

The Effects of Regulatory Focus and Social Distance on the Change of manufacturing enterprises Employees' Attitude towards Privacy: Evidence from ERPs

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Abstract

*In this paper, event-related potentials (ERPs) were used to investigate the changes in Employees' attitudes towards privacy and their neural mechanisms. Questionnaires were used to find out the change of employees in manufacturing enterprises attitudes before and after learning privacy events. An inter-group experiment of regulatory focus * social distance was designed. The results showed that: (1) The attitude change in the promotion focus group was much higher than that in the prevention focus group; (2) In the privacy learning process, the promotion focus group produced higher N1 amplitude than the prevention focus group; Prevention focus group had more certainty in attitude and less attitude change. (3) Although the attentional inputs were different, the social distance and attitude towards privacy changes of prevention focus group were not significantly different.*

Keywords: Event-related potentials, regulatory focus, social distance, manufacturing enterprises employees

I. Description of Problem

1.1 Background

Privacy is the information that individuals decide what they need and can tell others, and everyone has the right to control the release and use of this information. In modern society, commercial companies often use and analyze the browsing habits and records of network users, and conduct accurate marketing through videos, pictures and speeches published in network space, thus bringing unprecedented convenience to users. Therefore, in the early stage of the emergence of personalized recommendation system, people are willing to exchange such a convenient lifestyle with their personal data despite the security risks in such behaviors. In fact, users hope that commercial companies and social networking sites can protect their information and privacy^[1], but the use of various forms of information will still damage personal privacy^[2]. According to the 42nd Statistical Report on China's Internet Development, as of June 2018, the number of Internet users in China was 802 million, with an Internet penetration rate of 57.7%. Among them, 54% of the Internet users indicated that they had encountered network security problems in the past six months, and the problem of personal information disclosure accounted for the most, with 28.5%. Thus it is clear that the disclosure of personal information has become a serious social phenomenon, and the effects of privacy concerns, privacy boundaries and privacy protection behavior have become hot spots^[3, 4]. However, the user's attitude towards privacy is positively correlated with the degree of self-disclosure^[5]. Some users refused to register information on the website due to concerns about information privacy leakage; victims of privacy incidents on social networking sites may be less or more cautious about using social networking sites because they know the risks associated with privacy^[6], and may distrust the platform if they feel that privacy has been violated, thus limiting or even ceasing to use the platform^[7], which makes it difficult for Internet companies to obtain user data and even further develop. Therefore, it is extremely important to study the attitude towards privacy of users for the development of enterprises.

The intensity of attitudes is used to describe whether attitudes are susceptible to change and their influence^[8]. Attitude contradiction shows the characteristics of weak attitude, and attitude certainty refers to the degree of

confidence individuals have in their attitudes^[9]. The stronger the intensity and certainty of the attitude, the more lasting the attitude will be, the easier it will be to get it from memory, the more instructive it will be to future behavior, and the more resistant it will be to external persuasion. Attitudes based on direct experience, a large amount of information and fine cognitive processing have higher certainty than those based on indirect experience and a small amount of information^[10]. Studies have shown that when individuals have a stronger certainty about their attitudes, they are more likely to persuade others to accept their attitudes^[9], and the weaker the certainty is, the more likely they will be persuaded to change their attitudes. Network privacy refers to the right of users to decide the nature and degree of information related to themselves to others in the network environment, while users have less first-hand experience of privacy events and most of their knowledge comes from the privacy experiences of other minority people^[11]. As a result, the understanding of privacy for most people is at a vague level lack of a systematic concept, and mostly comes from indirect experience and lack of information. Therefore, the users' attitude of privacy is weak, and it is easy to change after being influenced by the outside world or information with strong correlation with themselves. It is a typical way of attitude change that individuals form or change attitudes by processing information related to attitude objects^[12]. Users may change their views and attitudes because of the information collected and shared^[13]. Thus, users' attitudes towards privacy may change greatly after collecting information and understanding it. Therefore, it's very significant to study the elements that affect users' attitude towards privacy in order to better carry out accurate marketing.

1.2 Regulatory focus theory

At present, some scholars have explained the problems such as privacy disclosure, information risk, and privacy protection behavior with the regulatory focus theory^[13, 14]. Regulatory focus theory refers to the behavior of individuals to change or control their own thoughts and reactions in a specific way or tendency to achieve the goal, which is divided into promotion focus and prevention focus.

