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## Personalised pricing and EU law

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### 1. From price discrimination to personalised pricing

**Price discrimination.** A firm price discriminates when it charges two consumers (or the same consumer) different prices for two units of the same product or similar products, and the price difference does not reflect cost differences (see generally, OECD, 2016). A firm price discriminates to extract as much as possible what the consumers are willing to pay for its products or services.

Price discrimination is feasible under some conditions: (i) the firm should have some market power (price discrimination is not feasible under perfect competition); and (ii) there is no or limited possibilities of arbitrage or resale (otherwise, consumers who benefit from low prices would have an incentive to resell the goods at higher prices and compete with the high-priced versions). The economic literature further distinguishes between different types of price discrimination, according to the level of information that the firms have about consumers.<sup>1</sup> The general idea is that the more accurate the information about consumers a firm possesses, the higher its ability to price discriminate and the higher the profitability of doing so (US Executive Office of the President, 2015).

**Personalised pricing.** The availability of big data facilitates price discrimination. Firms can use the data that they have collected to infer consumers' willingness-to-pay. The more information a firm can collect about its existing or potential customers, the more accurate its estimate of consumers' willingness-to-pay. To the extent that the firm has some market power, it can then set discriminatory prices based on this estimation. At the extreme, the firm is able to set individual prices and fully extract consumers' willingness-to-pay. Perhaps more realistically, it is able to engage in group pricing, with small targeted groups (e.g., fishing enthusiasts, etc.). We refer to both individual pricing and group pricing with small targeted groups as *personalised pricing* or *price targeting*.<sup>2</sup>

There is no conclusive empirical evidence that personalised pricing actually exists in online markets. For example, the report of OFT (2013) argues that personalised pricing is technically possible, but found no evidence that it was used by online firms in the UK in 2012. The CNIL-DGCCRF report (2014) found no evidence of personalised prices based on IP address in France in e-commerce websites. In 2017, the Competition and Markets Authority in the UK replicated and expanded the study of OFT (2013) and found no evidence of personalised pricing (CMA, 2018). Consultants for the European Commission conducted a similar study for 8 member states and 4 markets with similar findings (Ipsos

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<sup>1</sup> The economic literature (Pigou, 1920) distinguishes between first-degree discrimination (or personalised pricing), third-degree discrimination (or group pricing) and second-degree discrimination (or versioning). See Tirole (1988), chapter 3, or Belleflamme and Peitz (2015), chapters 8 to 10, for definitions and a detailed treatment of price discrimination.

<sup>2</sup> Individual pricing corresponds to first-degree price discrimination and group pricing to third-degree price discrimination. We exclude versioning (second-degree price discrimination) from our definition. Indeed, the debate about personalised pricing revolves around situations where consumers are offered different prices for the *same* good, which excludes second-degree discrimination where firms offer differentiated products in order to price discriminate.

et al., 2018). In the computer science literature, Vissers et al. (2014) ran a three-week experiment with 66 virtual user profiles connecting 25 airlines twice a day, and found no evidence of price targeting, though prices were observed to be very volatile.<sup>3</sup>

But this remains a controversial area. An (in)famous case occurred in 2000 when a customer complained that, after erasing the cookies from his computer's browser, he obtained a lower price for a particular DVD on Amazon.com. Consumers were very upset, and Amazon's CEO, Jeff Bezos, promised that the company "never will test prices based on customer demographics".<sup>4</sup> The fear of consumer backlash may explain why targeted pricing is hardly observed.<sup>5</sup> However, there are subtler – and more acceptable, from a consumer viewpoint – ways for a company to achieve the same outcome.

First, firms can offer the same uniform prices to all consumers, but with *personalised discounts*. Since discounts are less easily compared, negative reaction from consumers seems less likely. Since consumers end up paying different, personalised, net prices, this pricing strategy is equivalent to personalised pricing. Second, a firm can engage in *search discrimination* or *steering*, which consists in showing different products to customers from different groups, based on the available information about consumers. For example, the Wall Street Journal (2012) reported that the travel agency OrbitzWorldwide was showing more expensive hotel offers to Mac users than to PC users. A similar practice has been employed by Staples.com: the same newspaper article revealed that this website displayed different prices once the potential buyers' locations had been identified. The studies of CMA (2018) and of Ipsos et al. (2018) also found evidence of steering, consumers being shown different search results on some websites based on their operating system or the access route to the websites.<sup>6</sup>

In sum, with the advent of big data, we should expect more personalised prices, though firms may have to employ indirect methods (such as personalised discounts or search discrimination) to avoid upsetting consumers.

The regulation of personalised pricing is a complex issue because, on the one hand, personalised prices are not very common at this stage and very few cases have been dealt with by the regulators and, on the other hand, several legal instruments can be applicable. As explained by OECD (2018b), four main instruments apply: rules on consumer protection, data protection, competition protection and anti-discrimination. Those rules aim to empower consumers by increasing transparency and consumers' choice and to prohibit price discrimination in some circumstances.

## 2. Transparency rules

This section deals with transparency rules applicable to personalised prices. It first deals with EU consumer protection rules, in particular Consumer Rights and Unfair Commercial Practices Directives, which impose to inform the consumer if a price is personalised. The section then deals with the different transparency rules enshrined in General Data Protection Regulation (hereafter "GDPR") and show how this Regulation may be applied to price personalisation. Finally, it highlights that different levels of transparency may exist depending on the rules applied. Transparency may indeed vary from merely

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<sup>3</sup> Other types of practices may explain the high variability of online prices. In particular, it may be the case that firms use the possibility to change their prices online frequently to explore the demand curve (and estimate price elasticities).

<sup>4</sup> See [https://en.wikipedia.org/wiki/Amazon.com\\_controversies#Differential\\_pricing](https://en.wikipedia.org/wiki/Amazon.com_controversies#Differential_pricing).

<sup>5</sup> Consumers may perceive personalised prices as 'unfair'. Xia et al. (2004) argue that this happens when consumers observe that they are paying a higher price than the other consumers for a similar product.

<sup>6</sup> See also Mikians et al. (2012, 2013) and Hannak et al. (2014) who collected data on various e-commerce websites and provide some empirical evidence of search discrimination.

informing the consumer of the practice to providing her all the parameters and/or weight used for personalisation.

## 2.1. EU consumer protection rules

Consumer protection rules generally apply to B2C relationships although they have been extended to B2B relationships in some jurisdictions. They aim to achieve a high level of consumer protection vis à vis professional traders. This objective relies on the assumption that consumers are in weaker position than traders, *particularly with regard to the level of information*<sup>7</sup>, *knowledge*<sup>8</sup> and *bargaining power*.<sup>9</sup> Consequently, those rules impose several transparency obligations on the professional traders.

Thus, consumer protection seems an obvious candidate to deal with price personalization issues. This is further consistent since the European Union Court of justice (hereafter “the Court of justice”) has specified, in a recent case relating to mobile Internet navigation, that in such a technical sector a major imbalance of information and expertise exists between consumers and traders.<sup>10</sup> Two directives are relevant: (i) the Directive on Consumer Rights<sup>11</sup> (hereafter “CRD”) and (ii) the Directive on Unfair Commercial Practices<sup>12</sup> (hereafter “UCPD”).

### 2.1.1. Consumer Rights Directive

The CRD provides that before a consumer is bound by any contract, the trader must provide her several information in clear and comprehensible manner.<sup>13</sup> Since price personalization is a practice that is more likely to take place on Internet, specific rules relating to distance contract also apply.

In 2018, the Commission released a new deal for consumer<sup>14</sup>, which contain a proposal for a Better Enforcement Directive modifying CRD and UCPD. Under the former CRD directive traders were only required to inform the consumer on the calculation method of a price if it cannot be calculated in advance. These provisions concerned the goods or services that do not yet exist.<sup>15</sup> Therefore, there were no obligation to inform the consumer of any algorithmic price setting.

The Modernisation and Better Enforcement Directive<sup>16</sup> amends the CRD by establishing a new pre-contractual obligation, applying to every trader, to inform consumers in case of price personalization

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<sup>7</sup> Case C-388/13, *Nemzeti Fogyasztóvédelmi Hatóság v. UPC Magyarország kft.*, EU:C:2015:225, point 5; Cases C-54/17 and C-55/17, *Autorità Garante della Concorrenza e del Mercato v. Wind Tre and Vodafone Italia*, EU:C:2018:710, point 54.

<sup>8</sup> Case C-537/13, *Birutė Šiba v. Arūnas Devėnas*, EU:C:2015:14, point 22.

<sup>9</sup> Case C-110/14, *Horățiu Ovidiu Costea v. Volksbank România*, EU:C:2015:538, point 18.

<sup>10</sup> Cases C-54/17 and C-55/17, *Autorità Garante della Concorrenza e del Mercato v. Wind Tre and Vodafone Italia*, *op.cit.*

<sup>11</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, OJ 2011 L 304, pp.64–88 (hereafter CRD).

<sup>12</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 (‘Unfair Commercial Practices Directive’), OJ 2005 L 149, pp. 22–39 (hereafter UCPD).

