On the Ethics of Personalized Pricing: Habermasian Account of Transparency and Participation in Price Discrimination

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Abstract:

With the advent of new data protection regulations, firms need to obtain consent from customers about the collection of their data for the purpose of personalizing pricing. This complies with the Habermasian concept of discourse ethics and his claim for transparency. However, we argue that transparency is not beneficial for companies, if it uncovers business strategies that discriminate customers' prices without providing the opportunity to participate, i.e., to influence the pricing procedure. We postulate that being transparent about such a pricing procedure fosters moral anger and decreases the likelihood to obtain customers' consent for this strategy. Within four experiments we find a negative effect of transparency on consent likelihood mediated by a moral anger emotion (experiment 1) and identify boundaries of the negative transparency effect (experiment 2, 3 and 4). Our results support e-tailers' interest in implementing online pricing tactics in ethically acceptable ways.

Keywords: Personalized pricing, discourse ethics, transparency

Track: Social Responsibility & Ethics

1. Introduction

In a digital age, more and more detailed customer information become available to firms. An increasingly popular way to generate economic returns from such information is to charge customers individual prices determined based on their data (Chen & Iyer, 2002), a practice that we refer to as personalized pricing in this research. The implementation of such strategies entails some risks for companies: Discriminating prices opposes most people's understanding of fairness and equality (Cox, 2001), raises questions and concerns about the ethicality of a company's policy (Ayadi, Paraschiv, & Rousset, 2017) and is likely to evoke negative customer reactions (Garbarino & Lee, 2003). Yet, nowadays ethical and legal demands oblige companies to be transparent about such business strategies: New data protection regulations (such as the General Data Protection Regulation in the EU, see Malone (2018)) put companies increasingly under the pressure to be transparent about data collection. Moreover, disclosing data collection and related business practices also accounts for the ethical demand of transparency derived from Habermasian principles of discourse ethics (Habermas, 1990). However, transparency can backfire on companies, when it discloses business strategies that contradict people's understanding of social norms (Kim, Barasz, & John, 2018). We aim to support companies facing this discrepancy between ethical and legal demands and customer reactions when they are applied by answering the following research question: How can personalized pricing be implemented in a way that customers will accept this practice? Specifically, we study how and when transparency about the rule to personalize prices impacts customers' likelihood to give firms their consent to use their data for that purpose. Therefore, we draw from literature addressing business ethics and perceived price fairness.

We introduce Habermasian principles of discourse ethics (Habermas, 1990) in a business context as already established by the theory of political corporate social responsibility (CSR, Scherer & Palazzo, 2007). Thereby, we focus on his claim for transparency and test its effect on customer reactions. We also build on literature of fairness perceptions concerning pricing systems (Xia, Monroe, & Cox, 2004), since people tend to judge practices that lead to different prices for the same good as inherently unfair (Haws & Bearden, 2006) and morally wrong (Maxwell & Garbarino, 2010). While former research mainly addressed cognitive fairness perceptions regarding dynamic pricing systems, research directly measuring customers' emotional reactions is far less extensive.

We specifically focus on emotional and behavioral consequences of personalized pricing strategies, since literature suggests that moral judgments involve emotions rather than

cognitions (Russell & Giner-Sorolla, 2011). We are also the first to test applied principles of Habermasian discourse ethics in this context empirically. Specifically, we manipulate transparency about a non-participative pricing rule and measure resulting emotional and behavioral effects (experiment 1). We further address the crucial role of moral anger by manipulating the presence of a moral justification (experiment 2) and identify boundaries of the transparency effect by manipulating the degree of data sensitivity (experiment 3) and the opportunity to participate in a pricing procedure (experiment 4).

2. Theoretical Background and Hypotheses

According to Habermasian principles of discourse ethics (Habermas, 1990), ethically acceptable interactions need to account for specific preconditions including transparency and participation. Theory of political CSR (Scherer & Palazzo, 2007, 2011) applies these Habermasian principles in a business context arguing that companies should act as interaction partners with their several stakeholders (e.g., their customers). In order to gain moral legitimacy in this interaction, companies have to account for the abovementioned ethical principles. However, we argue that transparency alone is not sufficient to gain customers' goodwill and act ethically acceptable. An additional principle of discourse ethics has to be addressed, namely the opportunity to participate in the interaction. In a business context, that means being able to take an active role in or influence a business strategy that affects the respective interaction partner (like customers are affected by personalized pricing strategies).

