Maas, Peter; Bieler, Martin; Borchert, Maximillian; Barwitz, Niklas

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Nudging Along the Customer Journey

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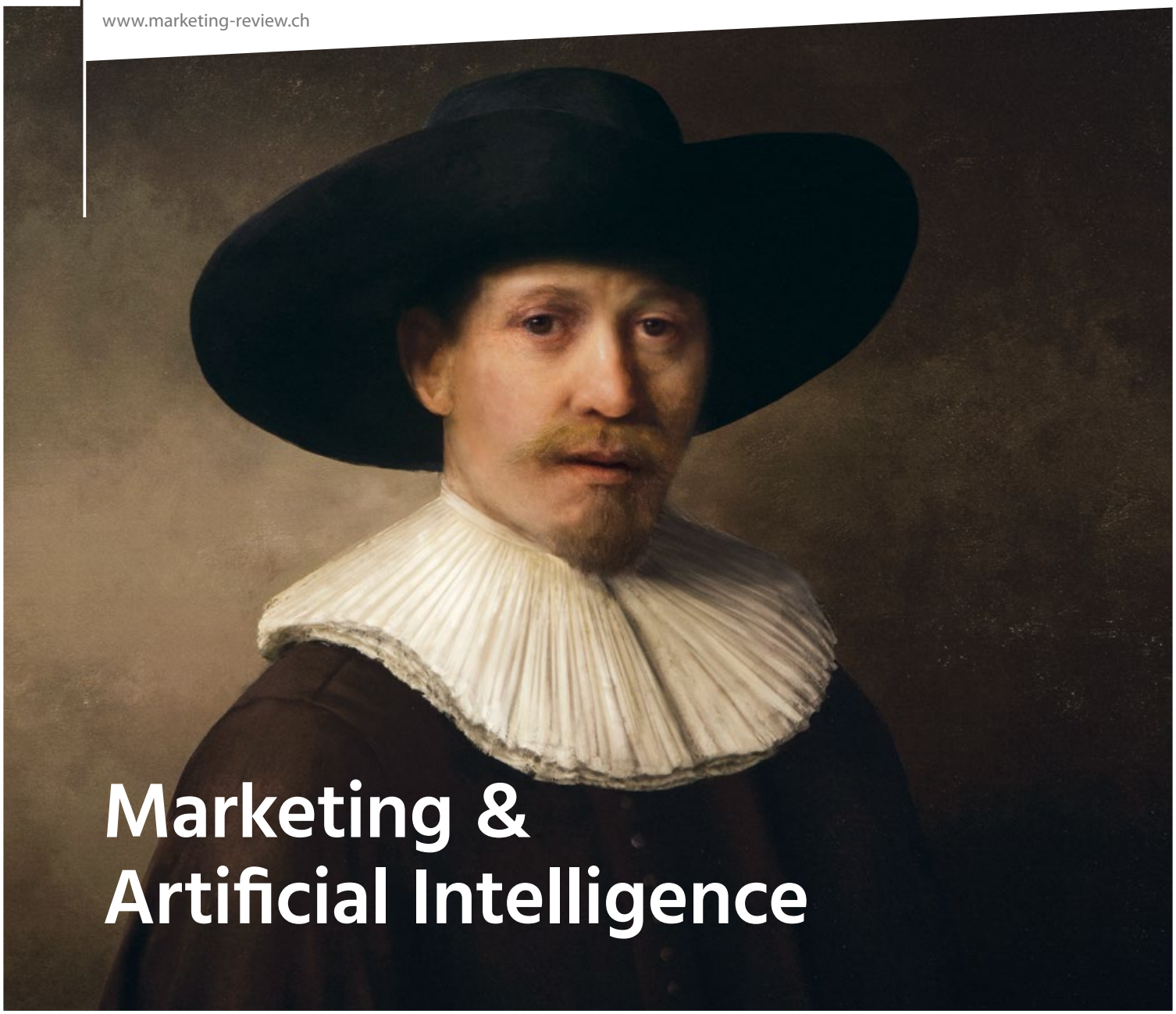

Marketing & Artificial Intelligence

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"From insight to impact"

Nudging Along the Customer Journey

Interaction channel choices during the customer journey have significant consequences for both consumers and service providers. Especially in service industries with high interaction frequency, both customer experience and cost per interaction can vary drastically. As a new experiment demonstrates, subtly nudging customers in the right direction can be an effective lever when navigating these issues.