<sup>13</sup> Article 6 CRD.

<sup>14</sup> COM(2018) 183 final.

<sup>15</sup> European Commission (2014), DG Justice guidance document concerning Directive 2011/83, p.25

<sup>16</sup> Directive 2019/... of the European Parliament and of the Council amending Council Directive 93/13, Directive 98/6 of the European Parliament and of the Council, Directive 2005/29 of the European Parliament and of the

based on automated decision making. It follows that under CRD, traders are now subject to a positive obligation to inform of online price personalization.

### 2.1.2. Unfair Commercial Practices Directive

UCPD may be also be used to widen the information requirements of a trader to keep B2C transactions fair. In order to apply UCPD provisions a consumer must face an unfair commercial practice. The concept of commercial practice is broad and covers any acts or omissions - including advertising<sup>17</sup> - directly related to the sale of products to consumers.<sup>18</sup>

Three types of commercial practices are considered as unfair under UCPD<sup>19</sup>: the practices prohibited under the general rule of Article 5(2), the practices prohibited under the semi-general<sup>20</sup> rules of Articles 6 to 9 and the practices always prohibited under the black list in the Directive annex I. Both practices aimed by general and semi-general rules must be the object of a case-by-case assessment.<sup>21</sup> For the purpose of this paper, we mainly focus on practices prohibited under semi general rules and especially on misleading practices. Since price personalization *per se* is not considered as always prohibited, these rules enhancing the transparency obligations in B2B relationship are indeed the more likely to apply.

To be considered as unfair under UCPD's semi general rules, a practice must be misleading and distort or be likely to distort the average consumer's economic behavior. Hence, the commercial practice must have the potential effect to appreciably impairing the consumer's ability to make an informed decision and making her *take a transactional decision that she would not have taken otherwise*.<sup>22</sup> The concept of transactional decision<sup>23</sup> covers a wide range of behavior including pre-purchase decisions.<sup>24</sup>

Finally, unfairness of a practice is assessed with regard to the benchmark of the *reasonably well informed and reasonably observant and circumspect* average consumer.<sup>25</sup> It results that Member State's authorities are able to determine which level of information consumers may normally expect of a commercial practice.<sup>26</sup>

Since price personalization in itself does not constitute an unfair commercial practice, the question is therefore whether a trader must inform the consumer of the practice. According to Jacquemin the notion of commercial practice includes *any algorithmic data processing carried out in order to send personalized advertising to consumers or to set the price of a product [...]*.<sup>27</sup> In such case, the data processing necessary to set the price is directly connected to the sale of products or services to a customer. Consequently, it constitutes a commercial practice entering in the scope of UCPD. Two types of misleading commercial practices are prohibited under UCPD: misleading actions and misleading omissions.

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Council and Directive 2011/83 of the European Parliament and of the Council as regards better enforcement and modernisation of EU consumer protection rules, to be published in the OJ.

<sup>17</sup> Recital 14 UCPD and Article 1. (d) UCPD.

<sup>18</sup> Article 1. (d) UCPD.

<sup>19</sup> Thirion (2013), p. 141.; Puttemans and Marcus (2014), p.39. ; Jacquemin and Hubin (2017), p. 94.

<sup>20</sup> Jacquemin and Hubin (2017), p. 95.

<sup>21</sup> Recital 17 UCPD.

<sup>22</sup> Article 2. (e) UCPD.

<sup>23</sup> Notion defined in Article 2. (k) UCPD.

<sup>24</sup> Vogel (2017), p.372.; In this sense also see Case C-281/12, *Trento Sviluppo srl and Centrale Adriatica Soc. coop. arl v. Autorità Garante della Concorrenza e del Mercato*, EU:C:2013:85, point 38.

<sup>25</sup> Case C-122/10, *Konsumentombudsmannen v. Ving Sverige.*, EU:C:2011:299, point 22; recital 18 UCPD.

<sup>26</sup> European Commission (2016), Guidance on the implementation/application of directive 2005/29/EC, p.38.

<sup>27</sup> Jacquemin (2018), p.85.

Article 6 (1d) prohibits misleading action deceiving or likely to deceive the consumer even containing factually correct information, in relation to the price or its calculation method. The wording of this Article is interesting because it not clearly relates only to goods or services that do not yet exist. At this stage, a doubt remains concerning the interpretation of this Article. It may apply to personalized discounts. If a discount is used to hide the price personalization practice, the information given (i.e. the price) is factually correct but the consumer is misled with regard to the price's calculation mode. This article also applies in case of commercial practices containing false information. If a trader uses price personalization techniques and states the contrary, it will constitute a misleading action.

A commercial practice is also considered as a misleading omission under Article 7 UCPD if (i) a trader fails to provide to a consumer all material information necessary before taking an informed and efficient purchase decision<sup>28</sup> and (ii) it distorts her economic behavior.

Information of price personalization constitutes a key item information for the consumer. Consumer's strong reaction to the Amazon's practice of 2000 illustrate it. BEUC also considers that information related to price are one of the most essential material information.<sup>29</sup> The Commission's guidance document of 2016 also provides precision in that sense. First, they highlight that even if a violation of data protection law does not, in itself, constitute an unfair practice, it should be taken into account in the assessment of the unfairness of a practice. Profiling and price personalization are expressly mentioned as practices that could be unfair if carried out in breach of data protection requirements.<sup>30</sup> Second, they underline that a trader must inform a consumer if its personal data are used for commercial purposes going beyond a specific transaction. If not, it could constitute a misleading omission.<sup>31</sup>

In such situation we also consider that a distortion of consumer's economic behavior exists or is likely to exist. As price personalization may increase prices for some customers, they may not want to purchase a good while knowing that they could buy it cheaper on another website, which does not personalize prices. In *Trento Sviluppo* the Court of justice highlighted that the concept of transactional decision not only covers *the decision [...] to purchase a product, but also the decision directly related [...] in particular the decision to enter shop.*<sup>32</sup> The pre-purchase decisions also cover accessing and spending time on a website.<sup>33</sup> It is possible to compare entering in a shop and accessing a website. Knowing the fact that a website use personal data to set a price, a consumer may simply not want to access to this website or go through the process necessary to purchase a good (i.e. creating an account, verifying it, typing payment information,...). Thus, the overall trader's practice make the consumer take a transactional she had not taken otherwise.

It is clear that, under UCPD, price personalization may be considered as an unfair practice if the consumer is not aware. It follows that traders are free to determine their prices in different ways as long as they inform the consumer.<sup>34</sup>

## 2.2. Data protection rules

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<sup>28</sup> European Commission (2016), Guidance on the implementation/application of directive 2005/29/EC, p.63.

<sup>29</sup> BEUC (2017), Fitness check of EU consumer law, p.5.; BEUC (2018), Ensuring consumer protection in the platform economy, p.9.

<sup>30</sup> European Commission (2016), Guidance on the implementation/application of directive 2005/29/EC, p.24

<sup>31</sup> *Ibid.*, p.63.

<sup>32</sup> Case C-281/12, *Trento Sviluppo and Centrale Adriatica v. Autorità Garante della Concorrenza e del Mercato*, *op.cit.*, point 38.

<sup>33</sup> European Commission (2016), Guidance on the implementation/application of directive 2005/29/EC, p.34.

<sup>34</sup> Also see OECD (2018), Personalised pricing in the Digital Era – Note by the European Union, p.10.

Data protection rules aim to ensure that the privacy and the right to self-determination of the data subjects are protected. The trigger to apply these rules and the protection of the GDPR<sup>35</sup> is the processing of personal data *wholly or partly by automated means* [...].<sup>36</sup> Two main conditions need to be fulfilled: first, an act of processing is necessary. Second, the processing must relate to personal data. These two notions are broadly defined.

Processing is defined as *any operation or set of operations which is performed on personal data or on sets of personal data, whether or not by automated means*.<sup>37</sup> It covers a wide range of data manipulation from consultation to the destruction of personal data and includes collection and combination of personal data.<sup>38</sup>

The notion of personal data is defined as any information relating to a directly or indirectly identified or identifiable natural person.<sup>39</sup> GDPR provides an open list of personal data.<sup>40</sup> Hence, benefits from the protection any private, public, professional, commercial subjective or objective information<sup>41</sup> as long as they relate to data subjects (even if not acting as consumers). With regard to this notion, Article 29 Working party (hereafter “WP29”) considers certain cookies as unique identifiers<sup>42</sup> and as personal data. Furthermore, both WP29 and the Court of justice consider a dynamic IP address as personal data<sup>43</sup>. Additionally, at big data era this notion is even broader since technology allows the combination of data in order to infer new information.<sup>44</sup>

Thus, any use of personal data, by an algorithm, in order to set price specially tailored to a consumer fall within the scope of GDPR. Consequently, this practice must be performed in accordance with the data protection requirement. Nevertheless, data protection rules do not prohibit algorithmic price personalization *per se*.<sup>45</sup>

GDPR contains several transparency rules. Since price personalization relies on personal information, it must respect these transparency requirements. In this regard are concerned some of the principles applying to every data processing and some of the data subject’s rights. Finally, if applicable to personalised pricing, Article 22 may also increase transparency.