Individuals with promotion focus pay attention to the positive results, and often ignore potential risks because of superficial benefits, while individuals with defense focus pay attention to avoiding negative results, and analyze potential risks rationally even if they can benefit^[15]. The former has stronger network trust than the latter, while the latter has stronger network risk perception than the former^[14]. In addition, the former relies more on emotional factors, adopts heuristic processing^[16], and relies on intuition or clues provided by the surrounding environment to make choices, which does not occupy or occupies less cognitive resources and is easily influenced by simple information clues, while the latter relies more on cognitive factors, adopts systematic processing^[17], and comprehensively searches related materials to sort out and judge the information and evaluate it, which takes up a lot of cognitive resources and is not easily influenced by irrelevant information.

Individuals with prevention focus are more inclined to worry about the invasion of personal network privacy than those with promotion focus, so they will evaluate the security of the network and data to decide whether to disclose information before disclosing their privacy, and they will sort out and judge the learning content when learning content related to privacy events, which makes it difficult to change their attitude. In contrast, individuals with promotion focus often disclose personal privacy because of existing rewards, and they are easy to change their existing attitude towards privacy events because of apparent hazards when learning content related to privacy events. Thus, the following hypothesis is made:

H1: The attitude change of individuals with promotion focus before and after learning is greater than that of individuals with prevention focus.

1.3 Construal level theory

Previous studies have proved that people will have a stronger sense of identity and familiarity^[18] and a stronger sense of trust towards people with the same background and experience. People who hold the same view will strengthen

the certainty of their own attitudes, and those who hold different views will be more easily persuaded, and the uncertainty of their attitudes will decrease even if they are not convinced^[19]. The psychological distance in such case where analysis point is away from current experience and self-perception can be explained by the construal level theory^[20].

Construal level theory (CLT) holds that people have different levels of abstraction and explanation for the psychological representation of objects^[21, 22]. Compared with the high construal level, the low construal level is more specific, rich in details, and pays attention to individual feasibility^[23]. From the perspective of interpretation level, people who are less familiar with or similar to others are considered as more distant by society. The closer the society is, the greater the impact on individuals. For example, Zhao investigated how peer recommendation affected decision-making^[24, 25], and found that compared with those with a close social distance, individuals with a long social distance lacked specific understanding of the events, had less information about the events and greater uncertainty in attitudes, which made it harder to change attitudes. Attitude is based on a high construal level, while behavior is ultimately built on a low construal level. Only when attitude is determined will individuals take action^[26].

However, compared with individuals with promotion focus, individuals with prevention focus need more redundant information to refine their attitudes towards privacy events to change their attitudes. Even in the case of a close social distance, it is difficult to get enough information to enable individuals to have greater changes in attitudes towards privacy.

Thus, the following hypotheses are made:

H2: The change of attitude towards privacy in individuals with promotion focus at a close distance is more significant than that in those with a further social distance.

H3: Among individuals with prevention focus, there is little difference on the change of attitude towards privacy regardless of social distance.

1.4 Attention and cognition

Individuals have limited cognitive resources, but each task needs to occupy certain cognitive resources for learning assessment. When an individual has a high degree of commitment to a learning task but the cognitive resources available for allocation are all occupied and cannot effectively inhibit the task-related stimuli, the individual is more likely to be interfered by the indifferent stimuli. On the contrary, individuals with low involvement in learning tasks will have sufficient cognitive resources to suppress the interference of indifferent stimuli^[27].

The purpose of this study is to explain the changes in attitudes towards privacy of different personality traits under different social distances and their underlying neural mechanisms from cognitive and attention perspectives. In previous studies on attention and cognition, self-reporting methods such as questionnaires were used to calculate the degree of attention of subjects in the experiment^[22] to determine their cognition of the event, which has obvious defects and may lead to excessive reporting of protective behaviors due to memory or social expectations. Therefore, in this study, the event-related potential technology is used to scan and record the EEG signals of the subjects, and the single-stimulus experimental paradigm, that is, using silent speech instead of non-target words in oddball paradigm, is used to record and analyze the individual's attention distribution in learning privacy events and the neural indicators of devotion to privacy events.

Individual attitude is influenced not only by cognitive resources, but also by the fineness of cognitive processing. The latter refers to the process of classifying, organizing, connecting and storing the newly acquired information together with the existing information in long-term memory, that is, memorizing, thinking and processing the newly acquired information. Individuals' attitudes formed after refined processing of new information are more certain and

easier to resist persuasion^[28]. When the refined new information is inconsistent with the existing information, individuals are easier to be persuaded and change their attitudes.