Prof. Dr. Peter Maas, Martin Bieler, M.A., Maximilian Borchert, M.A. HSG, Dr. oec. HSG Niklas Barwitz

Given the increasing number of interaction channels being offered on each stage of the customer journey today, customers now have nearly unlimited options for individualizing their journeys (Hennig-Thurau et al. 2010; Lemon/Verhoef 2016). This is especially true in the service industry and businesses like health insurance. Influencing customer journeys in spite of their complexities and maintaining a certain amount of control over interaction channel choice can be a highly attractive goal for companies (Edelman/Singer 2015). A singular interaction of the customer on his or her journey with the service or product can have a significantly positive or negative impact on that customer's experience. Customer decisions for one or the other interaction channel today have consequences for both sides. Those consequences can either be clear and transparent – take, for instance, the IT and personnel costs related to maintaining a phone hotline. Or they can be much harder to grasp, like an inferior customer experience arising from customers not choosing the interaction channel that provides the most utility for them. Seeing as information asymmetry favors the provider, cognitive limitations or a variety of biases can lead to people routinely making choices that are not in their best interest (Kahneman 2011; March/Simon 1958; Simon 1947; Sunstein 2014; Thaler/Sunstein 2008). This outcome is especially true in insurance, where customers may spend more time or gain less relevant information depending on the channel.

While several responses to this issue are currently intuitively available, any aspect that limits customers' freedom of choice comes with significant downsides attached. Reducing the number of interaction channels, for instance, can lead to upsetting those customers who are not being offered their preferred channel of interaction. To emphasize the importance of customer journey flexibility, even with all choices available, only 3% of all insurance customers would choose the exactly identical journey including all touch points and interaction channels along all stages of their customer journey (Barwitz et al. 2016).

The Politics Behind Nudging

While offering customers the interaction choices they expect and prefer, service providers should also optimize channel utilization and persuade those customers who are not locked in to one channel to move in a direction that is mutually beneficial. To achieve this outcome while still maintaining freedom of choice, the methodology of nudging as introduced by Thaler & Sunstein (2008) can be applied. Nudging is the inclusion of subtle signals (nudges) in the choice architecture which, without significantly changing the incentive structure, address peoples' subconscious choice processes. In other words, nudges such as default settings or references to peer group behavior can be applied to exploit cognitive limitations or behavioral biases that are likely to be found in the target audience.

Hailing from the realms of political science, nudging remains controversial. Since the sub-conscious manipulation of people can, unless discovered, not be disputed openly, many consider nudging as even more reprehensible than open and direct

Prof. Dr. Peter Maas
Member of the Executive Board at the Institute of Insurance Economics, University of St. Gallen (I.VW-HSG) and Professor of Management with focus on service and insurance management
peter.maas@unisg.ch

Martin Bieler, M.A.
Project Manager, PhD candidate and Research Assistant at I.VW-HSG
martin.bieler@unisg.ch

Maximilian Borchert, M.A. HSG
Consultant at A. T. Kearney and former research assistant at I.VW-HSG

Dr. oec. HSG Niklas Barwitz
Former Project Manager and Research Assistant at I.VW-HSG

Management Summary

1. Companies may be interested in steering their customers toward utilizing certain interaction channels during the customer journey without having to limit their overall channel offerings or restricting their customer's choice.
2. In an experiment, four different nudges based on common behavioral biases and/or other cognitive limitations were tested in a customer journey context.
3. Nudging is a highly viable mechanism that can be used to influence customers' interaction channel choices, but with differences in effectiveness depending on the stage of the journey and the specific nudge being used.
4. Some nudges can be implemented with minimal effort and may provide extraordinary returns on that investment.

regulation or legislation (Gigerenzer/Brighton 2009; Rebonato 2012; Sunstein 2015). This article does not focus on the political discussion, but companies do need to be aware of the political ramifications of nudging nevertheless. In an era so influenced by social media, the backlash from customers who feel manipulated, especially if they perceive it to be to their detriment and the company's benefit, can be massive (BBC 2014). Interestingly enough, however, it has recently been determined that the effectiveness of nudges is not significantly reduced when the nudges are made transparent to customers, thereby giving nudgers a unique opportunity to utilize nudges while still circumventing the moral dilemma (Bruns et al. 2018).

Nudge approaches have increasingly been carried from the social sciences to the business environment, both in research and actual practice. The current article introduces an experiment, which when conducted in a health insurance setting, for the first time evaluated the effectiveness of nudging in the customer journey context.