### ***(i) Principles applying to all data processing***

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<sup>35</sup> Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 September 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), OJ 2016 L.119/1, pp. 1-88 (hereafter GDPR).

<sup>36</sup> Article 2.1 GDPR.

<sup>37</sup> Article 4. (2) GDPR.

<sup>38</sup> Are among others mentioned: collection, recording, organisation, structuring, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, restriction, erasure or destruction.

<sup>39</sup> Article 4.(1) GDPR.

<sup>40</sup> Are among others mentioned: name, identification number, location data, online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person.

<sup>41</sup> de Terwangne (2018), p. 60. ; Also see cases C-92/09 and C-93/09, *Volker und Markus Schecke et Hartmut Eifert v. Land Hessen*, EU:C:2010:662, point 59.

<sup>42</sup> Article 29 Working Party (2008), Opinion 1/2008 on data protection issues related to search engines, p.9.

<sup>43</sup> Article 29 Working Party (2007), Opinion 4/2007 on the concept of personal data, pp.16-17.; Case C- 582/14, *Patrick Breyer v. Bundesrepublik Deutschland*, EU:C:2016:779, points 44-49. Also see recital 30 GDPR.

<sup>44</sup> On this subject also see: Delforge (2018), pp. 15-29.

<sup>45</sup> Drechsler and Benito Sanchez (2018), p. 4.; Zuiderveen and Poort (2017), p. 358.

Every data processing must respect several principles laid down in Article 5 GDPR<sup>46</sup>. With regard to price personalization, principle of loyalty, principle of transparency and principle of purpose limitation are especially relevant.

Principle of loyalty, which is also enshrined in the EU charter of fundamental rights (hereafter “the Charter”)<sup>47</sup>, means that data collection cannot be hidden to the concerned person.<sup>48</sup> This principle closely linked to transparency imposes on data controllers to sometimes provide additional information to insure the fairness of processing.<sup>49</sup>

Transparency principle implies that controllers must provide, to data subjects, information concerning processing of their data. There is no definition of transparency in the regulation itself but recital 39 defines it.<sup>50</sup> Accordingly, it means that it should be transparent for the subject that data concerning her are processed and to what extent they are processed.

Finally, principle of purpose limitations highlights two things. First, personal data need to be collected *for specified, explicit and legitimate* purposes (i.e. the objectives or goals pursued by the data processing). Second, these data cannot be processed for other purposes incompatible with the initial purposes. This principle implies that controllers cannot collect and process data without indicating their specific pursued aim. The wording specified implies at least that purpose of processing is not too broadly or too vaguely formulated. The term explicit implies that, when defining a processing purpose, the controller must be pedagogical and try to explain it as clearly as possible.<sup>51</sup> In practice, collecting data for personalization purposes will at least constitute a non-specified and not explicit purpose for price personalization. Additionally, data collected for other purpose (e.g. for billing) cannot be processed for price personalization without further consent for it.

## **(ii) Information right of the data subject**

Information right implements the principle of transparency. The Regulation lists down which information must be furnished to data subject also in cases of data processing for purposes of price personalization. Two scenarios must be distinguished. In the first, data are collected from the data subject (Article 13 GDPR). In the second data are not obtained from the subject (Article 14 GDPR).

In the first scenario, information right constitutes an *ex ante* right since information must be communicated at the time of the collection.<sup>52</sup> Pursuant Article 13.1(c) GDPR and principle of purpose limitation the controller must inform the subject of the purpose for which data are processed. Consequently, she must clearly inform the person, at the time of data collection, that her data will be used for price personalization. Additionally, if the processing relies on data subject’s consent, WP 29 considers that, a controller will need to name the other controllers if the data are transferred to other controllers who want to rely on the same initial consent.<sup>53</sup>

In the second scenario, controller still needs to fulfill her transparency obligations. She also needs to mention the source from which personal data originate. These obligations must be fulfilled at latest

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<sup>46</sup> i.e. principles of lawfulness, fairness and transparency; purpose limitation; data minimization; accuracy; storage limitation; integrity and confidentiality; accountability.

<sup>47</sup> Article 8 of the EU Charter of Fundamental rights

<sup>48</sup> In that sense: de Terwangne (2013), p. 230. Also see Recital 60 GDPR.

<sup>49</sup> For instance: Article 13.2 and 14.2 GDPR.

<sup>50</sup> Article 29 Working Party (2018), Guidelines on transparency under Regulation 2016/679, p.6.

<sup>51</sup> Degreve (2014), p. 428.

<sup>52</sup> Article 13.1 GDPR.

<sup>53</sup> Article 29 Working Party (2018), Guidelines on Consent under Regulation 2016/679, p.14.



within one month or at the time of the first communication with the data subject if data are used for communication with the data subject.

In both scenarios, the controller must inform the concerned person of the existence of automated decision-making, including profiling. These two practices are indeed necessary for price personalization (see below).

### **(iii) Right of access**

Having a doubt facing prices on a website, consumer may also use her right of access to get confirmation of price personalization practice existence. This mechanism enshrined in Article 15 GDPR constitutes an *ex post* right. It grants to every data subject the right to request a controller the confirmation that personal data concerning her are detained and under process. If her personal data are indeed processed, the controller needs to provide her several information including the explicit purposes of the processing.<sup>54</sup>

One of the major advantages of this provision is the right to obtain a copy of the personal data undergoing processing.<sup>55</sup> The controller must respond to such requests within one month at the latest and freely provide a copy of the data she detains.<sup>56</sup> This copy could provide precious information to help the consumer understand which data are used by an algorithm to set a price.

Moreover, apart from increasing transparency, this right also empowers the data subject. It allows her to verify accuracy of her data and may serve as a first step before using right to rectification.

### **(iv) Increased transparency in case of price personalization**

It is necessary to distinguish between profiling, automated decision-making and solely automated decision-making. Profiling, is defined in Article 4. (4) GDPR and necessarily implies assessing personal aspects of the data subject's life.<sup>57</sup> In the present case, data are processed for assessing at least economic situation of the subject. As for automated decision-making and solely automated decision-making they imply that a decision is taken on the basis of personal data. The main difference between these two concepts relies on the serious involvement of a human in the decision process.<sup>58</sup>

In addition to profiling, price personalization also implies an automated decision-making (i.e. setting a higher or lower price based on personal data). These mere facts suffice to increase the transparency requirements. Concerning information right, WP29 considers that a data subject needs to be aware that her data are processed for profiling purpose but also that automated decisions are taken on the basis of the profile generated with her data.<sup>59</sup> Similarly, with regard to the right of access, it underlines That controller must allow data subject to access to the data used to create her profile and to information relating to the profile which include details on the categories she has been placed into.<sup>60</sup>

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<sup>54</sup>Among others, in addition to the purpose of the processing, the categories of personal data concerned, the recipient or categories of recipient of the personal data, the existence of the right to request rectification and erasure, existence of automated decision-making, including profiling.

<sup>55</sup> On this issue: Tombal (2018), pp.437 – 443.

<sup>56</sup>Article 12.3 GDPR combined with article 12.5 GDPR.

<sup>57</sup>Article 29 Working Party (2018), Guidelines on Automated individual decision-making and Profiling for the purposes of Regulation 2016/679, p.7.

<sup>58</sup>*Ibid.*, pp. 8-9.

<sup>59</sup>*Ibid.*, p. 16.

<sup>60</sup>*Ibid.*, p. 17.

In the context of price personalization, it is more likely that algorithms will automatically set prices without any human intervention. Therefore, it enters into the scope of solely automated decision-making. Article 22.1 GDPR establishes a conditional prohibition for some of these decisions based solely on automated processing. At this stage it is not clear if this Article apply to price personalization (see below).

If price personalization enters into the scope of this Article transparency obligations relating to information and access rights are increased. In addition to information provided in cases of profiling and automated decision-making, the controller must provide *meaningful information about the logic involved*.<sup>61</sup> Without further definition of this notion, it could, from a technical point of view, lead to different level of explanation of a price setting decision. These different levels may imply providing the main parameters used in a decision process, providing all the features used to take a decision or a plain explanation of a decision.<sup>62</sup> In that sense, according to WP29 without necessarily providing all the features used in the decision, the controller must at least provide aggregated information on the factors/parameters taken into account for a decision and on their weight in this decision.<sup>63</sup>

### 2.3. Different levels of transparency

It is clear that consumer protection rules and data protection rules impose to inform the consumers in case of price personalisation. However, it is not always clear which information should be communicated to the consumers in case of price personalization as transparency main have different degrees depending on applicable rules.

Under CRD and UPCD the following levels of transparency may be considered: (i) The first and most basic degree is merely informing that the price is personalised. (ii) A most advanced degree of transparency relates to the manner the prices were personalised. In this case, traders may be obliged to indicate the main parameters determining the personalised prices. (iii) Another advanced degree of transparency relates to the prices offered to others so that a specific consumer can have an anchor price allowing to situate herself across the range of prices offered.<sup>64</sup>

The Modernisation and Better Enforcement Directive introduces in the CRD a new pre-contractual obligation to inform consumers in case of price personalization based on automated decision making. Additionally it also imposes on online marketplaces to inform consumers of the main parameters determining ranking of offers presented to them and the relative importance of these parameters as opposed to other parameters.<sup>65</sup> As the Directive proposal gives more details in the information to provide in case of ranking, it is more likely that under CRD traders will only need to furnish the more basic level of information.