Customers' reactions on violations of fairness and ethical principles in the context of pricing strategies have already been addressed by prior research. For example Xia, Monroe, and Cox (2004) claim that the perception of unfairness of a pricing procedure is associated with negative customer reactions on an emotional and behavioral level. The argumentation draws from Adams' (1965) equity theory claiming that the perception of unfairness is associated with anger or resentment on the side of the disadvantaged individual. Anger is a moral emotion, evoked as a reaction on immoral behavior like intentionally harming others (Russell & Giner-Sorolla, 2011). Since attacking the source of anger is a viable coping strategy (Lazarus, 1991), it evokes behavioral patterns associated with revenge or punishment (Roseman, Wiest, & Swartz, 1994). Anger directed towards a company results in reactions that harm a company's economic interests (Yi & Baumgartner, 2004). Withdrawing consent for data use for personalizing prices is the most direct punishing reaction in an online shopping context and can be considered an indicator for reduced compliance with a company.

We argue that being transparent about a pricing procedure that intentionally discriminates between customers while similarly withdrawing the opportunity to influence this procedure will not be accepted by customers, since it lacks the ethical demand of participation. Specifically, we assume that transparency about an immoral pricing rule increases moral anger and reduces customers' likelihood to give consent to this procedure. Figure 1 depicts the conceptual framework our research hypotheses are based upon.

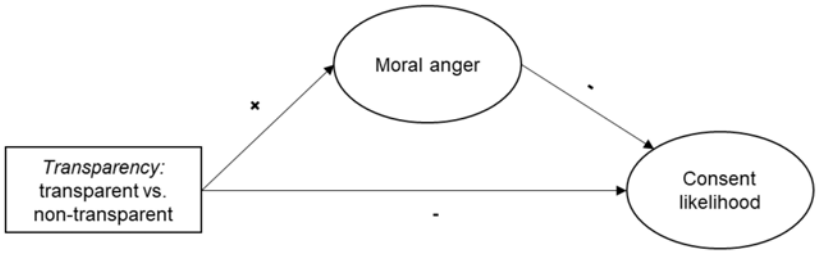

Figure 1. Conceptual Framework

We consider age an immoral pricing rule, since it discriminates between customers without offering them the opportunity to influence the price actively (as opposed to, e.g., surfing behavior). However, as former literature identified circumstances under which such pricing methods are acceptable, e.g., a pricing system favoring disadvantaged customers (Cox, 2001), we assume that a moral justification diminishes negative effects of transparency. To identify further boundaries of the transparency effect, we manipulate the sensitivity of data the pricing rule is based upon. Since concerns about privacy issues raise dramatically if highly sensitive data are collected which are unrelated to the business context (Lwin, Wirtz, & Williams, 2007), the use of more sensitive data should lead to greater resentments. We also introduce participation as another ethical demand. Grounding on evidences claiming positive effects of perceived control on customer reactions (Hui & Bateson, 1991), we assume perceived control as the crucial factor decreasing moral anger and mitigating the negative transparency effect. Taking together, we state the following research hypotheses:

H1a, b: Being transparent (vs. non-transparent) about a non-participative personalized pricing rule decreases customers' likelihood to give consent to personalized pricing. This effect is mediated by moral anger.

H1c: Moral justification of a transparent pricing rule reduces moral anger and increases customers' likelihood to give consent to personalized pricing.

H2a, b: Transparency about a personalized pricing rule that employs more (vs. less) sensitive data decreases customers' likelihood to give consent to personalized pricing. This effect is mediated by moral anger.

H3a, b: Transparency about a personalized pricing rule that is participative (vs. non-participative) increases customers' likelihood to give consent to personalized pricing. This effect is serially mediated by perceived control and moral anger.

3. Methods

3.1 Research design and procedure

In all experiments, we used between-subjects designs in a hypothetical buying situation. All experiments were conducted online with US-participants from Amazon Mechanical Turk. Participants received information about a personalized pricing procedure of a fictive online grocer brand in an informed consent form. Participants were asked to fill out morality and anger scales to indicate their opinion about the pricing procedure. Then they should indicate their likelihood to give consent to the specified pricing procedure. Finally, attention and/or manipulation checks and demographic data were conducted.