Nudging the Health Insurance Customer Journey

It has indeed been established that "channel attributes, such as perceived price, quality, convenience, risk and availability, influence channel choice" (Barwitz/Maas, 2018, p. 2). While from a firm's point of view, these aspects seem measurable and open to influence to some extent, one elementary notion still needs to be considered. In the end, channel choice is about the customer's perceptions. As nudging works on a purely perceptional level, without any significant changes in the incentive structure (Fitzsimons et al. 2002; Hertwig/Grüne-Yanoff 2017), it is highly intriguing in this context.

The promise of nudging sounds compelling. With but a minimal investment, significant improvements in customer choices can be achieved. The effectiveness of nudging measures has been impressively proven, especially in the areas of nutrition and health (Hanks et al. 2012; Ly et al. 2013; Thaler/Sunstein 2008). Since the same cognitive processes are thus addressed, it is assumed that nudging proves effective in other B2C contexts as well. Therefore, the following hypothesis was postulated: Customers' interaction channel choices can be significantly influenced by nudges.

This hypothesis was tested using an actual experiment. The approach was to steer customers towards a specific interaction channel using a range of nudges. In the area of health insurance, many customers are highly cost sensitive; yet there is also a significant premium market within which quality of service and their interactions is the most relevant purchase criterion (Schannen/Ujlaki 2014). Accordingly, the strategies for two imaginary health insurance providers were developed as follows: While company A, a premium provider, wants to direct potential clients to their agents to provide the best possible interaction experience, company W follows a cost leader strategy and tries to steer their customers toward their website.

Nudging Right

Four nudges were selected for the study. Picking from a broad range of nudges, the selection criteria wanted to generate measurable results in the desired experimental setting. All selected nudges were thus (a) digitally implementable, (b) did not provide positive or negative financial incentives, (c) were (with one exception) already scientifically proven in at least one other setting and (d) had a clear cause and effect relationship. The resulting nudge selection – default settings, social cues, color coding and salience – are listed in Table 1 along with their short descriptions.

Table 1 – Interaction Channel Nudges Tested in the Experiment

Nudge	Operationalization for Influencing Interaction Channel Choice	Sources (excerpt)	Related Hypothesis Tested in the Experiment	
Defaults	When making a choice for the next interaction channel, the participants are confronted with a drop-down menu with a preselection equal to the desired channel choice.	Goldstein et al. (2008); Momsen & Stoerk (2014)	Introducing default settings to the initial interaction choice architecture ...	... significantly increases the share of respondent's interaction channel choices that correspond to the desired choice outcome.
Social Cues	Along with the task description, participants receive that the majority of their peers chose a certain interaction channel. Beyond a threshold which triggers pro-social behavior, 85% is a randomly chosen value.	Dolan et al. (2012); Sunstein (2014)	Providing information on peer group behavior in addition to the initial choice setting ...	
Salience	A large and visually striking promotion of the desired choice with the option to directly access it pushes the actual choice menu – at first glance – out of sight.	Baskin et al. (2016); Sunstein (2014)	Increasing the salience of individual interaction choices by means of visual and written cues ...	
Color Coding	The desired choice is highlighted in blue, the most trustworthy and most often preferred color. The other options are highlighted in, according to color psychology, "inferior" colors.	Mahnke (1996); Labrecque & Milne (2012)	Visually changing the initial channel choice setting by coloring the different channel choices ...	

Source: Own illustration.

The Nudging Experiment

To determine the effectiveness of the four selected nudges, a simulated customer journey, reduced to its three most significant interactions information, purchase and claim, was prepared for implementation in an online survey tool. Those specific interactions were chosen for several reasons. First, each one represents a main stage of a customer's journey, i.e. pre-purchase, purchase, and post-purchase (Lemon/Verhoef 2016). Accordingly, the nudges were introduced in a chronological order to give the participants a logical storyline. Further, these are the stages of the customer journey that are considered most expensive (Münstermann/Vogelsang/Paulus 2014) and most important for customer experience creation (Ambacher/Knapp/Jánszky 2014), thereby promising the greatest potential benefits to both providers and customers. For each customer journey interaction, the participants were asked the following questions:

- **Information:** You want to inform yourself about different insurance plans offered by different companies. In order to do so, the following interaction options are available for choice. Which one do you choose?
- **Purchase:** Having informed yourself and evaluated different options, you have decided to purchase your health insurance plan at insurance company X. To complete the purchase you have the following options.
- **Claim:** Recently you became sick and had to visit the local doctor. Now you need to submit the invoice to your health insurer to get your reimbursement. In order to do so, you have the following options.