We can regret that it does not extend the obligation to provide the main parameters and their relative importance also in case of price personalization. However, it is still interesting because it will technically oblige market places to provide the main parameters used to rank product's offers online. Based on this, under UPCD's rules, national authorities may consider the consumer's presumed expectation as having the possibility to know the main parameters used for price personalization. This is even more consistent since, in case of ranking by an online marketplace, the Better Enforcement Directive states that main

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<sup>61</sup> Article 13.2 (f) GDPR, Article 14.2 (g) GDPR and Article 15.1 (h) GDPR.

<sup>62</sup> On this subject: Bibal, Lognoul, Frénay and de Streel (2018), p.4.

<sup>63</sup> Article 29 Working Party (2018), Guidelines on Automated individual decision-making and profiling for the purposes of Regulation 2016/679, p.27.

<sup>64</sup> Ezrachi and Stucke (2016), pp. 111-113. ; Townley, Morrison and Yeung (2017), p.21.

<sup>65</sup> Article 2.(5) of the Better Enforcement Directive proposal

parameters and their relative importance must be considered as material information within the scope of UCPD. Thus, the application of unfair practices to personalised prices could benefit from legal clarification either through case-law or through administrative guidance.

Under GDPR, transparency obligation also varies in case of price personalisation. The basic level of transparency to fulfil is to inform the subject of the data processing for purpose of price personalisation. Since this practice implies profiling automated decision-making, the controller must also provide access to information on the profile of the data subject and on the segment concerning her. Finally, if Article 22 GDPR on a solely automated decision-making applies, the controller must be able to provide -in case of access requests- information on the parameters taken into account for decisions and the weight of these parameters. Hence, the requirements are stricter than under UCPD and CRD.

### **3. Empowering rules**

The third section of this paper deals with the empowering rules provided by consumer protection rules and data protection rules. On the one hand, consumer protection rules and consumer rights Directive allow the consumer to exercise a withdrawal right. On the other hand, data protection rules are also providing several empowering rules in case of price personalisation.

#### **3.1. Consumer protection rules**

The 14-days withdrawal right mechanism<sup>66</sup> implemented by CRD may be used as *ex post* empowerment instrument for a consumer facing price personalization. After discovering or if believing that a purchased product's price was personalized - and maybe higher than on another website - a consumer may use her withdrawal right to be refunded. She could then buy the product on another website, which not uses price personalization algorithms. This is a good example of the flexible tools provided by consumer protection law. This mechanism was based on the fact that in case of distance contracts, a consumer is not able to see a product before being bound by a contract.<sup>67</sup> It may nevertheless be used as a remedy in case of price personalization. To allow the consumer to exercise this right, it is necessary to mention two remarks. First, it requires an acquaintance by the consumer of the practice. Second, it requires that the consumer does not face an urgent need of the product.

#### **3.2. Data protection rules**

Data protection rules provide several empowering rules applicable in case of price personalisation. First, the informed consent of the data subject seems to be the only lawfulness ground available in cases of price personalisation. Second, it allows the consumer to modify inaccurate or inexact data. We also think that an opt out mechanism may exist based on different data protection tools. Finally, if applicable to price personalisation, Article 22.1 GDPR may open to the data subject a right to contest the decision of price setting.

##### ***3.2.1. Informed consent of the data subject as legal basis for price personalization***

Principle of lawfulness and Article 6 GDPR highlight that every data processing must be lawful. Thus, the Regulation provides an exhaustive and restrictive list of six lawfulness grounds for every

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<sup>66</sup> Articles 9 to 16 CRD.

<sup>67</sup> Recital 14 of directive 97/7/EC of the European Parliament and of the Council of 20 May 1997 on the protection of consumers in respect of distance contracts, OJ 1997 L 144, pp. 19–27.

processing.<sup>68</sup> In cases of price personalization three lawfulness grounds can be considered: (i) The consent of data subject, (ii) the processing necessary for the performance of a contract to which the data subject is party, (iii) the processing necessary for the purposes of the legitimate interests pursued by the controller or by a third party.

With regard to the consent of the concerned person, GDPR requires a consent of good quality. One of the aims of GDPR was to reinforce the quality of the data subject's consent.<sup>69</sup> In accordance, any consent must be freely given, specific, informed and unambiguous.<sup>70</sup> Each of these terms are important and need to be taken into account when assessing the validity of a data subject's consent.

*Freely given* implies that a data subject exerts a real choice when giving her consent for processing.<sup>71</sup> As underlined by Steppe, if a trader is the only seller of a product and sells it under a personalized price, it is questionable to hold that consent is still valid.<sup>72</sup>

*Specific* means that consent is related to one or more specific purposes and implies a choice in relation with every purpose. In practice, this can oblige a controller to obtain multiple consents and to allow the data subject to reject a purpose.<sup>73</sup> For instance, even if a trader obtains consent to process data for personalized advertising, she will also need to obtain the consent for price personalization. The data subject must also be able to refuse the price personalization purpose. In a recent decision, the French data protection authority (CNIL) has sanctioned Google for its terms and conditions on Android mobile devices. The user had to accept all the processing purposes (including personalized advertising) to use its device. Consent was therefore not specific.<sup>74</sup>

The *informed* criterion is closely linked to the transparency and information requirements. It implies among other providing information relating to the purposes, the data collected, the rights of the data subject and use of data for decisions based on automated processing.

Finally, consent must be unambiguous.<sup>75</sup> In practice, requesting consent to process data for personalization purposes will not be sufficient for price personalization since it will leave some ambiguity.

Processing necessary for performance of a contract applies where two conditions are fulfilled. (i) The data subject must be party to a contract and (ii) the data processing must be necessary for its performance (ii). It is clear that a sale or service contract between a trader and a data subject will be sufficient for the first condition. With regard to the second condition and since this provision also concern the pre-contractual phase, we can ask ourselves if the mere fact that a consumer visit the trader's website is sufficient to justify the use of its data to personalize a price. This second condition constitute a serious hurdle in relation to price personalization. The threshold of the necessity test is indeed high<sup>76</sup> and will probably not be reached in case of price personalization. WP29 even specified that necessity must be

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<sup>68</sup> Cases C-468/10 and C-469/10, *Asociación Nacional de Establecimientos Financieros de Crédito (ASNEF) and Federación de Comercio Electrónico y Marketing Directo (FECMD) v Administración del Estado*, 24/11/2011, EU:C:2011:777, points 30-31.

<sup>69</sup> On this subject: de Terwangne (2018), pp.121-122.

<sup>70</sup> Article 4 (11) GDPR.

<sup>71</sup> Article 29 Working Party (2018), Guidelines on Consent under Regulation 2016/679, p. 6.

<sup>72</sup> Steppe (2017), p.777.

<sup>73</sup> Article 29 Working Party (2018), Guidelines on Consent under Regulation 2016/679, pp.12-13.

<sup>74</sup> Commission Nationale de l'Informatique et des Libertés (2019), Délibération n°SAN-2019-00.

<sup>75</sup> Article 7.2 GDPR specifies, that in case of written consent (i.e. as it is the case online), *the request for consent shall be presented [...] in an intelligible and easily accessible form, using clear and plain language*.

<sup>76</sup> Zuiderveen and Poort (2017), p.360; de Terwangne (2018), p.133; Steppe (2017), p.779.

interpreted narrowly.<sup>77</sup> European Data Protection Board also tends to consider that a processor must be able to demonstrate that the main object of the contract cannot be achieved without the data processing to be considered as necessary.<sup>78</sup> As setting a price (e.g. using a fix price for each buyer) or even price discriminating<sup>79</sup> could be achieved by other means than data processing, we consider that necessity criterion will not be fulfilled.

The processing based on the data controller's legitimate interests also contains a necessity test. Additionally, controller will need to make an *ex ante* balance between its rights and the fundamental rights of the data subject.<sup>80</sup> As already explained, price personalization requires intrusive profiling as it aims to assess as precisely as possible the data subject's WTP. In this regard, WP29 considers that it would be difficult for a controller to rely on legitimate interests for processing purposes such as profiling or tracking *for marketing or advertising*.<sup>81</sup> In such cases, the rights of the concerned person override the controller's interests. We consider the same reasoning applicable to personalized pricing. This is further consistent since recital 47 GDPR requires to take into account the reasonable expectation of the subject *at the time and in the context of the collection* when a processing is based on legitimate interest.

Data processing for purpose of price personalization is therefore feasible based only on data subject's consent. However, requirements to fulfill to obtain a valid consent are demanding and traders will need to be cautious while drafting request for consent. Additionally, Article 9 GDPR provides that processing of special categories of data (i.e. sensitive data<sup>82</sup>) is in principle prohibited. To price personalize products such as drugs, these data need to be processed. In cases implying processing of such data, the only possibility is also to rely on the explicit consent of the subject.

