usually identified as harmful’ other than serving the purpose of social scoring or through subliminal techniques which must ‘operate beyond consciousness’, which neither applies to online choice architecture as defined in this thesis, as although the process of personalization is not visible, the thereby tailored OCA is visible.<sup>683</sup> The GDPR is furthermore applicable to OCA that aims at having the recipient of the service disclose more data, thereby excluding many frequent choice architectural designs.<sup>684</sup>

The most consequential limitation of the scope of Art. 25 DSA is the exclusion of the applicability of the DSA to practices covered by the UCPD. The delineation between the applicability of the UCPD and Art. 25 DSA leads to great legal uncertainty,<sup>685</sup> stemming from both the uncertainty regarding the interpretation of Art. 25(2) DSA and uncertainties regarding the legal evaluation of OCA under the UCPD.

First, Art. 25(2) DSA can be interpreted to render the prohibition of the DSA a subsidiary provision, applicable to practices that fall within the more limited scope of Art.25(1) DSA, if the practice is not unfair according to the UCPD.<sup>686</sup> As a subsidiary provision, the prohibition could either apply to practices that are permitted or to practices outside the scope of the UCPD within the more restricted scope of online platforms, in the latter closing regulatory gaps.<sup>687</sup> In turn, an example that illustrates well the therein inherent uncertainties are dark patterns based

---

<sup>681</sup> On the increasing use of AI and algorithms see Mills and Sætra (n 66).

<sup>682</sup> On hypernudging and the use of AI and ML algorithms based on data see above (II.2.1.2.).

<sup>683</sup> Proposal for the AI Act (n 657) 47.

<sup>684</sup> E.g. the dark pattern ‘forced registration’ provoking data disclosure through unnecessary registration, see on their frequency OECD (n 51) 17 and 19; see also the example of the EDPB (n 680) para.44.

<sup>685</sup> Whittle and others for DG JUST (n 241) 47; Peter Rott, ‘Dark Patterns, der Digital Services Act und das Lauterkeitsrecht’ (2025) 6 VuR 216, 216 -217 and 218; Martini, Kramme and Kamke (n 656) 327; Ebers and Sein (n 602) 25.

<sup>686</sup> Cf. Rott (n 685) 217; Martini, Kramme and Kamke (n 656) 327; Leiser and Santos (n 81) 23.

<sup>687</sup> See to that effect Martini, Kramme and Kamke (n 656) 326-327; Leiser and Santos (n 81) 23.

on addictive-design, since it remains uncertain whether they are within the material scope of the UCPD.<sup>688</sup> Another important question in this regard, is whether Art. 25(1) DSA is meant to protect consumers against biases, in cases the UCPD does not,<sup>689</sup> touching on uncertainties regarding the extent to which the average consumer standard incorporates bias and other influences on decision-making since *Compass Banca*.<sup>690</sup>

Secondly, a different interpretation of the carve-out was recently offered by a Higher Regional Court in Germany,<sup>691</sup> as the intention not to prohibit practices that are permitted under the UCPD, whereby the DSA would be inapplicable to B2C practices in the sense of Art.2(d), irrespective of whether the practice is prohibited by the UCPD.<sup>692</sup> This interpretation is not convincing for several reasons. Most importantly, the material scope of the UCPD is restricted to unfair practices pursuant to Art. 3(1) UCPD, so permitted practices are not covered by the UCPD and Art.25(2) DSA does therefore not restrict the applicability to these patterns.<sup>693</sup> Yet, it would offer a clear delineation between the material scope of the UCPD and Art. 25 DSA.<sup>694</sup>

Depending on either interpretation, the carve-out of practices covered by the UCPD from the scope of the prohibition, it entails the entire or near-complete exclusion of B2C practices.<sup>695</sup> Article 25(1) DSA applies with legal certainty only to B2B practices, as it was applied in the sole Commission's non-compliance decision on Art. 25(1) DSA to date.<sup>696</sup>

---

<sup>688</sup> On addictive-design dark patterns under the UCPD, see above (III.1.1.1.); a subsidiary nature of Art.25(1) DSA could indicate no coverage by the UCPD, see to that effect Leiser and Santos (n 81) 23.

<sup>689</sup> Before *Compass Banca* it could be argued that the UCPD is *lex specialis* for the rational consumer, see to that effect Brennecke (n 536 'Regulating Dark patterns') 48.

<sup>690</sup> *Compass Banca v AGCM* (n 303); On the average consumer standard and bias, see above (III.1.1.3.5.).

<sup>691</sup> OLG Bamberg, judgment of 05.02.2025 -3 UKI 11/24 GRUR-RR 2025 238.

<sup>692</sup> Rott (n 685) 216-217 with further references to legal scholarship; this reasoning was applied by a German court in the OLG Bamberg judgment of 05.02.2025 (n 691).

<sup>693</sup> On Art. 3(1) UCPD see above (III.1.1.1.); likewise delimiting the scope of the UCPD this way Rott (n 685) 217; for additional arguments against this interpretation see Martini, Kramme and Kamke (n 656) 327.

<sup>694</sup> Likewise Rott (n 685).

<sup>695</sup> DF Fitness Check (n 184) 56; Whittle and others for DG JUST (n 241) 47; Leiser and Santos (n 81) 23.

