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The Power of Apology

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After an unsatisfactory purchase, many firms are quick to apologize to customers. It is, however, not clear why they should do that. As the apology is costless, it should be regarded as cheap talk and thus ignored by the customer. In this paper, we test in a controlled field experiment whether apologizing influences customers' subsequent behavior. We find that apologizing yields much better outcomes for the firm than offering a monetary compensation.

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1 Introduction

Apologies are ubiquitous. They are used regularly in everyday life between individuals, as well as by firms faced with disgruntled customers. Sociological theories of apologies suggest that apologizing induces shame and social disapproval (e.g., Tavuchis 1991); an apology could thus represent a costly message and the receiver of the apology could infer information about the sender. Ho (2007) proposes an economic theory of apologies. He considers a repeated principal-agent setup and shows that costly apologies by the agent allow the principal to distinguish between agent types. For a firm, however, it is not clear what such a cost would be. If the apology can be interpreted as admission of guilt, it could increase the risk of having to pay litigation costs, but most apologies do not include such an admission. Moreover, the firm could just apologize for strategic reasons. But if an apology is costless, the customer should ignore such a cheap-talk message.[1] So why do firms still apologize so much?

In this paper, we make a first step towards understanding apologies in a firm-customer relationship by investigating whether a firm's apology is able to influence customer behavior. We have an ideal data set to study this question: we collaborated with a firm selling a range of goods on the German eBay website, averaging more than 10,000 transactions per month. On eBay, transactions can be evaluated by sellers and buyers as positive, neutral, or negative. We exogenously manipulated the firm's reaction to neutral or negative evaluations by customers. In three randomized treatments, the firm either (i) apologized or (ii) offered a small or (iii) a large monetary compensation to customers and asked customers to withdraw their online evaluation in return. Customers were not aware of participating in an experiment and thus acted in a completely natural environment. The apology did not include any admission of guilt; the risk of litigation was thus constant across treatments. Since we can observe whether customers subsequently withdrew their evaluation, we

[1] A large related literature in law asks whether apologies could be useful in preventing law suits (for overviews see Cohen 2002, White 2009). Here, too, the central question is whether an apology is still effective when both, honest regret or strategic incentives, could be the reason for apologizing.

have a reliable indication for how the treatments influence customer behavior.

Notice that our setting makes it difficult for an apology to work: the apology is made by a large, anonymous firm; there is no face-to-face communication; and the firm has a clear incentive to apologize, i.e., there is a high probability that the apology is strategic and not honest. Thus, our results will likely underestimate the effect of apologies.

2 Design and Results

On eBay, 99% of evaluations are positive (Resnick & Zeckhauser 2002); rating a seller as neutral or negative is thus a strong signal about the seller's low trustworthiness. Indeed, a lower reputation score reduces the probability of sale and decreases the average selling price (Bajari & Hortacsu 2004). In addition, if a seller account falls below 98% of positive evaluations, the seller loses his standing as "PowerSeller", an official eBay certificate. Taken together, sellers have a strong interest in avoiding neutral and negative evaluations.

We exploit a special feature of the eBay evaluation system, called "mutual feedback withdrawal": both parties can agree not to evaluate a transaction at all, even after one party has evaluated the transaction. As a consequence, the former evaluation does not influence either party's reputation score. In our experiment, the firm asked customers to withdraw their evaluation after they had given a neutral or negative evaluation. All customers who gave a neutral or negative evaluation between November 2007 and April 2008 participated in the experiment ($N = 632$).

It was randomly determined to which treatment a given customer was assigned. In the first treatment, the *Apology Treatment* (AT), the customer received an email with the following text:[2]

[2]To ensure that customers did not interpret the apology as admission of guilt, a reason for the bad service was given without admitting any guilt.

> We are sorry to discover that you were not satisfied with our service. As we are concerned about customer satisfaction, I would like to apologize and ask whether you might withdraw your [negative/neutral] evaluation. You cited the very delayed delivery as the reason for your evaluation. Unfortunately, the manufacturer delivered the wrong goods, so we had to wait for a new delivery. We are very sorry and want to apologize for this. Since in this case we had no direct influence on the delivery time, I would like to ask you to agree to the mutual feedback withdrawal at this link: [link]. I would be very pleased if we could resolve this problem together.