### **3.2.2. Rectification right and opt out mechanism**

Since a price set by an algorithm may be influenced partly or wholly by inaccurate or incomplete data, GDPR grants a rectification right to data subjects.<sup>83</sup> As for right to access, the controller must act in consequence freely within one month. In addition to its duty to rectify inaccurate data, the data controller will, also need, in principle, to communicate these rectifications to each recipient to whom the concerned data have been transmitted.<sup>84</sup>

According to OECD, one solution in case of personalized pricing might be providing an opt out solution to consumers.<sup>85</sup> We think that data protection law may be used to implement this mechanism on basis of the right to withdraw consent (Article 7.3 GDPR) used in combination with right to erasure (Article 17 GDPR).

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<sup>77</sup> Article 29 Working Party (2018), Guidelines on Automated individual decision-making and Profiling for the purposes of Regulation 2016/679, p.13.

<sup>78</sup> European Data Protection Board (2019), Draft Guidelines 2/2019 on the processing of personal data under Article 6(1)(b) GDPR in the context of the provision of online services to data subjects, p.8 and pp. 13-14.

<sup>79</sup> On this subject: Steppe (2017), p.779.

<sup>80</sup> Beelen (2018), p. 54.

<sup>81</sup> Article 29 Working Party (2018), Guidelines on Automated individual decision-making and Profiling for the purposes of Regulation 2016/679, p.15.

<sup>82</sup> Are considered as sensitive data under article 9 GDPR : *data revealing racial or ethnic origin, political opinions, religious or philosophical beliefs, or trade union membership, and the processing of genetic data, biometric data for the purpose of uniquely identifying a natural person, data concerning health or data concerning a natural person's sex life or sexual orientation.*

<sup>83</sup> Article 16 GDPR.

<sup>84</sup> Article 19 GDPR.

<sup>85</sup> OECD (2018b), *Personalised pricing in the digital era*, Background note by the secretariat, p.31 and p.35.

Since the informed consent of the concerned person seems to be the only ground of lawfulness available for price personalization, GDPR allows the data subject to withdraw her consent at any time without having to furnish any specific explanation to the data controller. Additionally, GDPR provides that data subject can obtain the erasure of her data if she withdraws her consent.<sup>86</sup> In practice, the data subject needs to follow two steps. First withdraw her consent, then, ask the erasure of her personal data.<sup>87</sup> After withdrawal of consent and erasure of data, the trader will lose both legal and technical ability to use data in order to set a price. This will also produce a “chain react” since article 19 GDPR imposes to the controller to communicate the obligation to erase to each recipient of the personal data. This mechanism could also apply even if price personalization is considered outside the scope of the right not to be subjected to decisions based solely on automated processing.

### ***3.2.3. Additional safeguard measures applying in case of price personalization?***

Article 22.1 GDPR on automated decision establishes a conditional prohibition for decisions based solely on automated processing and Article 22.2 GDPR set exceptions to this principle. To enter in the scope of this provision, a decision based solely on automated processing must: (i) produce legal effects or (ii) significantly affects the subject.

With regard to the first possibility (i.e. producing legal effects), it is not clear if the sole fact of setting a personalized price for a consumer enters in the scope of this definition. On the one hand academics<sup>88</sup> are often quoting an opinion of the Belgian data protection authority considering that an online advertising offering a price reduction constitute a price offer as having legal effects.<sup>89</sup> On the other hand, WP29 guidelines states that only decisions having serious impact enter into the scope of this provision.<sup>90</sup> Some authors therefore estimate that WP29 doesn't consider the price personalization practice in general as entering into the scope of the provision.<sup>91</sup> According to us, setting a personalized price next to a product on a webpage automatically produce legal effects for the consumer. It constitutes an offer for sale and it affects her legal obligations under a contract (i.e. the obligation to pay a price).

With regard to the second possibility (i.e. significantly affecting the data subject), WP29 guidelines on this Article point out that to be considered as significantly affecting, the decision must have among others the potential effect *to have a prolonged impact on the subject* or to take advantage of her vulnerabilities.<sup>92</sup> Price personalization have such potential if a consumer automatically ends paying a higher price for all her online purchases or if the price of product increases in situations of urgent need for it. An *ex ante* prohibition of the practice with the possibility for the trader to apply it on the basis of an exception is therefore more consistent with the risk based approach enshrined in GDPR<sup>93</sup> and the objective of providing a high level of protection to the data subject.

However, GDPR does not set a general prohibition of price personalization. Article 22.2 GDPR mentions that prohibition is not applicable if the automated decision is among others: (i) necessary for entering into, or performance of, a contract between the subject and the controller or (ii) relies on data

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<sup>86</sup> Article 7.1. (c) GDPR.

<sup>87</sup> Tombal (2018), p.464.

<sup>88</sup> Steppe (2017), p. 362.

<sup>89</sup> Belgian Data Protection Authority (2010), opinion n°35/2012, pp.20-21.

<sup>90</sup> Article 29 Working Party (2018), Guidelines on Automated individual decision-making and profiling for the purposes of Regulation 2016/679, p.21.

<sup>91</sup> Coton and Limbree (2018), p.26.; Vaele and Edwards (2018), p.401. and especially footnote 30.

<sup>92</sup> Article 29 Working Party (2018), Guidelines on Automated individual decision-making and Profiling for the purposes of Regulation 2016/679, pp.21-22.

<sup>93</sup> On this subject also see Gellert (2018); Article 29 Working Party (2017), Guidelines on Data Protection Impact Assessment (DPIA).

subject's explicit consent. A clear parallel can be made with the remarks concerning the lawfulness grounds. Therefore, if this provision applies to algorithmic price personalization, only explicit consent remains as legal basis for the practice.

If Article 22.1 GDPR applies to price personalization, additional safeguard measures apply. In such case, the controller must at least grant to the subject the right to obtain human intervention, to express his point of view and to contest the decision.<sup>94</sup> The question to what extent these rights result in an obligation to explain the decision are still debated.<sup>95</sup> However, important clues are pointing in that direction. First, Recital 71 GDPR states that the data subject must *be able to obtain an explanation of the decision*. Second, according to WP29 a controller must provide to data subjects information sufficiently comprehensive and useful in order to understand the reason of a decision<sup>96</sup> and to challenge it.<sup>97</sup> Finally, Article 22.3 GDPR states that data subject must be able to contest a decision. In order to grant this provision with a useful effect and before being able to contest a decision, the person must have at least explanation allowing him to understand the pricing decision.

## **4. Prohibition rules**

### **4.1. Competition protection rules**

Competition protection rules apply to all transactions concluded by private or public undertakings. As generally recognised, they aim to ensure that those transactions maximise the total welfare (of the consumers and the producers) in some jurisdictions and merely the total consumer welfare in other jurisdictions (see OECD, 2018b, p. 29). To do so, antitrust rules prohibit firms' agreements (in a broad sense) and unilateral conducts by firms which are decreasing the total or consumer welfare.

As the effects of personalised prices on economic welfare depend on the market characteristics and the specificities of the case at hand, a general *per se* prohibition of the practice by antitrust law is not justified. However, if it can be proved in a specific case that the personalisation of the prices decreases total or consumer welfare, the practice is prohibited by the antitrust rules. In the EU, Article 101(1d) TFEU and Article 102(c) TFEU prohibit specifically anti-competitive discriminatory agreement and abuse of dominant position respectively. In this context, discrimination is defined as '*applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage*'.

#### **4.1.1. Anti-competitive agreements**

A distinction is usually made between horizontal agreements among competitors and vertical agreements among firms at different places of the same value chain. Regarding *horizontal agreements*, if competitors agree to charge the same personalised prices, this is a standard cartel which is prohibited as any other cartel.<sup>98</sup> The analysis is more complex when personalised prices are agreed in *vertical relationships* and the personalisation contributes to anti-competitive effects of the agreement. In the EU context where the European Commission and the Courts are particularly worry about the partitioning of the single market, vertical agreements between suppliers and distributors which entail geographical

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<sup>94</sup> Article 22.3 GDPR.

<sup>95</sup> Pro: Malgieri and Comandé (2017); Kaminski (2018); Malgieri (2018). Contra: Wachter, Mittelstadt and Floridi (2017).

<sup>96</sup> Article 29 Working Party (2018), Guidelines on Automated individual decision-making and Profiling for the purposes of Regulation 2016/679, p.25.

<sup>97</sup> *Ibid*, p. 28.

<sup>98</sup> Maggiolino (2017). Note that the reliance on pricing algorithms, which may be used for personalisation, has also an effect on the factors leading to price collusion, see UK-CMA (2018), OECD (2017).

discrimination on the basis of the residence of the consumer are prohibited in many circumstances (European Commission, 2017).

#### **4.1.2. Anti-competitive unilateral conducts**

A distinction is generally made between exclusionary conducts in B2B relationships which are prohibited by antitrust rules in all jurisdictions and exploitative conducts in B2C relationships which are prohibited by antitrust rules only in some jurisdictions.