<sup>696</sup> European Commission non-compliance decision against X (n 675) .

## 2.2. Compliance by design

Article 31 DSA additionally entails a positive design duty applicable to online platforms ‘allowing consumers to conclude distance contracts with traders’, by obliging providers to design and operate online interfaces in a way that allows traders to comply with Union law, including pre-contractual information obligations. Therefore, the DSA in this more limited scope complements other provisions such as the CRD and UCPD, specifically addressing interface design. However, once again without offering more legal certainty as to the standard of interface design required to meet these obligations.<sup>697</sup> The vague notions of making ‘best efforts’ and ‘user friendly’ in Recital 74 cannot substantially aid in clarifying the intricate questions regarding the presentation of information and there are questions as to the coherence between the information obligations under the DSA and CRD.<sup>698</sup> Nevertheless, the design of the interface is thereby rendered a compliance issue for the platform provider in addition to the trader, who now has a vested interest to assure compliance.<sup>699</sup>

---

<sup>697</sup> On uncertainties regarding interface design and information obligations of consumer law see above on the UCPD (III.1.1.3.2.) and CRD (III.1.2.2.).

<sup>698</sup> See to that effect Mark Whittle and others for DG JUST (n 241) 297-298.

<sup>699</sup> Likewise Martini, Kramme and Kamke (n 656) 327.

### 2.3. Additional obligations for VLOPs and VLOs

The DSA obliges providers of ‘very large online platforms’ (VLOPs) and ‘very large online search engines’ (VLOs) in the sense of Art. 33 as designated by the Commission on the basis of their annual turnover,<sup>700</sup> with additional obligations of risk assessment and risk management.

Pursuant to Art. 34 DSA, they must annually assess risks of ‘design or functioning of their service’ and importantly ‘including algorithmic systems.’ These assessments pertain to ‘systemic risks’ in the sense of Art. 34(1) DSA, which provides a non-exhaustive list of protected interests, over all of which online choice architectural design can exert influence.<sup>701</sup>

The reference to the ‘functioning’ of a service could be interpreted to include risks caused by less perceptible forms of influence like hypernudging, though this remains uncertain.<sup>702</sup>

A more certain reinforcement of the importance of this provision to the legal assessment of OCA is offered by Recital 83 in addressing ‘manipulation’ including ‘from online interface design that may stimulate behavioral addictions of recipients of the service’, thereby including dark patterns based on addictive-design into the scope of these risk assessments. In light of the uncertain applicability of the UCPD and Art. 25(1) DSA, this is an important provision in aiding their legal assessment and closes the potential regulatory gap within the smaller scope of VLOPs and VLOs.<sup>703</sup>

Pursuant to Art. 35(1) DSA, VLOPs and VLOs must mitigate identified risks including through practices (a) ‘adapting the design, features or functioning of their services, including their

---

<sup>700</sup> Notable examples the Commission has designated include Google Ireland Ltd.; Amazon Services Europe S.à.r.l. and Meta Platforms Ireland Limited, see Directorate-General for Communications Networks, Content and Technology, ‘Supervision of the designated very large online platforms and search engines under DSA’ (2025) Last update 05 December 2025 <<https://digital-strategy.ec.europa.eu/en/policies/list-designated-vlops-and-vloses>> accessed 16.01.2026.

<sup>701</sup> Cf. Kaesling (n 654) 1614.

<sup>702</sup> Cf. Leiser and Santos (n 81) 24.

<sup>703</sup> Similarly Esposito and Ferreira (n 161) 1013.

online interfaces’ and (d) ‘testing and adapting their algorithmic systems.’ However, it is not specified which measures to mitigate risks should actually be taken and so far, the Commission has published Guidelines solely on ‘systemic risks for electoral processes’<sup>704</sup>

Therefore, it is very unclear what these risk mitigation measures should actually look like.<sup>705</sup>

Still, the Commission has initiated formal proceedings against the undertaking Tik Tok, including for ‘foreseeable negative effects stemming from the design of TikTok’s system, including algorithmic systems, that may stimulate behavioural addictions’<sup>706</sup> under Articles 34 and 35, which has resulted in the commitment to withdraw the design and not release similar designs in the future.<sup>707</sup> Therefore, these could still prove effective in their application to addictive-design OCA.

#### **2.4. Conclusion on the bearing of the DSA to the legal assessment and uncertainty of OCA**

The analysis of the application of the DSA to OCA has revealed that the DSA actually has a limited bearing on the evaluation of OCA even within the smaller scope of OCA by providers of online platforms, while simultaneously being a source of great legal uncertainty,<sup>708</sup> despite

---

<sup>704</sup> European Commission, ‘Guidelines for providers of Very Large Online Platforms and Very Large Online Search Engines on the mitigation of systemic risks for electoral processes pursuant to Article 35(3) of Regulation (EU) 2022/2065’ (2024) OJ C/2024/3014.

<sup>705</sup> Likewise, before the Guidelines on electoral processes, Kaesling (n 654) 1615.

<sup>706</sup> European Commission, ‘Commission opens formal proceedings against TikTok under the Digital Services Act’ (2024) Press release <[https://ec.europa.eu/commission/presscorner/detail/en/ip\\_24\\_926](https://ec.europa.eu/commission/presscorner/detail/en/ip_24_926)> accessed 16.01.2026.