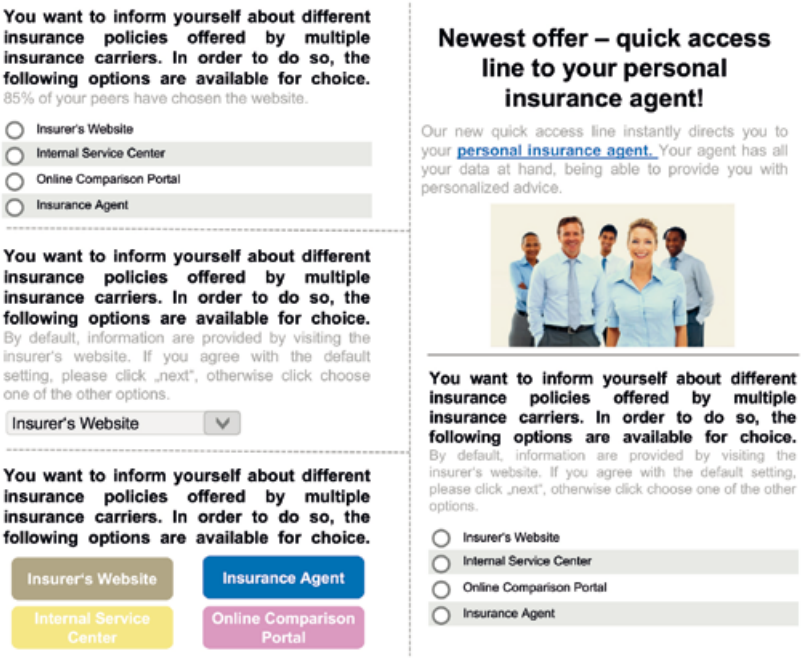
All questions had to be answered by selecting either the insurance agent (the desired outcome of strategy A), the website (the desired outcome of strate-

Main Propositions

1. The experiment found significant evidence of the effectiveness of nudging insurance customers toward desired interaction channels along their customer journey.
2. Beyond confirming the effectiveness of established nudges, such as default settings, the experiment for the first time confirms the effectiveness of color coding when nudging consumers.
3. A "Cognitive Reflection Test" implemented into the experiment linked superior cognitive abilities to a higher resistance to nudges.

Fig. 1: Operationalization of nudges in the experiment

From top left to right: Social Cues (Website), Defaults (Website), Color Coding (Agent), Salience (Agent).



Source: Own Illustration.

gy W), the service center, or a comparison portal / mobile app. The participants could select any answer – however, they were also nudged by defaults, social cues, color coding, or salience, depending on their treatment group. Figure 1 illustrates how each nudge was operationalized in the information stage to increase the likelihood of the selection of the desired choice.

For each question or interaction, each participant was randomly assigned to a treatment group – or control group – as per Figure 2. To gain more information about the participants, all had to provide information about their individual health care situation and answer socio-demographic questions. To detect any deliberately automated survey completion, the instructional manipulation check (IMC) suggested by Oppenheimer, Meyvis and Davidenko (2009) was implemented.

Further still, Frederick's (2005) Cognitive Reflection Test (CRT) was applied to determine any correlation between cognitive abilities and nudge perceptibility. The CRT is a three-item judgment task that measures an individual's tendency to stick with an initial gut response instead of the rationally correct answer. Especially for heuristics-and-biases tasks, the CRT serves as a distinct predictor of performance and behavior. In this regard, studies have proven a positive correlation between low CRT results and heuristics-and-bias conforming behavior (Toplak/West/Stanovich 2011).

In a pretest, both understandability and time required to complete the survey were tested. The experiment was then designed using Unipark and implemented in Amazon's human intelligence work platform, Mechanical Turk (MTurk). Participants received a small monetary compensation falling within the range recommended by MTurk.

To generate reliable results, a sample of at least 60 participants per treatment group was required. Recruiting a significantly higher amount and deducting those participants who failed the IMT and the 5% who finished the quickest, an adjusted sample of 858 participants was analyzed further. Of these respondents, 45% were female and their age ranged from 18 to 74 (M_{age} = 34, SD = 10.8).

Considering other socio-demographic factors, the participants in the survey clearly represented a cross-section of the U.S. population, with two noteworthy exceptions: The average education level was significantly higher than average, with 80% of the participants having some kind of university education. Also, the unemployment rate for the participants was nearly twice as high when compared to the U.S. rate at the time of the study (8.7% vs. 4.9%).