In *B2B relationships*, price discrimination and personalisation between firms may lead to a (i) *secondary-line (or external) discrimination* when the dominant firm is charging different prices to similar customers and is not competing against those customers or (ii) a *primary-line (or internal) discrimination* when the dominant firm is charging different prices to similar customers and, being vertically integrated, is directly competing against those customers. In most jurisdictions, both types of discrimination are prohibited by antitrust rules when the discrimination is decreasing total or consumer welfare.<sup>99</sup> As shown in section 2, this requires a case-by-case analysis.

In *B2C relationships*, price discrimination and personalisation between consumers could be prohibited by antitrust rules in the jurisdictions where exploitative abuses of market power are covered by those rules, such as for instance in the EU, Australia, Korea or Turkey.<sup>100</sup> The threshold for antitrust intervention which often amounts to price regulation is always very high in those circumstances as explained by OECD (2011). This is justified given the high risks of errors of antitrust intervention against exploitative practices and their relative higher costs of type I errors (as antitrust intervention may distort incentives to invest and innovate by dominant and small forms) over type II errors (as markets usually self-correct in case of exploitative practices, in particular excessive prices).

In the EU, the Court of Justice judged that a price is excessive when: *‘the difference between the costs actually incurred and the price actually charged is excessive, and, if the answer to this question is in the affirmative, whether a price has been imposed which is either unfair in itself or when compared to competing products’*.<sup>101</sup> In case of personalisation, the determination of the excessive character and the comparison with the costs should, according to us, be made against all the prices together and not against each individual price as the normative standard for antitrust intervention is the total consumer welfare and not the welfare of each consumer.<sup>102</sup> However, some authors like Ezrachi and Stucke (2016) or Graef (2017) suggest that antitrust intervention could go further and that the prohibition of exploitative personalised prices could be broader. This is related to the current more general debate on the role of antitrust in the digital sector and, more broadly, on the objective and the normative standard for intervention, being the protection of consumer or total welfare in the short term or in the long term, the protection of the competition process, the protection of diversity and consumers’ choice or the protection of fairness defined in ex ante perspective (equality of opportunities) or ex post perspective (fair distribution of the economic surplus).

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<sup>99</sup> See O’Donoghue and Padilla (2013) for analysis of the application EU competition law to exclusionary personalised prices.

<sup>100</sup> For an analysis of the EU rules, see Botta and Wiedemann (2018).

<sup>101</sup> Case 27/76, *United Brands v. Commission*, EU:C:1978:22, point 252, as recently recalled in Case C-177/16, *AKKA/LAA*, EU:C:2017:689, point 36.

<sup>102</sup> In Case C-238/05, *Asnef-Equifax v. Asociación de Usuarios de Servicios Bancarios (Ausbanc)*, ECLI:EU:C:2006:734, point 70, the Court of Justice judged that: *‘it is the beneficial nature of the effect on all consumers in the relevant markets that must be taken into consideration, not the effect on each member of that category of consumers’*.



## 4.2. Anti-discrimination law

Anti-discrimination rules can apply to the actions of the State and/or the private firms. Those rules aim at protecting the fundamental right not to be discriminated on the basis of some grounds that our liberal democracies find unacceptable. To do so, anti-discrimination laws prohibit the use by the administration and/or by private firms of those grounds to differentiate individuals.

Since price personalization constitute a form of price discrimination, it could lead to discrimination in access to goods and services and enter in the scope of anti-discrimination law. These rules indeed apply to discrimination in access to goods and services which are available to the public at large (i.e. a great number of individuals<sup>103</sup>) and outside the area of private and family life.<sup>104</sup> Two different sets of rules are relevant for purpose of price personalization. The first concerns fundamental rights in general and the second concerns specific EU rules relating to the internal market.

Principle of non-discrimination is enshrined in the Charter of Fundamental Rights<sup>105</sup> and in additional Directives. In relation to access to goods and services, the Race Directive<sup>106</sup> and the Gender Directive are therefore relevant. Directives 2000/78<sup>107</sup> and 2006/54<sup>108</sup> are excluded from our analysis. Their scope is limited to employment and they don't apply to price personalization.

With regard to specific rules relating to internal market, Article 18 TFEU prohibits any discrimination based on ground of nationality. This principle is also provided by the Service Directive<sup>109</sup> and the Geo Blocking Regulation<sup>110</sup> which prohibit discrimination based on place of residence within the EU internal market.

These legal instruments only protect against discrimination based on specific criterions. Nevertheless, if a pricing algorithm use one of these to personalize a price, the practice could be prohibited.

### 4.2.1. Protected criterions under EU Law

The first step is to identify which are the protected criterions in regard to discrimination in access to goods and services. Under the current EU anti-discrimination framework, only the use of few criterions is prohibited for price personalization. The Race Directive prohibits any discrimination based on the race or ethnic origin. The Gender Directive protects against discrimination based on the sex of a person. Additionally, Service Directive and Geo Blocking Regulation protect against discrimination based on nationality or place of residence of the recipient. It results that, in cases of price personalization, only

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<sup>103</sup> Hacker (2018), p.1156.

<sup>104</sup> Recital 13 of Directive 2004/113 of the Council implementing the principle of equal treatment between men and women in the access to and supply of goods and services, OJ 2004 L 373, pp. 37–43 (hereafter the Gender Directive).

<sup>105</sup> Article 21 of the EU Charter of Fundamental rights.

<sup>106</sup> Directive 2000/114/EC of the Council implementing the principle of equal treatment between persons irrespective of racial or ethnic origin, OJ 2000 L 180, pp. 22–26 (hereafter the Race Directive).

<sup>107</sup> Directive 2000/78/EC of the Council establishing a general framework for equal treatment in employment and occupation, OJ 2000 L 303, pp. 16–22.

<sup>108</sup> Directive 2006/54/EC of the European Parliament and of the Council on the implementation of the principle of equal opportunities and equal treatment of men and women in matters of employment and occupation (recast), OJ 2006 L 204, pp. 23–36.

<sup>109</sup> Directive 2006/123/EC of the European Parliament and of the Council of 12 December 2006 on services in the internal market, OJ 2006 L 376, pp. 36–68 (hereafter the Service Directive).

<sup>110</sup> Regulation (EU) 2018/302 of the European Parliament and of the Council on addressing unjustified geo-blocking and other forms of discrimination based on customers' nationality, place of residence or place of establishment within the internal market and amending Regulations (EC) No 2006/2004 and (EU) 2017/2394 and Directive 2009/22/EC, OJ 2018 L 60I, pp. 1–15 (hereafter the Geo Blocking Regulation).

these criteria cannot be used for this purpose. If based wholly or partly in one of these, the practice will constitute a prohibited discrimination.

Additional criteria may be protected in relation to access to goods and services with adoption of the anti-discrimination Directive proposal of 2008.<sup>111</sup> If adopted, this Directive may also protect against discrimination on ground of religion or belief, disability, age and sexual orientation.<sup>112</sup> At the moment, adoption of this Directive seems however compromised.

The recent case law of the Court of Justice relating to Article 21 of the Charter of Fundamental Rights may however enlarged the list of protected criteria. The Court of justice stated in two recent Grand Chamber decisions that Article 21 of the Charter suffice in itself to confer a right that may be invoked in a dispute between individuals in the field of EU law, even in contractual relationship.<sup>113</sup> The Court also highlighted that rights stemming from this provision do not need to be further specified by EU law to be invoked in dispute between individuals.<sup>114</sup> These cases concerns employment and, at this stage, it still remains unclear if these findings also apply in the field of access to goods and services. This may be further relevant since access to goods and services relate to internal market which is enshrined among others in Article 4 TFUE. Nevertheless, only discrimination based on the few above-mentioned criteria are, at this stage clearly prohibited.

#### **4.2.2. Types of prohibited discrimination**

Both EU Directives relating to fundamental rights and to internal market prohibit direct and indirect discriminations.<sup>115</sup> On the One hand, a direct discrimination happens when a person is treated less favorably, on basis of a protected criterion *than another is, has been or would be treated in a comparable situation*.<sup>116</sup> The same applies if the concerned person is not characterized herself by one of the protected criteria as long as the decision itself relies on these criteria.<sup>117</sup> Thus, algorithmic price setting may constitute a prohibited discrimination if based partly or wholly on inaccurate data which also constitute a protected criterion. For purpose of this paper, we consider that online consumers, at least within the EU internal market are in a comparable situation.

On the other hand, an indirect discrimination occurs when the use – by an algorithm in price personalization issues – of an apparently neutral criterion has the effect to put a group identified by a protected criterion<sup>118</sup> *at a particular disadvantage compared with other persons*. For instance, if an algorithm uses the navigation history of consumers and charge 10% more to consumers having visited make-up online store, it could constitute an indirect discrimination based on sex of the consumer.

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<sup>111</sup> Proposal of 2<sup>nd</sup> July 2008 for a Council Directive on implementing the principle of equal treatment between persons irrespective of religion or belief, disability, age or sexual orientation, COM/2008/0426 final (hereafter the 2008 Directive proposal).

<sup>112</sup> Article 1 and 2.1.(d) of the 2008 Directive proposal.