<sup>707</sup> European Commission, ‘TikTok commits to permanently withdraw TikTok Lite Rewards programme from the EU to comply with the Digital Services Act’ (2024) Press release <[https://ec.europa.eu/commission/presscorner/detail/en/ip\\_24\\_4161](https://ec.europa.eu/commission/presscorner/detail/en/ip_24_4161)> accessed 16.01.2026.

<sup>708</sup> Similarly Martini, Kramme and Kamke (n 656) 328.

being specifically tailored to address digital practices, including even a specific prohibition of dark patterns that clearly recognizes the effects they have on the user.

In fact, the application of the prohibition of dark patterns pursuant to Art. 25 (1) DSA mirrors the uncertainties and strengths of the technology-neutral principles-based prohibitions in combination with Annex I of the UCPD: they are flexible enough to be applicable to evolving digital practices in the future, but lack the clarity of a certain yardstick for evaluation, as well as concretization of how they can be applied to specific dark patterns.<sup>709</sup> However, Art. 25(1) DSA has the potential to provide a more sound basis for the certain evaluation of dark patterns, if the effects like manipulation and deception the prohibition is anchored in, were clarified to help delineate between permissible and prohibited influence.<sup>710</sup> A clearer definition for dark patterns in the sense of the DSA could provide for an application of the prohibition with more certainty.<sup>711</sup>

The main source of legal uncertainty, however, lies in the difficulty to delineate the scope of applicability between the DSA and the GDPR and most consequentially also the DSA and the UCPD pursuant to Art. 25(2) DSA.<sup>712</sup> The exemption from its scope of all practices covered by the GDPR is especially consequential to AI-driven OCA that is personalized based on data about the consumer, as their legal evaluation under the UCPD also is particularly uncertain.<sup>713</sup>

---

<sup>709</sup> Likewise on the DSA Martini, Kramme and Kamke (n 656) 325.

<sup>710</sup> Similarly, Kaesling (n 654) 1611; Martini and Drews (n 658) 29; Brennecke (n 558 ‘Theory of exploitation’) 155-156; Martini, Kramme and Kamke (n 656) 328.

<sup>711</sup> Similarly traders associations and stakeholders in Whittle and others for DG JUST (n 241) 47; DF Fitness Check (n 184) 59; see also Car and Filippo for Parliament (n 48).

<sup>712</sup> Similarly Whittle and others for DG JUST (n 241) 47; Rott (n 685) 216 -217, 218; Martini, Kramme and Kamke (n 656) 327; Ebers and Sein (n 602) 25.

<sup>713</sup> Additionally, it has been chosen for the AI Act not to regulate in this area since already regulated by the DSA, see Proposal for the AI Act (n 657) 47.

This could be remedied if the UCPD was reformed, or at least reinterpreted in the digital environment, to be able to adequately address these practices.<sup>714</sup>

In any case however, the interplay between the UCPD and DSA must be clarified. With the current uncertainty of the applicability of the UCPD to addictive-design, ideally Art. 25(1) DSA would act as a subsidiary provision, that within the more limited scope of online platforms, applies to dark patterns outside the scope of the UCPD,<sup>715</sup> thereby providing a partial remedy to the legal grey zone they currently fall within.<sup>716</sup> Seeing as neither the UCPD can be applied with legal certainty, nor does the DSA offer a conclusive delineation between their scope, the rule in Art. 25(2) DSA has done more harm than good pertaining to the certain evaluation of OCA in EU acquis.<sup>717</sup> The Digital Fairness Check has noted that ‘many consider that enforcement authorities would face considerable risks when bringing forth actions invoking Art. 25 DSA.’<sup>718</sup> Interestingly, Art. 16e CRD which is clearly based on Art. 25(1) DSA as it contains the same statutory language, contains no such carve-out or subsidiary rule, which could indicate that the legislator intended to prevent the same uncertainties from applying.

The prohibition of dark patterns can be applied with certainty only to B2B-dark patterns but therein does fill a previous regulatory gap.

Additionally, within the narrower scope of VLOPs and VLOs, Art. 34 DSA actually provides a meaningful contribution to the regulation of OCA<sup>719</sup> and to a certain extent regulates OCA

---

<sup>714</sup> See above (II.1.4.).

<sup>715</sup> Which, contrary to the evaluation of a Higher regional court in Germany, includes dark patterns that are not unfair pursuant the UCPD, see OLG Bamberg judgment of 05.02.2025 (n 691); on the scope of the UCPD see above (III.1.1.1.); likewise delimiting the scope of the UCPD this way Rott (n 685) 217.

<sup>716</sup> Likewise in favor of this interpretation of the subsidiary character of the DSA Leiser and Santos (n 81) 23; Martini, Kramme and Kamke (n 656) 326.

<sup>717</sup> Most common coherence issue reported in the Fitness Check, see Whittle and others for DG JUST (n 241) 47; likewise concluding on Art. 25(2) and even advocating for it to be abolished, Rott (n 685) 218.

<sup>718</sup> DF Fitness Check (n 184) 150.

