Too Happy to Care? Measuring the Effect of Positive Emotions on Attention and Information Processing

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Emotions strongly influence human behaviour. Thus, ecommerce practitioners design artefacts to purposely induce *positive* emotions. Mechanisms such as providing instant upgrades, automatic application of "best available coupons", as well as quizzes, games, and raffles that are embedded into the shopping process are designed to create a positive consumer experience, positively influencing outcomes such as *purchase intention*, *satisfaction*, and ultimately, *loyalty*. This topic is especially relevant to the IS discipline, as emotions have a strong effect on the processing and absorption of *information*. In particular, the literature predicts that positive emotions can influence **attention** placement and information **processing intensity**. Interestingly, theory predicts two different and conflicting effects of positive emotions on human information behavior. On the one hand, the broaden-and-build theory (Fredrickson et al. 2005) predicts positive emotions to cause increased attention and more intensive processing (H1). On the other hand, explanations based on Tamir and Robinson (2007) posit that positive emotions may actually lead to decreased attention (H2). Additional support for this hypothesis is based on *confidence* effects induced by positive emotions (Petty et al 2002). Because this theoretical conflict has strong academic as well as practical implications, we test both predictions in a series of controlled laboratory experiments. In our first experiment we used a simulated online store to test the hypothesis that positive emotions *increase* attention against the hypothesis that positive emotions *decrease* attention. We recruited participants at a university in Hong Kong (n=12), and directed them to a website that mimicked a well-known local supermarket delivery service, were they had to select snacks for a picnic. After selecting the items, the participants proceeded to a checkout page that listed all items in the basket and asked for final confirmation. We induced positive emotions (the IV) by forwarding the treatment group to a wheel-of-fortune game for winning a 50HKD (~5€, 8USD) voucher before they reached the checkout page. Winning chances were indicated to be 15%, but we manipulated the game so that all participants in the treatment group actually won. The non-treatment group was not forwarded to the game. In order to rule out memory effects due to differences in duration of the process, we included a waiting dialog in the non-treatment group. To assess *attention* (the DV), we added an unwanted item ("Fish Balls") to the shopping basket (Figure 1, right), and recorded whether the participants realized the item's presence before placing the order.

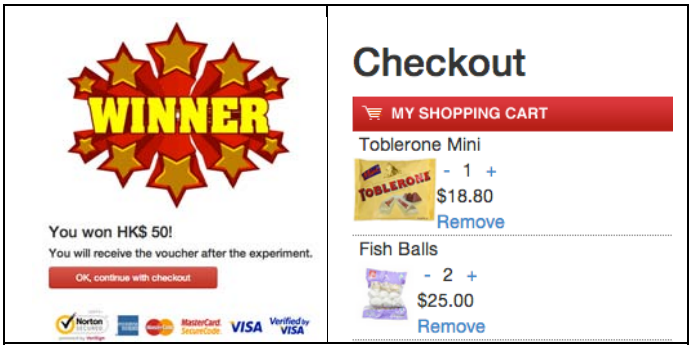

Figure 1. Treatment stimulus (left), measure of attention (right).

To provide a preliminary test of our hypotheses, we apply the following logic: If the treatment group realizes the presence of an unwanted item more often than the control group, H1 would be supported. If the treatment group realizes the presence of an unwanted item less often than the control group, H2 would be supported. We used **facial electromyography** (fEMG) as manipulation check for the independent variable. Using a custom script, we recorded a marker at stimulus onset (Figure 1, left side, notification of winning), and recorded the activity of the zygomaticus major muscle (which is involved in smiling and the expression of other positive affect) using a Psychlab EMG2 system. We compared each participant's zygomaticus activity against his or her baseline activity. Early results indicate hat we successfully manipulated positive affect, but did not find meaningful differences between participants in terms of attention. Given the subjects' familiarity with the task, it is likely that our way of assessing attention was overly noticeable. For the next phase of this ongoing work, we plan to modify the task, fully incorporate the three distinct networks of attention (alerting, orienting, and executive attention), and include an additional dependent variable besides *attention*; specifically, we will use the analysis of eye movements and fixations as a measure of *information processing*.

References

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