<sup>113</sup> Case C-193/17, *Cresco Investigation v. Markus Achatzi*, EU:C:2019:43, points 76 and 77; Case C-414/16 *Vera Egenberger v. Evangelisches Werk für Diakonie und Entwicklung eV*, EU:C:2018:257, points 76 and 77.

<sup>114</sup> Case C-414/16 *Vera Egenberger v. Evangelisches Werk für Diakonie und Entwicklung eV*, *ibid.*, point 78.

<sup>115</sup> Articles 2.2. (a) and 2.2. (b) of the Race Directive, Article 2.(a) and 2.(b) of the Gender Directive, Article 1.1 of the Geo Blocking Regulation, European Commission (2012), Staff working document with a view to establishing guidance on the application of Article 20(2) of Directive 2006/123/EC, p. 9.

<sup>116</sup> Article 2.2. (a) of the Race Directive, Article 2.(a) of the Gender Directive.

<sup>117</sup> Drechsler and benito sanchez (2018), p.14; Case C-83/14 *CHEZ Razpredelenie Bulgaria AD v. Komisia za zashtita ot diskriminatsia*, EU:C:2015:480, point 56 and points 59 and 60.

<sup>118</sup> Robin-Olivier (2016), p. 239.

The concept of direct discrimination relates to a practice aiming individual<sup>119</sup> while the concept of indirect discrimination relates to practice aiming a group of persons.<sup>120</sup> Price personalization may be considered as a direct discrimination if ultimately based on one of the protected criteria – even inferred with big data tools<sup>121</sup> – or as an indirect discrimination if based on a neutral criterion but has detrimental effects on a group of persons characterized by a protected criterion. Depending on the concerned rules discrimination may be allowed if an objective justification exists.<sup>122</sup>

#### **4.2.3. Prohibited and justifiable discriminations**

This section analyses which discriminations are prohibited and which discrimination may be justified under (i) EU rules relating to fundamental freedoms and (ii) under specific EU rules for internal market.

##### **(i) Secondary law relating to fundamental freedoms**

In case of direct discrimination based on race or ethnic origin, no justifications are possible in relation to access to goods and services. Therefore, if the price set by the algorithm is partially or wholly based on it, it will be prohibited.

Direct discrimination based on sex and indirect discriminations based on sex and race<sup>123</sup> may be objectively justified. In order to be justified a discrimination must fulfill 3 conditions: (i) pursue a legitimate aim, (ii) be appropriate to reach this aim and (iii) be necessary.<sup>124</sup>

The first condition to justify a discrimination is that the discrimination must pursue a legitimate aim. This concept is of an open nature<sup>125</sup> and the Court of justice has already considered that justifications of economic nature may constitute a legitimate aim.<sup>126</sup> Nevertheless, the Court of justice also highlighted, in employment cases that a legitimate aim must respond to a real need of the undertaking and unrelated to discrimination.<sup>127</sup> If applicable to discrimination in access to goods and services, these two considerations may create a major hurdle in cases of price personalization. It is indeed questionable to hold that price personalization respond to a real need of the seller. In *Hill* case the Court of justice even specified that a discrimination cannot be justified on economic ground if avoidance of this discrimination leads to increasing in costs.<sup>128</sup> In addition, the very nature of the practice is to discriminate between consumers on basis of their WTP.

The second condition (i.e. being appropriate to reach the aim), means that the practice must be effective to reach the pursued aim.<sup>129</sup> As algorithmic price personalization may constitute the best tool to personalize price and assess the consumer WTP, this condition is fulfilled.

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<sup>119</sup> Hacker (2018), p. 1151.

<sup>120</sup> Craig and de Burca (2011), p.897.

<sup>121</sup> Drechsler and benito sanchez (2018), p.13.

<sup>122</sup> Zuiderveen (2018), pp.19-20.

<sup>123</sup> Article 4.5 of the Gender Directive.

<sup>124</sup> Article 2.2. (b) of the Race Directive, Article 2.(b) of the Gender Directive; Craig and de Burca (2011), p.906.

<sup>125</sup> Tobler (2008), p.32.

<sup>126</sup> Case C-96/80 *Jenkins v. Kingsgate*, EU:C:1981:80, point 12; Case C-127/92, *Pamela Mary Enderby v. Frenchay Health Authority and Secretary of State for Health*, EU:C:1993:859, points 25-26; Ivanus (2014), p.156.

<sup>127</sup> Case C-170/84 *Bilka - Kaufhaus GmbH v. Karin Weber von Hartz*, EU:C:1986:204, point 30; Case 196/02, *Vasiliki Nikoloudi v. Organismos Tilepikoinonion Ellados*, EU:C:2005:141, point 47 especially highlighted in Tobler (2008), pp.32 and 48; Moran (2000), p.116; Case C-83/14 *CHEZ Razpredelenie Bulgaria AD v. Komisia za zashtita ot diskriminatsia*, EU:C:2015:480, point 85.

<sup>128</sup> Case C-243/95 *Kathleen Hill and Ann Stapleton v. The Revenue Commissioners and Department of Finance*, EU:C:1998:298, point 40.; Hervey (2002), p.127.

<sup>129</sup> Craig and de Burca (2011), p.907; Tobler (2008), p.35.

The last condition, is a necessity test which implies that the means used must be necessary to attain the aim pursued. According to Hacker, this condition may be fulfilled since use of algorithmic computing power will in general be more accurate than human.<sup>130</sup> If attaining perfect or nearly perfect price discrimination is a legitimate aim, then using algorithm to achieve this goal could be necessary. However, price personalization is also a form of price discrimination. If necessity is interpreted more strictly as requiring that no other less discriminatory means could be used to achieve the goal pursued<sup>131</sup> then the use of algorithm to price discriminate may not be considered as necessary. Price discrimination can be achieved by other means like versioning for instance.

In order to prove a *prima facie* risk of (direct or indirect) discrimination the parameters used to set the price need to be known by the concerned person. This could also be more problematic in case of indirect discrimination due to the group dimension of this concept which often implies using statistical evidences.<sup>132</sup>

## ***(ii) Specific rules relating to EU internal market***

Article 18 TFEU contains an absolute and general rule prohibiting any discrimination on grounds of nationality. In the current state of things, this provision seems however deprived of horizontal direct effect. It means that EU consumer cannot invoke this provision in a dispute with a seller.<sup>133</sup> Additionally, within the Internet's environment, discriminations based on the nationality will not necessarily happen. The discriminations faced by consumers will more probably be based on its place of residence.<sup>134</sup> In practice, if a seller uses the IP address of the consumer to set a personalized price, the discrimination is based on the consumer's place of residence instead of its nationality.

Service Directive prohibits any discrimination, in condition of access to a service (i.e. among other price<sup>135</sup>), based on the nationality or place of residence of the service's recipient.<sup>136</sup> The discrimination based on these criteria may however be objectively justified<sup>137</sup> and recital 95 of the Directive provides an open list of possible justifications. On its Guidance paper concerning this provision, the Commission identifies consumer's willingness to pay as a possible justification for such discrimination.<sup>138</sup> Thus, this Directive is not prohibiting the use of nationality or place of residence for purpose of personalized pricing.

This Directive suffers several problems and Geo blocking Regulation has been adopted among others because its Article 20 TFEU has not fully reached its goal in combating discrimination and reducing legal uncertainty.<sup>139</sup> Therefore, this regulation explicitly aims to prevent direct and indirect discrimination in general condition of access to goods and services based on nationality and place of residence.<sup>140</sup> The notion of general condition of access is broadly defined and includes the net sale

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<sup>130</sup> Hacker (2018), pp. 1160-1161.

<sup>131</sup> In this sense: Hervey (2002), p.122, Ivanus (2014), p.158.

<sup>132</sup> Zuiderveen (2018), pp.19-20.

<sup>133</sup> Schulte-nölke, Zoll, Macierzynska-franaszczyk, Stefan, Charlton, Barmascheid and Kubela (2013), pp. 33-40.

<sup>134</sup> *Ibid.*, p.31.

<sup>135</sup> European Commission (2012), Staff working document with a view to establishing guidance on the application of Article 20(2) of Directive 2006/123/EC, p.10.

<sup>136</sup> Article 20.2 of the Service Directive.

<sup>137</sup> Article 20.2 read in combination with recital 95 of the Service Directive.

<sup>138</sup> European Commission (2012), Staff working document with a view to establishing guidance on the application of Article 20(2) of Directive 2006/123/EC, pp. 15 and 18.

<sup>139</sup> Recital 3 of the Geo blocking regulation; Bourreau, de Streel, Graef (2017), p.46.

<sup>140</sup> Article 1.1 and Article 4.1 of the Geo Blocking Regulation.

prices.<sup>141</sup> The prohibition applies in three specific situations including the purchasing and delivery of goods.

The Regulation also provide that traders are allowed to offer different net sale prices *to customers on a specific territory or to specific groups of customers on a non-discriminatory basis*. This provision means that traders may price discriminate between groups of consumers as long as it is not based on the nationality or place of residence of the consumer. This interpretation seems indeed coherent with the Commission's position which states that the Regulation does not regulate prices and not prohibit dynamic pricing.<sup>142</sup> In this scenario, using a single consumer's IP address for price personalization may be prohibited as indirect discrimination based on residence place.