<sup>719</sup> Similarly on dark patterns Kaesling (n 654) 1614; on addictive-design OCA Esposito and Maciel Cathoud Ferreira (n 161) 1013.

underpinned by addictive design, which might operate in the legal grey zone of traditional consumer law instruments.<sup>720</sup>

### **3. Conclusion on the existent framework for online choice architecture in EU law established by horizontal consumer law instruments and the Digital Services Act**

This master's thesis aimed to assess the bearing of the UCPD, CRD and UCTD as horizontal instruments of EU consumer law complemented by the Digital Services Act, on the legal assessment and legal uncertainty of online choice architecture in EU law. This assessment has revealed the inherent inadequacy of traditional EU consumer law to effectively regulate OCA and the respective and overarching sources of legal uncertainty of OCA under the UCPD, CRD, UCTD. Crucially, this regulatory deficit even within the scope of the Digital Services Act, despite providing a provision specifically tailored to effectively regulate dark patterns, remains largely unresolved.

The first overarching main source of legal uncertainty that applies across the UCPD, UCTD and the Digital Services Act, is the broadly worded principles-based prohibitions, which have been demonstrated to represent the predominant legal framework for OCA.<sup>721</sup> This approach has assured the applicability of these provisions to different forms of OCA and can in that sense be accredited with allowing for future-proof regulation. However, these provisions fail to delineate between permissible and prohibited influence with enough specificity to allow their application to OCA that influences decision-making through psychological effects, like bias or

---

<sup>720</sup> On uncertainties regarding the UCPD's applicability to addictive design OCA see above (III.1.1.4.) and in more detail (III.1.1.1.) and (III.1.1.3.1.).

<sup>721</sup> Cf. above UCPD (III.1.1.4.) and UCTD (III.1.3.3.).

bounded rationality,<sup>722</sup> rather than outright forcing the user to complete a certain task or outright lying about or omitting information. However, as established in Section II. of this thesis, the majority of OCA including dark patterns which can also be defined as nudging, have a steering effect on choice due to the psychological realities of the decision-making process, and can thus not be adequately evaluated under these principles-based provisions. The thesis has therein identified a notable difference between the legal certainty provided for different groups of OCA, despite them often being subsumed under the umbrella term ‘dark patterns.’ As for the principles-based provisions of the UCPD and UCTD this divergence is also owed to the ‘techno-neutral’ approach of these Directives, as their analysis has demonstrated that their analogue legal standards cannot be adequately translated to the digital environment.

If not through a more holistic approach to establishing standards for digital practices, both Directives would benefit from an inclusion of interface-specific prohibitions in their Annex, though this would prove more effective for the per se prohibitions of the UCPD, as opposed to the only indicative Annex of the UCTD, which is also not harmonized.<sup>723</sup>

Pertaining to delineation in the DSA, Art. 25(1) DSA as the prohibition of ‘dark patterns’ would benefit either from a definition of the terms ‘dark patterns’ and ‘nudging’ in the sense of the DSA, or definitions of prohibited forms of influence, especially pertaining to the term ‘manipulation.’<sup>724</sup>

The delineation between prohibited and permissible influence on decision-making could also benefit from positive obligations of what actually constitutes ‘fair’ design, which could be achieved through reinterpretation of professional diligence pursuant to the UCPD.

---

<sup>722</sup> On psychological effects that OCA leverages, which influence decision-making, whether intentionally or unintentionally, see above (II.1.) and (II.2.1.).

<sup>723</sup> The Annex of the UCTD could be harmonized and turned into a blacklist, to achieve a higher level of legal certainty, see above (III.1.3.3.).

<sup>724</sup> Different interpretations of the term manipulation have been established for the analytical framework of this thesis, see above (II.1.); this would particularly aid in evaluating the majority of OCA that ‘manipulates’ decision-making by leveraging psychological effects, subject to most legal uncertainty in the current legal framework.

The second closely related overarching source of legal uncertainty is the yardstick of the standard of protection against which these principles-based provisions as well as the more prescriptive rules of the CRD must be evaluated.

In the DSA, this standard clearly extends to digital practices that steer their decision-making by leveraging biases and other cognitive restraints on decision-making, like bounded rationality,<sup>725</sup> irrespective of intentionality. Nevertheless, the alternative standard to one only inclusive of rational decision-making is not clearly defined, which must be clarified for certain assessment.<sup>726</sup>

Pursuant to case-law of the ECJ all horizontal instruments of consumer law must be evaluated against the standard of the average consumer, although it is only codified in the UCPD. This is the most profound source of legal uncertainty across these instruments. In light of the recent *Compass Banca* ruling, the standard of protection has been expanded to include deviations from rational decision-making, which has been a highly anticipated evolution from the consumer-protection perspective towards forging a standard that can adequately assess new possibilities for OCA to influence consumer decision-making in the evolved digital landscape. However, the delineation between permissible and prohibited influence has been further obscured. Two sources of uncertainty pertain to the evolved standard of protection: First, while the standard of protection has been expanded, it is not clear which deviations from rational decision-making besides biases are actually included, though the standard is explicitly not limited to only include biases.<sup>727</sup> Secondly, under this evolved standard of the average consumer, the materiality threshold for influence on decision-making leveraging these

---

<sup>725</sup> On ‘bounded rationality’ see above (II.1.); on uncertainties regarding Art. 25 DSA and the interpretation of prohibited influence see above (III.2.1.).