3.1 Measures and statistical analyses

We used a two-part measure for moral anger consisting of a morality (Wilcox, Kim, & Sen, 2009) and an anger scale (Russell & Giner-Sorolla, 2011). Since they were highly correlated in all experiments (all $r \leq -.45$, all $p < .001$), we call the anger measure moral anger in all models. We measured the hypothetical likelihood of participants to give consent to the pricing procedure on an 11-point semantic differential. In experiment 4, we also measured perceived behavioral control (Shiloh, Berkenstadt, Meiran, Bat-Miriam-Katznelson, & Goldman, 1997). We included attention checks in each experiment and manipulation checks for experiments 3 and 4. For statistical analyses we used Stata and the SPSS macro Process (Hayes, 2013). All mediation analyses included 10'000 bootstrapped resamples and 95% confidence intervals.

4. Experiment 1: Effect of Transparency

4.1 Sample and manipulation

181 participants ($M_{age} = 35.96$, $SD = 11.60$, 50% female) were randomly assigned to one of two online shopping situations. In the first condition (transparent) participants were told that their prices would be based on their age. In the second condition (non-transparent) they were told that their price would be personalized but not on which specific data.

4.2 Results

The effect of transparency on the likelihood to give consent to personalized pricing was negative and significant ($M_{non\text{-}transparent}$ = 5.42, SD = 3.90, $M_{transparent}$ = 3.03, SD = 2.97, t(1, 179) = -4.63, p < .01, Cohen's d = -0.69 [95% confidence interval: -0.99, -0.39]). Transparency further increased moral anger ($M_{non\text{-}transparent}$ = 3.62, SD = 1.76, $M_{transparent}$ = 5.07, SD = 1.54, t(1, 179) = 5.89, p < .01, d = 0.88 [0.57, 1.18]). Mediation analysis revealed a significant indirect effect (ω = -1.97 [-2.78, -1.23]): Transparency about the non-participative pricing procedure enhanced moral anger (b = 1.45, p < .001), which in turn reduced consent likelihood (b = -1.35, p < .001). Notably, the remaining direct effect of transparency on consent likelihood was not significant after the introduction of the mediator in the model (b = -0.43, p = .326). This result pattern confirms hypotheses H1a and H1b.

5. Experiment 2: Effect of a Moral Justification

5.1 Sample and manipulation

174 participants (M_{age} = 35.09, SD = 11.40, 44% female) were randomly assigned to one of two conditions. In one condition, the consent form provided transparency about a pricing rule based on age (no justification). The second group (justification) received the same information plus an additional information including a moral justification for the pricing procedure, namely that it was imeplemented to provide the products to customers of all income classes, including retired persons and students.

5.2 Results

We found a significant positive effect of moral justification on consent likelihood ($M_{justification}$ = 5.35, SD = 3.92, $M_{no\text{-}justification}$ = 3.89, SD = 3.66, t(1, 172) = 2.54, p < .05, d = 0.39 [0.08, 0.69]) mediated by moral anger (ω = 0.48 [0.05, 1.0]): Providing a moral justification decreased moral anger (b = -0.6, p < .05) which was negatively associated with consent likelihood (b = -0.8, p < .001). These results confirm H1c.

6. Experiment 3: Effect of Increased Data Sensitivity

6.1 Sample and manipulation

302 participants (M_{age} = 36.12, SD = 12.2, 57% female) were randomly assigned either to a condition in which the company was not transparent about its personalized pricing rule (non-transparent) or transparent about the rule based on less sensitive data (age; transparent – less sensitive), or transparent about rule based on more sensitive data, (religious beliefs; transparent – more sensitive). According to the manipulation check, religious beliefs were considered as being more sensitive data ($M_{less\ sensitive}$ = 3.76, SD = 1.88, $M_{more\ sensitive}$ = 4.46, SD = 2.13, t(1, 200) = 2.45, $p < .05$, d = 0.35 [0.07, 0.62]).

6.2 Results

Comparing the two transparency conditions, we found a negative effect of more (vs. less) data sensitivity on consent likelihood, which supports H2a ($M_{transparent\ –\ less\ sensitive}$ = 3.45, SD = 3.21, $M_{transparent\ –\ more\ sensitive}$ = 2.36, SD = 2.86, t(1, 200) = -2.57, $p < .05$, d = -0.36 [-0.64, -0.08]). In accordance with H2b, moral anger mediated the effect of more sensitive data (vs. less sensitive data) on consent likelihood (ω = -1.08, [-1.73, -0.54]). Reconfirming H1a, the effect of transparency about a less sensitive pricing rule (vs. non-transparency) on consent likelihood was negative and significant ($M_{non\text{-}transparent}$ = 4.65, SD = 3.66, $M_{transparent\ –\ less\ sensitive}$ = 3.46, SD = 3.21, t(1, 199) = -2.46, $p < .05$, d = -0.36 [-0.34, -0.08]) and mediated by moral anger (ω = -.85, [-1.50, -0.22]).