Nevertheless, Geo blocking Regulation doesn't apply in purely internal situations. If prohibiting personalised pricing, this regulation would not prohibit it if both seller and buyers are located within the same Member State.

#### ***4.2.4. Prohibition of price personalization under national Member State law?***

EU law is only setting minimum requirements and additional criterions may be protected under national law. For instance, in addition to several other criterions, Belgian law also prohibit discrimination based on property. We can therefore ask ourselves if personalized pricing could be considered as a discrimination based on the property of the person. This question is even more consistent since property is a protected criterion under Article 21 of the EU charter and several international legal instruments.<sup>143</sup> The notion of property is broad and includes real property and personal property like goods and income.<sup>144</sup> If constituting a discrimination based on this criterion, the practice may be prohibited in some jurisdiction within the EU.

### **5. Summary of the main rules applicable to personalised pricing**

The Table 1 below summarises the main conditions of application and the effects of the four main legal instruments which have just been described. The Table shows and compares the main objectives and scope of each legal instrument as well as the consequences on users and consumers' transparency and choice and on the prohibition of some cases of personalisation when empowerment is deemed to be insufficient.

While some rules can be substitute, in particular the consumer protection and personal data protection rules, most of the rules are complementary.<sup>145</sup> Indeed, consumer protection and data protection rules mainly aim at increasing transparency while competition protection and anti-discrimination rules mainly aim at prohibiting some cases of price personalisation. The first set of rules allows the consumers the

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<sup>141</sup> Article 2.14) of the Geo Blocking Regulation.

<sup>142</sup> European Commission (2018), Questions and Answers on the Geo-Blocking Regulation in the context of e-commerce, pp. 21-22.

<sup>143</sup> Among others: Article 2.1 of International Covenant on Civil and Political Rights and Article 14 of the European Convention on human right.

<sup>144</sup> United nations (2009), General Comment No. 20: Non-Discrimination in Economic, Social and Cultural Rights, p. 7.

<sup>145</sup> On the complementarity between the consumer protection and data protection rules, the Staff of the European Commission (2016, p. 26) notes that the violation of data protection rules do not always means that the practice would be considered as unfair under consumer protection, but that '*such data protection violations should be considered when assessing the overall unfairness of commercial practices under the Unfair Commercial Practice Directive, particularly in the situation where the trader processes consumer data in violation of data protection requirements, i.e. for direct marketing purposes or any other commercial purposes like profiling, personal pricing or big data applications.*'

understand better the market dynamics and, provided they have alternatives to which they can switch, vote with their feet and go to other providers. They also allow the authorities in charge of the second set of rules, i.e. antitrust and anti-discrimination agencies, to understand better the basis and the effects of the personalised pricing and the need for prohibition. Hence, the first set of rules contributes to the effectiveness of the second set of rules.

**Table 1: Conditions and effects of the main rules applicable to personalised pricing (PP)**

<b>Types of legal instrument</b>	<b>Consumer protection</b>	<b>Personal data protection</b>	<b>Competition protection</b>	<b>Non-discrimination</b>
<b>Transparency</b>	<p>New CRD -Information of price personalisation based on automated decision as pre-contractual requirement</p> <p>UCPD Information in case of price personalisation But at which degree? - mere fact that prices are personalised - the parameters of the personalisation - the average or median price offered</p>	<p>- Use of personal data and purpose of processing - information relating to profiling and automated decision making</p> <p>if article 22.1 applicable: -main parameters used for PP and weight of these parameters in the decision.</p>		
<b>User empowerment</b>	<p>-PP may be considered as unfair under some circumstances affecting the <i>quality</i> of consumer choice</p> <p>-Withdrawal right may be used for refund in cases of PP.</p>	<p>- Need data subject informed consent to base PP on personal data</p> <p>-Rectification right may be used if PP based on inaccurate data</p> <p>-Opt out mechanism based on withdrawal of consent and right to erasure</p> <p>If article 22.1 applicable : -right to obtain human intervention, to obtain explanation of decision and to contest decision.</p>	- May stimulate competition hence users' choices	
<b>Prohibition</b>			PP which is welfare-detrimental (to be	- PP directly based on racial/ethnic origin

			determined on case-by-case)  <i>Agreements</i> - Horizontal - Vertical  <i>Unilateral conducts</i> - Exclusionary in B2B: internal discrimination and external discrimination - Exploitative in B2C	-PP indirectly based on sex or racial/ethnic origin without objective and appropriate justification  - In EU, PP based directly or indirectly on nationality or residence without objective justification  -At national level, PP prohibited as discrimination based on property?
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## 6. Remedies and policy recommendation

Although the rapid technical progress in data collection and data analysis makes the personalisation of prices easier and less costly, several recent studies across the world show that digital firms generally do not personalise their prices. This may be explained by the mistrust of the consumers against personalised prices and by the availability of alternatives which are more accepted by consumers, such as personalisation of search results or discounts. Moreover, economic theory shows that personalised prices are not always bad for consumers and their welfare effects depend on the market characteristics and the specificities of the case at hand. However, consumers are worry of price personalisation especially when based on personal data; their trust is at stake when they do not understand well how prices are determined and how their data have been used. To maintain trust in the digital services, it is thus important that the legal framework applicable to personalised prices is well understood and provides for appropriate obligations which are effectively implemented. This last section provides recommendations in that regard.

### 6.1. Rules and remedies for personalised pricing in the digital era

The regulation of personalised prices should first and foremost empower the consumers by ensuring they are well informed that prices are personalised and by maximising as much as possible their choices. However, empowering consumers may not be enough in some circumstances and, in those cases, regulation should go further and prohibit the personalisation.

**Consumer information.** As the consumers' mistrust and fear can partly be explained by a lack of knowledge about when and how prices are personalised and as information asymmetry can be an important market failure in the digital economy (Townley et al., 2017), rules should lead to more transparency. Moreover, as recommended by OECD (2018a), those information should be disclosed to the consumers in a smart manner taking into account the bias and heuristics underlined by behavioural studies. Or, as put by the UK Behavioural Insight Team, information disclosure should comply with the EAST framework, i.e. be easy, attractive, social and timely.

**Consumer choice and market competition.** As transparency to consumers is only useful when they can act upon the information and as price personalisation is more likely to be good for consumers when firms compete, rules should maximise consumers' choices by stimulating competition between

providers and facilitating consumers switching. Hence, antitrust rules should establish a level playing field between all providers and firmly condemn anti-competitive agreements and unilateral conducts. Specifically for unilateral conducts, antitrust rules are better at condemning exclusionary price personalisation than regulating exploitative price personalisation. In addition, independently of the state of competition, users should have the right to oppose personalisation especially when it is based on their personal data. Hence, data protection rules should require consent when personal data are used for price personalisation.

**Prohibition of some forms of price personalisation.** As informed consumers having choices may lead to cases where prices are personalised on grounds which are deemed unacceptable in a liberal democracy, rules should prohibit those case of personalisation by the public authorities as well as by the private firms.

## 6.2. The effectiveness of the rules and their enforcement

Legal rules are only piece of paper, they need to be effectively enforced to be meaningful. This implies that rules should be clear and sufficiently certain, enforced by strong and expert agencies which cooperate between each other at the national and at the international levels.

**Clear and legally certain rules.** As explained in Section 3, most of the rules applicable to personalised pricing are principle-based. Such rules have the advantage of being easily adaptable to new issues (such as personalised pricing) but the disadvantage of leaving legal uncertainty until their application are clarified by the case-law. To speed up this process of legal clarification, which is needed in the digital economy when the technological time is much quicker than the judicial time, the enforcement agencies may adopt interpretative guidance as the done for example by the Staff of the European Commission (2016) for the Directive on unfair commercial practices.

**Strong and expert enforcement authorities.** The different agencies enforcing the rules on consumer protection, on personal data protection, on competition protection and on anti-discrimination should be credible, hence they should be sufficiently financed and staffed in particular with computer and data scientists understanding the incentives and the process of the prices personalisation in the digital era.

**Cooperating enforcement authorities.** As different legal rules apply to personalised prices, it is key that the different national agencies in charge of those rules cooperate closely between each other to better understand the common problems they face and, when intervention is needed, adopt consistent decisions. However, institutional cooperation does not mean legal fusion. The role of each agency and legal instrument should be differentiated, as they are mainly complements and not substitutes. In addition, as many actors of the digital economy are global, it is also important that those authorities cooperate at the global or, at least, regional level. This is why the European Data Protection Supervisor (2016, p. 15) set up a Digital Clearing House, a voluntary network of contact points in regulatory authorities at national and EU level who are responsible for regulation of the digital sector.<sup>146</sup>

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<sup>146</sup> [https://edps.europa.eu/data-protection/our-work/subjects/big-data-digital-clearinghouse\\_en](https://edps.europa.eu/data-protection/our-work/subjects/big-data-digital-clearinghouse_en)



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