<sup>726</sup> On the missing standard see above (III.2.1.).

<sup>727</sup> The ECJ has included into the average consumer standard possible constraints on the consumer’s decision making ‘*such as* cognitive biases’ [emphasis added] *Compass Banca v AGCM* (n 303) para. 59; on the average consumer standard see above (III.1.1.3.5.).

deviations has not been established.<sup>728</sup> These elements must be clarified, especially for the UCPD as the most important instrument to assess OCA due to its wide scope.<sup>729</sup> The same could be said for the CRD and UCTD, but it must first be clarified to what extent these deviations from the traditional average consumer standard even apply. In light of previous harmonization of this standard by the ECJ, some effect is to be presumed.

Applicable provisions of the CRD, perhaps not lastly because it was conceived much later than the UCPD and UCTD and intended to address the digital environment, have challenged the notion of the homo economicus previously at the heart of the average consumer standard for some time now, originally with the right to withdrawal in Art. 9 CRD and Art. 22 CRD on default effects. Though the recognizable deviations from a normative framework that expects the consumer to withstand online manipulation in some provisions like Art. 8 (2) CRD have previously been curbed with the application of the ‘traditional’ average consumer standard by the ECJ, the CRD does provide some valuable provisions with its more prescriptive rules for individual dark patterns over the principles-based provisions of the UCPD and UCTD. The transparency obligations however, rather directly embody the traditional consumer model in the legislative text and therefore apply broad wording which, it bears repeating, does not allow for clear delineation between prohibited and permissible influence through the presentation of information in the digital environment.<sup>730</sup>

The recently inserted Articles 11a and 16e CRD have introduced design-based regulations into the horizontal instruments of consumer law, with a very limited scope extending to one specific

---

<sup>728</sup> A notable exception from the materiality threshold is the prohibition of misleading practices pursuant to Art. 6 and 7 UCPD, see above (III.1.1.3.2.).

<sup>729</sup> Cf. above (III.1.1.4.).

<sup>730</sup> Cf. above (III.1.2.6).

form of sludge OCA<sup>731</sup> and financial services. However, these design-based regulations are notable in that they provide a much better basis for the certain evaluation of OCA.<sup>732</sup>

Pertaining to specific persistent regulatory gaps in the analyzed legal framework, the UCPD is applicable to the vast majority if not all of B2C online choice architecture. Yet, the applicability of the UCPD to addictive-design OCA, such as hyper-engaging dark patterns must be clarified. Despite their prevalence they operate in a legal grey zone, which the DSA can only partially remedy with Art. 34 and 35 DSA within the much narrower scope of VLOPs and VLOs.

Another result of the broadly defined wording of the principles-based provisions combined with the techno-neutral approach of the UCPD specifically, is that personalized OCA that tailors the choice environment based on data about the consumer, such as hypernudging which often combines this approach with AI-algorithms, likewise operates in a legal grey zone. Notably, the prohibition of dark patterns pursuant to Art. 25 (1) DSA cannot remedy this even within the narrower scope of its application to online platforms although the prohibition of dark patterns seems better equipped to address them, because all data-driven OCA is covered by the GDPR and thus exempt from its scope of application.

The third major source of uncertainty is the delineation between the scope of applicability of the DSA and the UCPD. It is currently unclear whether Art. 25(1) DSA acts as a subsidiary provision to the UCPD for B2C dark patterns in the sense of possibly prohibiting practices that are permissible under the UCPD within its narrower scope, or whether B2C dark patterns are effectively exempt from its scope entirely.<sup>733</sup> Thereby the prohibition of dark patterns can be

---

<sup>731</sup> On the definition of ‘sludge’ see above (II.2.1.3.).

<sup>732</sup> It is regrettable that this provision is not part of the UCPD, see above (III.1.2.6.).

<sup>733</sup> On diverging interpretations and implications of different interpretations, see above (II.2.1.2.).

applied with legal certainty only to B2B-dark patterns, though this does close a previous regulatory gap left by the UCPD and other consumer law instruments.<sup>734</sup>

Overall, the possibilities to improve the legal certainty of online choice architecture presented in this thesis, can be subsumed under the concretization of the application of the principles-based provisions, especially in the case of the UCPD whose techno-neutral approach needs to be supplemented. Additionally, the normative framework underpinning consumer law especially with regard to the application of the average consumer standard to digital practices must be clarified. The soft law instrument of the Commission Guidance has notably proven ineffective, so there is a compelling case for the Digital Fairness Act to take legislative measures or at the very least provide clarification in the form of additional Recitals.

---

<sup>734</sup> Cf. above (II.2.4.).