Thus, the following hypotheses are made:

H4: Regulatory focus not significant main effect on N1 component, and there is no obvious difference between promotion focus group and prevention focus group.

H5: Individuals with promotion focus: social distance has no significant main effect on N1 component, and there is no obvious difference in wave amplitude between the groups with a long social distance and those with a close social distance.

H6: Individuals with prevention focus: social distance has a significant main effect on N1 component, and the amplitude of the group with a long social distance is significantly higher than that with a close social distance.

II. Methodology

2.1 Subjects

A total of 160 manufacturing enterprises Employees were tested for their regulatory focus scores and attitudes towards private events. They were grouped according to the regulatory focus scores, and 20 subjects with promotion personality and 20 with prevention personality were screened out in total. Among them, the scores of promotion personality ranged from -1.08 to 0.83, $M = -0.17$, $SD = 0.58$, and prevention personality ranged from 1.25 to 2.41, $M = 1.59$, $SD = 0.36$. In the 40 effective subjects who participated in the follow-up experiment, 21 females and 17 males, average age of 23 years old, were randomly divided into the close/long social distance groups within the promotion focus group and the prevention focus group, with a total of 4 groups. There was neither significant difference in the promotion focus fraction ($t(18) = -0.146$, $p > 0.05$), regulatory focus fraction ($t(18) = -0.312$, $p > 0.05$) of subjects with close/long social distance, nor significant difference in age between the four groups, $F(3,27) = 0.727$, $p > 0.05$. All subjects were right-handed, had no history of mental illness, and had normal naked or corrected visual acuity.

2.2 Experimental equipment and materials

In this experiment, US Neuroscan EEG recording and analysis system was used, and the electrode position was based on the 64-lead electrode cap expanded by the international universal 10-20 system. The vertical electro-oculogram (VEO) and horizontal electro-oculogram (HEO) were recorded at the same time. The filter bandpass was 0.01-100HZ, the sampling frequency was 100HZ, and the scalp resistance was required to be lower than 5K Ω .

The subjects filled in the questionnaire of regulatory focus and attitude towards privacy in the early stage of questionnaire collection. The regulatory focus questionnaire is based on the questionnaire compiled by Higgins et al., which is based on individual growth experience, individual subjective success or failure experience and parents' educational objectives^[29]. The revised Regulatory Focus Questionnaire (Chinese Version), which is suitable for the Chinese situation, has 10 items, 6 promotion focus subscales and 4 prevention focus subscales. The attitude towards privacy scale includes six items, which can measure the individual's attitude towards privacy by judging whether to use personal data by internet companies is good or not^[30]. Both scales were measured with Likert Seven Scale, from 1 (strongly opposed/inconsistent) to 7 (totally agree /consistent).

2.3 Experimental design

This experiment is an inter-group experiment based on social distance. During the experiment, the subjects were required to watch PPT for 10 minutes with electrode caps, and the contents were typical privacy events picked up by the researchers, including privacy leakage, privacy information application, privacy hazards, etc. The group with a

close social distance watched domestic privacy events, while the group with a long social distance watched foreign privacy events, and the study time, environment, content and cognitive ability of the subjects were controlled at the same level. Subjects were required to watch the contents of PPT carefully. After the experiment, they needed to recall the contents of privacy events in PPT and recorded them on paper in the form of keywords to measure their cognition of exogenous learning contents. After that, they were asked to fill out the attitude towards privacy questionnaire again to measure the differences between their attitudes before and after.

Before the start of the experiment, the subjects were required to adjust to a comfortable sitting position in a room with soft light and quiet sound insulation, with their eyes about 1m away from the computer screen and horizontal and vertical viewing angles of no more than 5°. In the learning process of PPT, 1,000 HZ (100ms duration 10ms rise/fall time and 60dB SPL) audio stimulation was played according to the single-Stimulus experimental paradigm, and the audio was located on both sides of the subjects' ears with a distance of 60cm. Based on the classical oddball experimental paradigm, the non-target audio stimulus were replaced with silent stimulus in the experiment. The experimental target audio and non-target audio were 120 times in total.

2.4 Data collection and analysis

In this research, the effects of regulatory focus and social distance on the distribution of attention in privacy events were investigated to explain the phenomenon of changes in users' attitudes towards privacy. ERP analysis mainly involved 1,000ms before and after the occurrence of disturbance sound, and the analysis component was mainly the early attention component N1. 130-180ms was selected from the N1 component time window according to the integral superposition amplitude diagram to analyze the electrode points: FCZ, FC5, FC6, F5, FZ and F6.