Results

The data were prepared and analyzed using IBM SPSS Statistics. To determine if the sample was normally distributed, a Saphiro-Wilk test of normality and Levene's test for homogeneity of variances were conducted. Since both implied a significant deviation of the data from normal distribution, requirements for parametric tests were not given and non-parametric testing was

applied. With the treatment group as the independent variable and the interaction channel choice as the dependent variable, crosstabulations and Chi-Square tests were conducted. For the latter, the level of significance was set at $\alpha = 0.05$ to minimize the chance of having Type 1 errors (Weiers 2011).

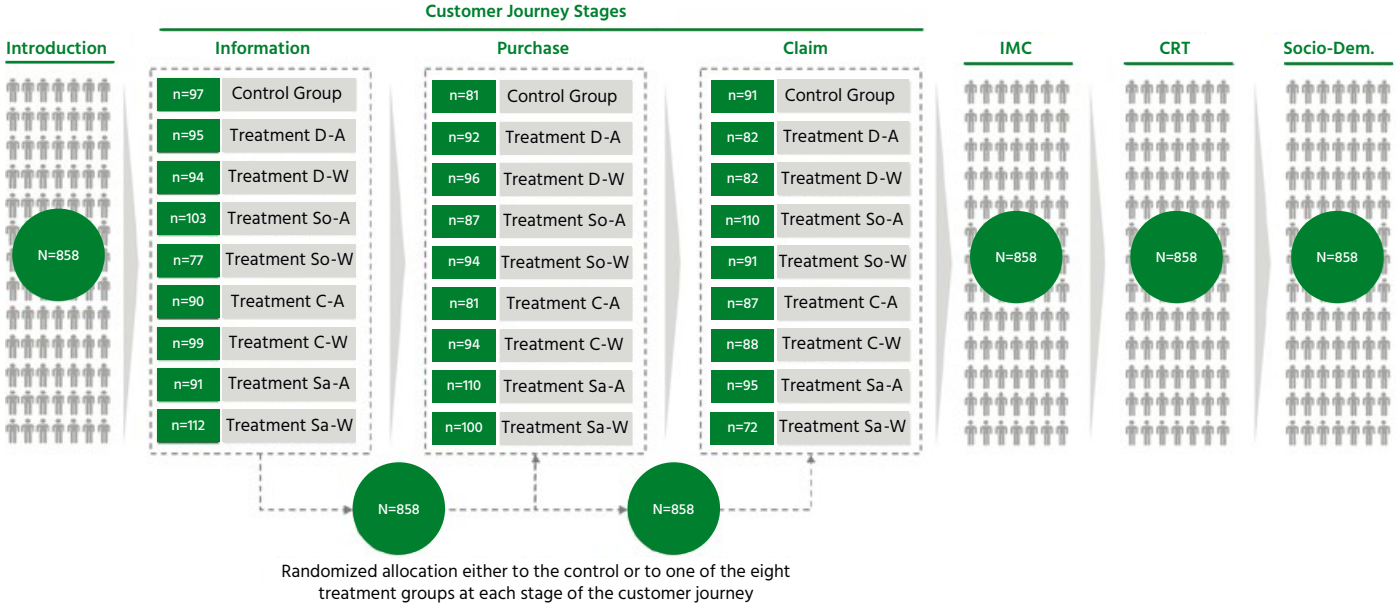
For all the interaction stage / nudge combinations, a development toward the desired choice when compared to the control group was noticed (see Figure 3). While almost all developments were significant, some findings were especially notable. As in several of the experiments on nudging in other contexts (e.g. Goldstein et al. 2008), the default settings proved to be highly effective. Across all journey stages, the likelihood of a participant choosing either the agent or the website roughly doubled when default-nudged accordingly. This result suggests a confirmation of the overall effectiveness of default settings as a nudge. A similar, if not quite as clear, picture appeared when looking at the effectiveness of social cues. The likelihood of the respective channel being chosen roughly doubled with the exception of the only slight increase of the insurer's website being chosen by treatment group Social Cues – Website.

Nudge approaches have increasingly been carried from the social sciences to the business environment, both in research and actual practice.

In terms of color coding, the numbers speak less of a clear language. While treatment Color – Website showed a significantly positive correlation in the information and purchase stages, its effectiveness in the claim stage does not clearly show. For treatment Color – Agent, pushing towards the insurance agent using color coding only seemed to work in the purchase stage. These findings, however, are highly relevant, as to our knowledge, this confirmation of a color-based nudge is the first of its kind. Given the intricate nature of color psychology (Elliot/Maier 2014; Whitfield/Whilt-

Fig. 2: Experiment procedure and assignment of treatment group

Treatment groups consist of the nudge (Default, Social Cues, Color or Salience) and the target interaction channel (Agent or Website).