## **IV. Literature**

### **Table of cases**

#### **European Case Law**

ECJ C-646/22 Compass Banca SpA v Autorità Garante della Concorrenza e del Mercato (2024) OJ C/2025/127

ECJ C-565/22 Verein für Konsumenteninformation v Sofatutor GmbH (2023) OJ C/2023/734

ECJ C-319/20 Meta Platforms Ireland Limited v Bundesverband der Verbraucherzentralen und Verbraucherverbände - Verbraucherzentrale Bundesverband eV. (2022) OJ C237/07

ECJ C-249/21 Fuhrmann-2-GmbH v B.(2022) OJ C213/20

ECJ C-536/20 Tiketa UAB v M.S. (2022) OJ C165/16

ECJ C-628/17 Prezes Urzędu Ochrony Konkurencji i Konsumentów v Orange Polska S.A (2019) OJ C263/4

ECJ C-430/17 Walbusch Walter Busch GmbH & Co. KG v Zentrale zur Bekämpfung unlauteren Wettbewerbs Frankfurt am Main eV. (2019) OJ C93/13

ECJ Joined cases C-54/17 and C-55/17 Autorità Garante della Concorrenza e del Mercato v Wind Tre SpA and Vodafone Italia SpA. (2018) OJ C408/13

ECJ C-186/16 Ruxandra Paula Andriciuc and Others v Banca Românească SA (2017) OJ C-186/16

ECJ C-290/16 Air Berlin plc & Co. Luftverkehrs KG v Bundesverband der Verbraucherzentralen und Verbraucherverbände - Verbraucherzentrale Bundesverband eV (2017) OJ C283/10

ECJ Case C-611/14 Canal Digital Danmark A/S (2016) OJ 2017 C6/09

ECJ C-143/13 Bogdan Matei, Ioana Ofelia Matei v SC Volksbank România SA (2015) OJ C138/4

ECJ C-26/13 Árpád Kásler, Hajnalka Káslerné Rábai v OTP Jelzálogbank Zrt (2014) OJ C194/05

ECJ C-281/12 Trento Sviluppo and Centrale Adriatica v Autorità Garante della Concorrenza e del Mercato (2013) OJ C53/13

ECJ C-435/11 CHS Tour Services GmbH v Team4 Travel GmbH (2013) OJ C344/11

ECJ C-471/10 Nemzeti Fogyasztóvédelmi Hatóság v Invitel Távközlési Zrt (2012) OJ C174/7

ECJ joined cases C-261/07 and C-299/07 VTB-VAB NV v Total Belgium and Galatea BVBA v Sanoma Magazines Belgium (2009) OJ C141/05

ECJ C-210/96 Gut Springenheide GmbH and Rudolf Tusky v Oberkreisdirektor des Kreises Steinfurt - Amt für Lebensmittelüberwachung (1998)

### **National Judgments of the Member States**

**(Dutch)** Rechtbank Amsterdam, judgment of 02.10.2025 - C/13/774725 / KG ZA 25-687 MK/JD Stichting Bits of Freedom v Facebook Netherlands and others

**(German)** BGH I ZR 11/20 Kostenlose Registrierung Decision of the 25.09.2025 [Request for a preliminary ruling referred to the ECJ by the German Federal Court of Justice]

**(German)** OLG Bamberg, judgment of 05.02.2025 -3 UKI 11/24 GRUR-RR 2025 238

### **Table of Legislation**

#### **European Legislation**

**Consumer Protection Regulation:** Regulation (EU) 2017/2394 of the European Parliament and of the Council of 12 December 2017 on cooperation between national authorities responsible for the enforcement of consumer protection laws and repealing Regulation (EC) No 2006/2004 (2017) OJ L345/1

**Consumer Rights Directive:** Directive 2011/83/EU of the European Parliament and of the Council of 25 October 2011 on consumer rights, amending Council Directive 93/13/EEC and Directive 1999/44/EC of the European Parliament and of the Council and repealing Council Directive 85/577/EEC and Directive 97/7/EC of the European Parliament and of the Council (2011) OJ L304/64

**Data Act:** Regulation (EU) 2023/2854 of the European Parliament and of the Council of 13 December 2023 on harmonized rules on fair access to and use of data and amending Regulation (EU) 2017/2394 and Directive (EU) 2020/1828 (2023) OJ L2023/2854

**Data Governance Act:** Regulation (EU) 2022/868 of the European Parliament and of the Council of 30 May 2022 on European data governance and amending Regulation (EU) 2018/1724 (2022) OJ L152/1

**Digital Services Act:** 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 (2022) OJ L277/1

Directive (EU) 2023/2673 of the European Parliament and of the Council of 22 November 2023 amending Directive 2011/83/EU as regards financial services contracts concluded at a distance and repealing Directive 2002/65/EC (2023) OJ L2023/2673

**General Data Protection Regulation:** 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 (2016) OJ L119/1

**Omnibus 2019 modernization Directive:** Directive (EU) 2019/2161 of the European Parliament and of the Council of 27 November 2019 amending Council Directive 93/13/EEC and Directives 98/6/EC, 2005/29/EC and 2011/83/EU of the European Parliament and of the Council as regards the better enforcement and modernisation of Union consumer protection rules (2019) OJ L328/7

**Unfair Commercial Practices Directive:** Directive 2005/29/EC of the European Parliament and of the Council of 11 May 2005 concerning unfair business-to-consumer commercial practices in the internal market and amending Council Directive 84/450/EEC, Directives 97/7/EC, 98/27/EC and 2002/65/EC of the European Parliament and of the Council and Regulation (EC) No 2006/2004 of the European Parliament and of the Council (2005) OJ L149/22

**Unfair Contract Terms Directive:** Council Directive 93/13/EEC of 5 April 1993 on unfair terms in consumer contracts (1993) OJ L95/29