7. Experiment 4: Effect of a Participative Pricing Rule

7.1 Sample and manipulation

236 participants (M_{age} = 36.56, SD = 11.66, 49% female) were randomly assigned to one of three conditions. The first group received no information about the pricing rule (non-transparent). Participants in the second group were informed that they were not able to influence the price they had to pay as prices were based on age (transparent – non-participative). Participants In the third group were informed that they were able to influence the price as prices were based on their surfing behavior (transparent – participative). The manipulation check showed that manipulation of participation impressions worked ($M_{transparent\ –\ non\text{-}participative}$ = 2.86, $M_{transparent\ –\ participative}$ = 4.74, $M_{non\text{-}transparent}$ = 3.01, F(2, 235) = 69.98, $p < .001$).

7.2 Results

Comparisons between both transparency groups revealed a significant positive effect of participation on consent likelihood (t(1, 158) = 3.32, p = .001, d = 0.53 [0.21, 0.84]) and

perceived behavioral control ($t(1, 158) = 4.19$, $p < .001$, $d = 0.66$ [0.34; 0.98]) and a negative effect on moral anger ($t(1, 158) = -2.29$, $p < .05$, $d = -0.36$ [-0.67; -0.05]). As in experiments 1 and 3, consent likelihood was significantly decreased in the transparent – non-participative compared to the non-transparent condition ($t(1, 154) = -3.5$, $p < .001$, $d = -0.56$ [-0.88; -0.24]). Thus, results confirm H3a and reconfirm H1a. For all variables, no group differences revealed between the non-transparent and the transparent-participative group (all $t \geq -0.27$ or ≤ 0.15, all $p \geq .79$). Means and standard deviations can be found in Table 1.

Supporting H3b, the effect of participation (vs. non-participation) was serially mediated ($\omega_{serial} = 0.18$, [0.01, 0.41]): Participation enhanced perceived control ($b = 1.2$, $p < .001$) which reduced moral anger ($b = -0.18$, $p = .02$) which was negatively associated with consent likelihood ($b = -0.83$, $p < .001$). The remaining direct effect of participation on consent likelihood was not significant anymore after introduction of the mediators ($b = 0.47$, $p = .313$). Reconfirming H1b we found a significant indirect effect of transparency on consent likelihood, mediated by moral anger ($\omega = -0.76$, [-1.44, -0.14]) when comparing the non-transparent and the transparent – non-participative group.

	Perceived control		Moral anger		Consent likelihood	
Group	*M*	*SD*	*M*	*SD*	*M*	*SD*
Non-transparent	3.61	1.59	4.46	1.70	4.74	3.54
Transparent – participative	3.68	1.80	4.50	1.69	4.65	3.63
Transparent – non-participative	2.49	1.81	5.12	1.70	2.86	3.16

Table 1. Means and standard deviation for perceived behavioral control, moral anger and consent likelihood for the different groups in experiment 4.

8. Discussion

With our research we aimed to introduce the ethical concepts of Habermas' discourse ethics (Habermas, 1990) in a marketing context and to test their impact on customer reactions empirically. Throughout four experiments we demonstrate the negative effect of transparency about a non-participative pricing procedure on consent likelihood and the crucial role of moral anger. We strengthen this evidence by showing that the elimination of moral anger through a moral justification diminishes the negative transparency effect (experiment 2). We also identify important boundary effects such as the degree of severity of norm violation. We do so by varying data sensitivity (experiment 3) and find a negative proportional effect: With increasing data sensitivity consent likelihood decreases. We also address participation as another ethical demand (experiment 4) and find that the opportunity to influence a pricing procedure and the allocation of control decreases moral anger and increases consent

likelihood. Possible limitations of our research are the hypothetical buying situation and that we introduced the concept of fairness merely theoretically.

However, we find convincing evidence that transparency alone is not sufficient to gain customers' goodwill and compliance and that other ethical demands have to be taken into consideration, i.e., the opportunity to participate. We also direct attention to the importance of emotions, i.e., moral anger, when it comes to customers' moral judgments about a company's behavior. We propose consent likelihood as a new and important indicator variable for customers' compliance in marketing research. Moreover, we are the first to demonstrate the empirical applicability of ethical theories in marketing research. To sum up, we contribute to literature on personalized pricing, to marketing research in general and provide practical implications for companies interested in implementing personalized pricing strategies in an online context.

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