Source: Own Illustration.

shire 1990), it seems highly likely that when tweaking the colors being utilized for nudging, the effectiveness of color nudges could be amplified. In such a case, insight into how exactly nudges work could provide significant insight into their optimal design (Felsen/Reiner 2015).

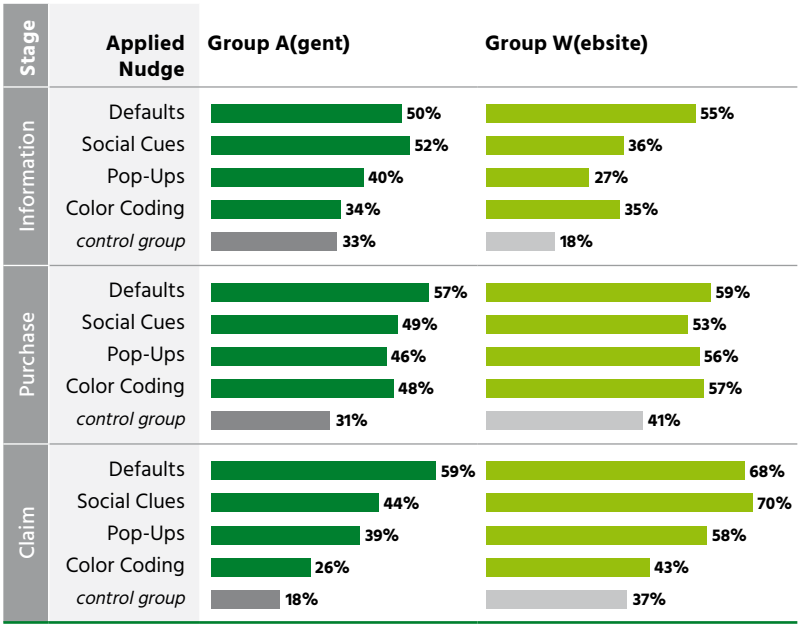
Lastly, salience as well proved to be an effective nudge in our customer journey context. While the pop-ups had a slight, but insignificant, impact on interaction channel choice in the information stage, the likelihood of the "correct" channel being chosen by the respective treatment groups increased by around 50% during the purchase and claim stages.

Examining the influence of cognitive abilities as measured by the CRT on the effectiveness of nudges, there is a striking correlation. The treatment groups were divided into one sub-group with below average and one sub-group with above average CRT scores. The study shows that for two exceptions (Color – Website and Salience – Agent in the purchase stage) out of all 24 combinations of nudges, desired choices and journey stages, participants with a lower CRT score consistently were influenced at a statistically significant level. Participants with a higher score, however, were only significantly influenced by the default nudge at the information stage. All other nudges failed to significantly influence the interaction channel choice. Therefore, it can be presumed that higher cognitive abilities will increase the resilience to being influenced by nudges.

In addition to the confirmation of nudging, this correlation is highly intriguing, as it contributes especially to the normative discussion on nudging. It does empirically confirm that nudges utilize people's shortcomings, such as intellectual limitations, to influence decision-making, and also shows that this correlation is measurable. Assuming that choices should preferably be the result of people's own deliberations, this finding indicates that some kind of intellectual empowerment is preferable compared to any sub-conscious manipulation using nudges. This is where organizations that desire to implement nudges must ensure that they only utilize "positive" nudges or make their nudges more transparent.

Fig. 3: Effectiveness of Nudges During Three Customer Journey Stages

% of people choosing the agent or website when nudged accordingly vs. the control group.



Source: Own Illustration.

Analogue Channel Nudging

How can organizations then implement their nudges? This experiment clearly shows that customers' interaction channel choice can be influenced by a variety of nudges. However, it also largely resembles an exclusively digital customer journey. With the actual effectiveness of nudges being confirmed in an online context, can companies also leverage these findings to nudge customers from analogue toward online (or other analogue) channels?

As this experiment was the first done in nudging in a customer journey context, further research, for instance in the form of field experiments, will have to be undertaken to achieve definite answers. Because most of the nudges discussed in this article had previously been tested in offline contexts, it can be assumed that at least some of the effectiveness observed

herein will carry over. For the development of nudges which are operationalized through a company-owned touchpoint, choice architects generally will have two options:

1. Nudging at the beginning of an interaction to change that current interaction channel choice
2. Nudging at the end of an interaction to change the next interaction channel choice

As an example of the first option, consider the following scenario: A large insurance health insurance company has most of its customers filing claims through a telephone hotline. However, the company would prefer that customers switch to using their app. Along with the standard request to "please hold the line" playing in a continuous loop, a social cue could also be emitted: "Did you know that 90% of our app's users are very satisfied with the service it provides?"