### **Other primary sources**

BT-Drs. 18/4535 Entwurf eines Zweiten Gesetzes zur Änderung des Gesetzes gegen den unlauteren Wettbewerb

Zweites Gesetz zur Änderung des Gesetzes gegen den unlauteren Wettbewerb BGBl I 2015 Nr.49

### **Secondary Sources**

#### **Journal Articles**

Brenncke M, 'Regulating Dark Patterns' (2024) 14 Notre Dame J Int'l Comp L 39

Brenncke M, 'A Theory of Exploitation for Consumer Law: Online Choice Architectures, Dark Patterns and Autonomy Violations' (2023) 47 Journal of Consumer Policy 2024 127

Clubbs Coldron B and others, 'When The Internet Gets Under Our Skin: Reassessing Consumer Law and Policy in a Society of Cyborgs' (2025) 48 Journal of Consumer Law and Policy 205

Durovic M and Poon J 'Consumer Vulnerability, Digital Fairness, and the European Rules on Unfair Contract Terms: What Can Be Learnt from the Case Law Against TikTok and Meta?' (2023) 46 Journal of Consumer Policy 419

<<https://link.springer.com/content/pdf/10.1007/s10603-023-09546-7.pdf>>  
05.12.2025

accessed

Esposito F and Maciel Cathoud Ferreira T, 'Addictive Design as an Unfair Commercial Practice: The case of Hyper-Engaging Dark patterns' (2024) 15 *European Journal of Risk Regulation* published by Cambridge University Press 1000

Ferretti F, 'The consumer image under EU law: Average, rationally bounded and dispositionally vulnerable. What are the prospects for protection in digital markets?' (2025) 62 *Common Market Law Review* published by Wolters Kluwer Law 121

Gelbrich K and Legner S, 'Wer ist Verbraucher? Zu Ausdifferenzierungen des Verbraucherschutzes im digitalen Umfeld' (2025) 1 *VuR* 8

Hacker P, 'Manipulation by algorithms. Exploring the triangle of unfair commercial practice, data protection, and privacy law' (2021) 29 *European Law Journal* 2023 142

Helberger N, Sax M, Micklitz H-W, 'Choice Architectures in the Digital Economy: Towards a New Understanding of Digital Vulnerability' (2022) 45 *Journal of Consumer Policy* 175

Hofmann F, 'EuGH: Verbraucherleitbild im Lauterkeitsrecht – Was kann der homo oeconomicus (nicht)?' (2025) 4 *ZEuP* 881

Jolls C Sunstein C R and Thaler R, 'A Behavioral Approach to Law and Economics' (1998) 50 *Stanford Law Review* 1471

Kaesling K, 'Regulierung von Dark Patterns im Digital Services Act: Nutzer- und Verbraucherschutz im Internet' (2024) 23 *NJW* 1609

Köhl D, 'Das Leitbild des Durchschnittsverbrauchers im Spannungsverhältnis mit Erkenntnissen der Verhaltensökonomik' (2025) 23 *GRUR* 1794

Leiser M and Caruana M-M, 'Dark Patterns: Light to be Found in Europe's Consumer Protection Regime' (2021) 6 *EuCML* 237

Leiser M and Santos C, 'Dark Patterns, Enforcements, and the Emerging Digital Design Acquis: Manipulation beneath the Interface' (2024) 15 *European Journal of Law and Technology* 1

Luzak J, 'The Steady Creep of an Average Consumer as a Reference Consumer in the Assessment of the Transparent Provision of Mandatory Information' (2025) *Journal contribution to Tijdschrift voor Consumentenrecht & Handelspraktijken* (first published in 2020) available under <<https://hdl.handle.net/10871/122942>> accessed 22.12.2025

Merkle M L, 'Transparenz nach der KI-Verordnung- von der Blackbox zum Open-Book?' (2024) 9 *RD* 2024 414

Martini M and Drews C, 'Making Choice Meaningful – Tackling Dark Patterns in Cookie Consent Banners Through European Data Privacy Law' (2022) available at SSRN <<https://ssrn.com/abstract=4257979>> accessed 16.01.2025

Martini, Kramme I and Kamke A, 'Dark Patterns im Scheinwerferlicht des Digital Services Act' (2023) 5 MMR 323

Martini M and others, 'Dark Patterns: Phänomenologie und Antworten der Rechtsordnung' (2021) 1 ZfDR 47

Mills S, 'Finding the "nudge" in hypernudge' (2022) 71 Technology in Society 102117

Mills S, 'Deceptive choice architecture and behavioral audits: A principles based approach' (2024) 18 Regulation and Governance 1426

Mills S and Skaug Sætra H, 'The autonomous choice architect' (2022) 39 AI & Society 583, 'Introduction'

Morozovaite V, 'Hypernudging in the changing European regulatory landscape for digital markets' (2022) 15 Policy & Internet 2023 78  
<<https://onlinelibrary.wiley.com/doi/full/10.1002/poi3.329>> accessed 16.01.2026

Namysłowska M, 'The Silent Death of EU Consumer Law and Its Resilient Revival: Reinventing Consumer Protection Against Unfair Digital Commercial Practices' (2025) 48 Journal of Consumer Policy 317

Riefa C, 'Protecting Vulnerable Consumers in the Digital Single Market' (2022) 33 European Business Law Review 607