In the second treatment, the *Low Compensation Treatment* (LCT), the customer received an email with the following text:

> On [date], you have evaluated us [negatively/neutrally]. As a good-will gesture, we can offer you 2.50 euro if you would consider to withdraw your [negative/neutral] evaluation. In case you consent to this procedure, please tell us your account details (in order to transfer the amount). In return, I would like to ask you to agree to the mutual feedback withdrawal at this link: [link].

In the third treatment, the *High Compensation Treatment* (HCT), the text was as in the second treatment but the amount offered was raised to 5 euro. The amount in the HCT is substantial compared to the average transaction value of 23.20 euro (including shipping costs). For half the customers in the LCT and HCT, a sentence "We will pay the money as soon as you have withdrawn the evaluation" was added. This did not influence behavior in any respect; we thus pool participants regardless of whether they saw the additional sentence or not. Results remain the same if we consider the five treatments separately. In the regressions in Table 1, we also control for this difference (dummy for "Conditional Payment").

> **Result 1:** *Customers who receive an apology instead of a monetary compensation are more than twice as likely to withdraw their evaluation.*

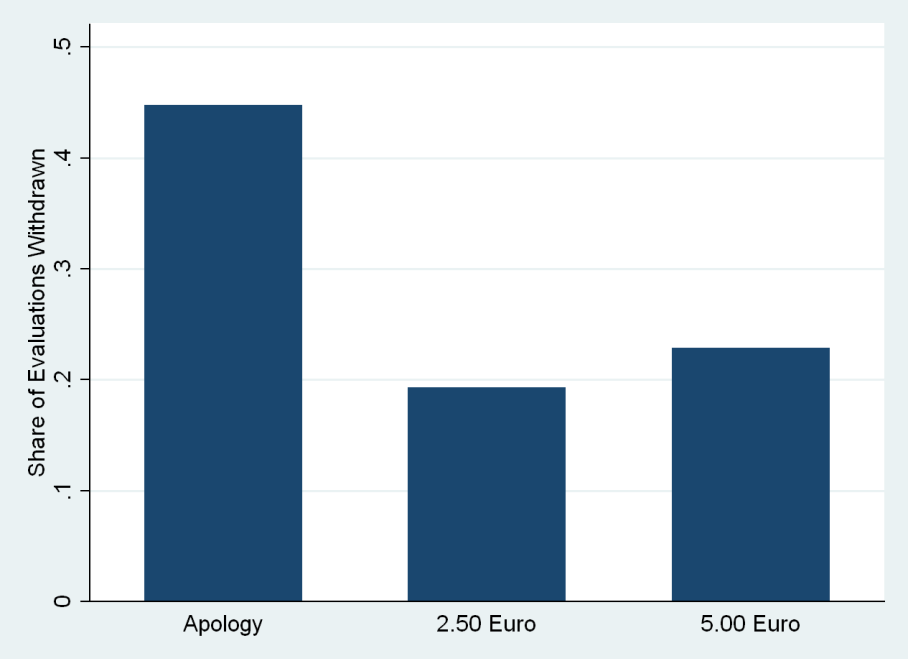

Figure 1: *Share of Evaluations Withdrawn by Treatment.*

21.1% of participants withdrew their evaluation when they were offered a monetary compensation. From Figure 1 one can see that doubling the amount of money leads only to a small increase of this share (from 19.3% in the LCT to 22.9% in the HCT; Fisher's exact test: $p = 0.330$). Giving an apology instead of paying money leads to a drastic increase to 44.8% of participants withdrawing their evaluation. The treatment differences between apology and non-apology treatments are highly significant (both $p < 0.001$).

The same result obtains when we compare treatments in probit regressions where we can control for additional variables (see Table 1, Columns 1 to 4). We control for the price of the purchased good (including shipping costs), whether the evaluation was negative or neutral, the gender of the customer, whether the customer lives in East or West Germany or not in Germany at all, the customer's eBay experience, and the reason the customer gave for the evaluation (reasons are: good's quality lower than advertised; damaged good; good could not be delivered and customer was reimbursed; high shipping costs; long delivery time; unsatisfactory after-sales service). The firm operates different, seemingly independent accounts which have different reputation scores; we also control for these scores.