For the second case, a customer on his/her journey to purchase another product from the same carrier just interacted with the insurance agent and is about to receive an information package. If the insurer prefers that contracting, the next journey stage, be conducted using a web-based process, the insurer could include a very salient link to its website in that package, thereby making this the first piece of information customers take in (whether in print or via an e-mail).

Given the intricate nature of color psychology, it seems highly likely that when tweaking the colors being utilized for nudging, the effectiveness of color nudges could be amplified.

However, even when considering analogue interactions, insurers do need to be aware that customers will often inform themselves using digital means – and any such customer touchpoint is in and of itself an opportunity to nudge customers to choose the desired channel next.

Conclusion and Discussion

The experiment described herein confirms the fundamental hypothesis and shows that nudging is a valid approach to use for influencing interaction channel choice during an insurance customer journey and indeed can provide tangible outcomes at a very low rate of investment. The effectiveness of nudges does differ depending on a variety of factors, such as the choice setting, cognitive abilities, or socio-demographic factors. More research into nudge design, including the interactions of different nudges between each other and the factors enhancing or limiting susceptibility to certain nudges is ideally warranted. For instance, it would be very interesting to dive deeper into color nudging to learn whether effects beyond the ones already achieved in the experiment can be generated and increased.

The clear confirmation of the relevance of cognitive abilities for nudges' effectiveness should also be considered when developing according nudge strategies. Not only should choice architects keep an eye on their target audience, other factors, such as decision fatigue (Levitin 2014) and the prevalence of the automated thinking system within specific customer-company interactions, may also have a strong impact. Nudges might indeed be better suited for customer journeys that are inherently more emotional and intuitive since customers do have a tendency to apply a less reflective thinking mode in those situations (Kahneman 2011). At the same time, companies can attempt to actively emotionalize their customer journeys to try and trigger people's intuitive thinking systems

Lessons Learned

1. Marketing departments should detect and utilize low hanging fruits for easily implementable nudges.
2. Nudging may contribute to marketing's standing within the firm due to extremely low investment and a clear impact on the firm's bottom line.
3. Ethical implications need to be assessed to avoid customer backlash.
4. Further research should look into other types of proposed nudges and also improve the operationalization of the ones introduced and analyzed in this article.

(Holbrook et al. 1984), thereby increasing their nudge susceptibility.

An important implication for insurers is that they should not rely on a "one size fits all" approach, but rather carefully consider the nudges they do apply depending on context. However, given their extremely low implementation cost, if the insurer already has an online process for the respective customer journey stages, the effectiveness of default settings and social cues across all stages remains impressive. While keeping in mind all the possible negative connotations of nudging, insurance providers as well as other companies seeking to improve their interaction costs and customer performance have good reasons to consider the implementation of similar nudges into their customer interaction processes.

Literature

Ambacher, N./Knapp, D./Jánszky, S. G. (2014): Versicherungen 2020: Kunden, Werte, Produktchancen, 2bAHEAD, www.zukunft.business/foresight/trendstudien/trendstudie/versicherungen-2020/, retrieved 29.05.2018.

Barwitz, N./Maas, P. (2018): Understanding the Omnichannel Customer Journey: Determinants of Interaction Choice, in: Journal of Interactive Marketing, Volume 43, August 2018, pp. 116–133.

Barwitz, N. et al. (2016): Die Customer Journey in einer multioptionalen Welt, St. Gallen & Zürich.

Baskin, E. et al. (2016): Proximity of snacks to beverages increases food consumption in the workplace: A field study, in: Appetite, 103, pp. 244–248.

BBC (2014): Facebook emotion experiment sparks criticism, www.bbc.com/news/technology-28051930, retrieved 24.04.2018.

Bruns, H. et al. (2018): Can nudges be transparent and yet effective?, in: Journal of Economic Psychology, 65, pp. 41–59.

Dolan, P. et al. (2012): Influencing behaviour: The mindspace way, in: Journal of Economic Psychology, 33, 1, pp. 264–277.

Edelman, D. C./Singer, M. (2015): Competing on Customer Journeys, in: Harvard Business Review, 93, 11, pp. 88–100.