Rott P, 'Dark Patterns, der Digital Services Act und das Lauterkeitsrecht' (2025) 6 VuR 216

Sadeghian A and Otarkhani A, 'Data driven digital nudging: a systematic literature review and future agenda' (2023) 43 Behavior and Information Technology 3834

Santos C, Morozovaite V and De Conca S, 'No harm no foul: how harms caused by dark patterns are conceptualised and tackled under EU data protection, consumer and competition laws' (2025) 34 Information & communications technology law 329 published by Taylor & Francis Online <<https://www.tandfonline.com/doi/full/10.1080/13600834.2025.2461958>> accessed 16.01.2026

Sibony A and Helleringer G, 'European consumer protection through the behavioral lens' (2017) 05/2017 The Columbia Journal of European Law 607

Susser D, Roessler B and Nissenbaum H, 'Technology, autonomy and manipulation' (2019) 8 Internet Policy Review 1 <<https://policyreview.info/articles/analysis/technology-autonomy-and-manipulation>> accessed 16.01. 2026

Thaler R, 'Nudge, not Sludge' (2018) 361 AAAS Science 431 available under <<https://www.science.org/doi/10.1126/science.aau9241>> accessed 16.01.2025

Wagner D M, 'On the Emergence of AI nudging: Gentle Big Brother?' (2021) 2 Robonomics: The Journal of the Automated Economy 18

Weber R H, 'The Disclosure Dream – Towards a New Transparency Concept in EU Consumer Law' (2023) 2 EuCML 67

Weinmann M, Schneider C, Brocke J, 'Digital Nudging' (2016) 58 Business & Information Systems Engineering 433

Weinzierl Q, 'Neue Dark-Patterns-Verbote als Abschied vom homo oeconomicus im EU-Recht' (2024) 8 EuZW 345

Yeung K, "'Hypernudge'": Big Data as a mode of regulation by design' (2016) 20 Information, Communication & Society 118

### **Looseleaf services**

Köhler H and Feddersen J, *Beck'sche Kurzkommentare Band 13a Gesetz gegen den unlauteren Wettbewerb* (43 CH Beck 2025)

Micklitz H-W and Namysłowska M, *Münchener Kommentar zum Lauterkeitsrecht* (3 CH Beck 2020)

### **Publications of intergovernmental research organizations**

Busch C, Fletcher A, 'Harmful Online Choice Architecture' (2024) CRRE Report <<https://cerre.eu/publications/harmful-online-choice-architecture/>> accessed 16.01.2026

Helberger N and others, 'EU Consumer Protection 2.0 Structural asymmetries in digital consumer markets' (2021) BEUC

OECD, 'Dark Commercial Patterns' (2022) 336 Digital Economy Papers, OECD Publishing <<https://doi.org/10.1787/44f5e846-en>> accessed 05.05.2025

### **Books**

Ebers M and Sein K, 'Data-driven Technologies: Challenges for Privacy and EU Data Protection Law' in Ebers M and Sein K (eds) *Privacy, Data Protection and Data-driven Technologies* (1 Routledge 2025)

Egan M, *An Analysis of Richard H. Thaler and Cass R. Sunstein's Nudge Improving Decisions about Health, Wealth, and Happiness* (1 Macat International 2017)

Graef I, 'The EU Regulatory Patchwork for Dark Patterns: An Illustration of an Inframarginal Revolution in European Law?' in (ed Woodcock R A) *Toward an Inframarginal Revolution, Redistributing Gains from Trade* (1 Cambridge University Press 2025)

Grochowski M, 'Consumer Vulnerability: a Genealogy' in Grundmann S and Sirena P (eds) *European Contract Law and Future Challenges* (1 Larcier Intersentia 2025)

Kahneman D, *Thinking fast and slow* (1 Farrar, Straus and Giroux 2011)

Micklitz H-W, 'Unfair Commercial Practices, Digital Asymmetry and Reversal of Burden of Proof' in Hilty R (ed) *Kreation Innovation Märkte – Creation Innovation Markets* (1 Springer Nature 2024)

Roşca C, *Digital Arms for Digital Consumer Harms: Mapping Legal and Technical Solutions for Dark Patterns in EU Consumer Law* (1 Maastricht University Press 2024) available under <<https://pubpub.maastrichtuniversitypress.nl/digital-arms-for-digital-consumer-harms>> accessed 16.01.2026

Sunstein C R, *Sludge: What Stops Us from Getting Things Done and What to Do About It* (1 MIT Press 2021)

Thaler R, Sunstein C R and Balz J, 'Choice Architecture' in Shafir E (ed) *The Behavioral Foundations of Public Policy* (1 Princeton University Press 2013)

Thaler R and Sunstein C R, *Nudge: Improving decisions About Health, Wealth and Happiness* (1 Yale University Press 2008)

## Websites

Jabłonowska A and Bouwman T, 'Cognitive biases of the average consumer' (2024) ConsumerID Blog published by the University of Leiden <<https://consumerid.eu/blogs/the-cognitive-biases-of-the-average-consumer>> accessed 16.01.2026.

Leiser M, Santos C, Doshi K, 'Deceptive Patterns' <<https://www.deceptive.design/>> accessed 16.01.2026