In all specifications, the Apology Treatment yields significantly higher withdrawal rates. The only significant control variables are one of the reasons given for the evaluation ("long delivery time" leads to more withdrawal) and the price of the purchased good. A higher price reduces the probability that the evaluation is withdrawn.

Interestingly, the latter effect differs across treatments:

> **Result 2:** *When money is offered, a higher purchase price makes it less likely that a customer withdraws his evaluation. An apology works independent of the level of the purchase price.*

To investigate the different impact of the purchase price across treatments while avoiding the complications related to interaction terms in probit regressions (Ai & Norton 2003), we split the sample and run separate regressions within treatment (Table 1, Columns 5 and 6). We find that the purchase price has a negative influence on the propensity to withdraw the evaluation only when money is paid;[3] in the AT, the coefficient is (insignificantly) positive. No other control variable has a significantly different impact across treatments.

3 Discussion

Our results suggest that firms apologize so much because apologies do indeed influence customers' behavior. The underlying reasons for *why* an apology works remain unclear. It seems as if customers do not realize that they are interacting with an employee who is paid to send apology emails and not with an individual who experiences shame when apologizing. It might also be that apologizing triggers a heuristic to forgive that is hard to overcome rationally. It could be that getting paid money reduced the intrinsic motivation of customers to withdraw the evaluation (like in Gneezy & Rustichini 2000); but this seems unlikely, as customers were quite displeased and their intrinsic motivation should have been small to begin with. In

[3]The coefficient remains significant in regressions run in HCT or LCT individually.

Table 1: Probit Estimates of the Decision to Withdraw the Evaluation

Dependent Variable: Customer Withdraws Evaluation	Full sample				Only LCT/HCT	Only AT
	(1)	(2)	(3)	(4)	(5)	(6)
Apology Treatment	0.237***	0.261***	0.248***	0.280***		
	(0.048)	(0.054)	(0.059)	(0.062)		
High Compensation Treatment		0.040	0.060	0.082*	0.087**	
		(0.041)	(0.041)	(0.044)	(0.039)	
Conditional Payment			-0.040	-0.041	-0.031	
			(0.039)	(0.040)	(0.037)	
Price (in euro)			-0.004***	-0.004***	-0.005***	0.006
			(0.001)	(0.002)	(0.002)	(0.005)
Additional controls	No	No	No	Yes	Yes	Yes
N.Obs.	632	632	632	620	500	119
Prob $> \chi^2$	0.000	0.000	0.000	0.000	0.008	0.180
Pseudo R^2	0.04	0.04	0.05	0.08	0.06	0.11

Table 1: Marginal effects are shown; standard errors are in parentheses. The control variables are described in the text. Significance at the 1%, 5%, and 10% level is denoted by ***, **, and *, respectively.

any case, apologies are a powerful and at the same time cheap tool to influence customers' behavior.

Concerning the design of evaluation systems, our findings suggest that the effectiveness of such a system might be undermined if evaluations can be taken back. eBay seems to have realized this as well: mutual feedback withdrawal is no longer available.

4 References

Ai, C. & Norton, E. C. (2003), 'Interaction terms in logit and probit models', *Economics Letters* **80**, 123–129.

Bajari, P. & Hortacsu, A. (2004), 'Economic insights from Internet auctions', *Journal of Economic Literature* **42**(2), 457–486.

Cohen, J. R. (2002), 'Legislating apology', *University of Cincinatti Law Review* **70**, 819–872.

Gneezy, U. & Rustichini, A. (2000), 'Pay enough or don't pay at all', *Quarterly Journal of Economics* **115**(3), 791–810.

Ho, B. (2007), 'Apologies as signals', *Cornell University Discussion Paper* .

Resnick, P. & Zeckhauser, R. (2002), 'Trust among strangers in Internet transactions', *The Economics of the Internet and E-Commerce* **11**, 127–157.

Tavuchis, N. (1991), *Mea Culpa: A Sociology of Apology and Reconciliation*, Stanford University Press, Stanford, CA.

White, B. T. (2009), 'Saving face', *Arizona Legal Studies Discussion Paper* .