Elliot, A. J./Maier, M. A. (2014): Color Psychology: Effects of Perceiving Color on Psychological Functioning in Humans, in: Annual Review of Psychology, 65, 1, pp. 95–120.

Felsen, G./Reiner, P. B. (2015): What can Neuroscience Contribute to the Debate Over Nudging?, in: Review of Philosophy and Psychology, 6, 3, pp. 469–479.

Fitzsimons, G. J. et al. (2002): Non-Conscious Influences on Consumer Choice, in: Marketing Letters, 13, 3, pp. 269–279.

Frederick, S. (2005): Cognitive Reflection and Decision Making, in: Journal of Economic Perspectives, 19, 4, pp. 25–42.

Gigerenzer, G./Brighton, H. (2009): Homo Heuristicus: Why Biased Minds Make Better Inferences, in: Topics in Cognitive Science, 1, 1, pp. 107–143.

Goldstein, D. G. et al. (2008): Nudge Your Customers Toward Better Choices, in: Harvard Business Review, 86, 12, pp. 99–105.

Hanks, A. S. et al. (2012): Healthy convenience: nudging students toward healthier choices in the lunchroom, in: Journal of Public Health, 34, 3, pp. 370–376.

Hennig-Thurau, T. et al. (2010): The Impact of New Media on Customer Relationships, in: Journal of Service Research, 13, 3, pp. 311–330.

Hertwig, R./Grüne-Yanoff, T. (2017): Nudging and Boosting: Steering or Empowering Good Decisions, in: Perspectives on Psychological Science, 12, 6, pp. 973–986.

Holbrook, M. B. et al. (1984): Play as a Consumption Experience: The Roles of Emotions, Performance, and Personality in the Enjoyment of Games, in: Journal of Consumer Research, 1 1, 2, pp. 728.

Kahneman, D. (2011): Thinking, fast and slow, New York.

Labrecque, L. I./Milne, G. R. (2012): Exciting red and competent blue: the importance of color in marketing, in: Journal of the Academy of Marketing Science, 40, 5, pp. 711–727.

Lemon, K. N./Verhoef, P. C. (2016): Understanding Customer Experience Throughout the Customer Journey, in: Journal of Marketing, 80, 6, pp. 69–96.

Levitin, D. J. (2014): The Organized Mind, New York.

Ly, K. et al. (2013): A Practitioner's Guide To Nudging, Toronto.

Mahnke, F. H. (1996): Color, environment, and human response, New York.

March, J./Simon, H. (1958): Organizations, Oxford.

Momsen, K./Stoerk, T. (2014): From intention to action: Can nudges help consumers to choose renewable energy?, in: Energy Policy, 74, pp. 376–382.

Münstermann, B./Vogelsang, U./Paulus, G. (2014): European Insurance and Asset Management, McKinsey, www.mckinsey.com/~/media/mckinsey/industries/financial services/our insights/what drives insurance operating costs/successfully_reducing_operating_costs.ashx, retrieved 29.05.2018.

Oppenheimer, D. M./Meyvis, T./Davidenko, N. (2009): Instructional manipulation checks: Detecting satisficing to increase statistical power, in: Journal of Experimental Social Psychology, 45, 4, pp. 867–872.

Rebonato, R. (2012): Taking Liberties: A Critical Examination of Libertarian Paternalism, New York.

Schannen, F./Ujlaki, A. (2014): Next Generation Insurance In Central Europe, Roland Berger, www.rolandberger.com/en/Media/Insurance-industry-in-Central-and-Eastern-Europe-Digitalization-and-new-age-gro.html?country=null, retreived 29.05.2018.

Simon, H. A. (1947): Administrative Behavior, New York.

Sunstein, C. R. (2014): Why nudge? : The politics of libertarian paternalism, New Haven.

Sunstein, C. R. (2015): The Ethics of Nudging, in: Yale Journal on Regulation, 32, pp. 413–451

Thaler, R. H./Sunstein, C. R. (2008): Nudge: Improving decisions about health, wealth, and happiness, New Haven.

Toplak, M. E./West, R. F./Stanovich, K. E. (2011): The Cognitive Reflection Test as a predictor of performance on heuristics-and-biases tasks, in: Memory & Cognition, 39, 7, pp. 1275–1289.

Weiers, R. M. (2011): Introductory Business Statistics, International Edition, Hampshire.

Whitfield, T. W./Whiltshire, T. J. (1990): Color psychology: A critical review, in: Genetic, Social, and General Psychology Monographs, 116, 4, pp. 385–411.