III. Results

3.1 Data from the attitude towards privacy questionnaire

The ANOVA was used to analyze the attitude of 40 subjects before and after the experiment. There was no obvious difference in pre-experiment attitude among the promotion focus group ($M=3.80, SD=1.09$) and the prevention focus group ($SD=1.07, M=3.72$) by SPSS analysis. $T(38)=0.250, P>0.05, d=0.08$.

The attitudes towards privacy in the promotion focus group ($t(19)=-3.802, P<0.05, d=1.16$) and the prevention focus group ($t(19)=-5.761, P<0.05, d=1.08$) were significantly different before and after the experiment, and the attitude change in the promotion focus group ($M=0.84, SD=0.99$) was obviously higher than that in the prevention focus group ($M=0.63, SD=0.49$), ($t(38)=0.847, P<0.05, d=0.27$). Thus, H1 holds.

The ANOVA was used to analyze the subjects' attitudes before and after the experiment with close/long social distances between the promotion focus group and the prevention focus group. There was no obvious difference in pre-experiment attitude between the promotion focus group ($t(18)=.694, P>0.05$) and the prevention focus group ($t(18)=.065, P>0.05$) with close/long social distances by SPSS analysis.

The attitudes towards privacy of the subjects both in the promotion focus group ($t(9)=-3.628, P<0.05, d=1.06$)/($t(9)=-2.900, P<0.05, d=1.13$) and prevention focus group ($t(9)=-4.029, P<0.05, d=1.33$)/($t(9)=-3.904, P<0.05, d=0.77$) were significantly different before and after the experiment when their social distance was different. However, for the promotion focus group, the attitude change when the social distance was close ($M=1.17, SD=1.27$) was significantly higher than that in the social distance group ($M=0.51, SD=0.45$), ($t(18)=-1.537, P<0.05, d=0.69$). However, there was no obvious difference in attitude change between the defense-oriented group with a close social distance ($M=0.64, SD=0.50$) and that with a long social distance ($M=0.61, SD=0.51$), ($t(18)=0.841, P>0.05, d=0.38$). Therefore, H2 and H3 are true.

3.2 Electrophysiological data

Firstly, in this experiment, the subjects were divided into two groups: promotion focus and prevention focus to record the early attention electrophysiological component N1 during watching the privacy event PPT.

The amplitude of N1 component was analyzed by 2*3 intra-group ANOVA, with regulatory focus (promotion focus * prevention focus) as the inter-group factor and electrode points (FCZ, FC5, FC6) as the intra-group factor. The results showed that the regulatory focus had no major effect on the N1 component, $F(1,38) = 0.152$, $P=0.699$, and $\text{partial}\eta^2=0.004$. The main effect between electrodes was obvious, $F(2,76) = 13.170$, $P=0.000$, $\text{partial}\eta^2 = .257$. The interactive effect between adjusting orientation and electrode was obvious, $F(2,76) = 3.287$, $P=0.043$, $\text{partial}\eta^2 = .080$. Therefore, H4 holds.

Then the subjects in the promotion focus group and prevention focus group were classified with the social distance, to record the amplitudes of N1 components in F5, FZ, and F6 of groups with close and long social distances, and independent sample t test was performed. The results are as follows:

In the promotion focus group, there was no obvious difference between the groups with a close social distance ($M=-11.34, SD=3.67$) and the group with a long social distance ($M=-11.01, SD=2.38$), $t(58)=0.417, P>0.05, d=0.19$; In the prevention focus group, the amplitude of the group with a long social distance ($M=-12.13, SD=4.47$) was significantly higher than that with a close social distance ($M=-9.39, SD=4.03$), $t(58)=-2.492, P<0.05, d=0.35$. Therefore, H5 and H6 hold.

IV. Conclusions

In this experiment, task-independent stimulus-induced auditory N1 components, which is auditory posterior potential that can be induced only by receiving sound stimulation without responding. Early attention components appear in temporal lobe (F5, F6, FC5, FC6) and overhead area (FZ, FCZ), and the latency is generally about 100ms^[31]. The N1 component is considered to reflect the individual's early attention to the stimulus and different perceptual characteristics of the stimulus. The enhancement of the N1 amplitude reflects the individual's attention resource allocation or attention discrimination to the stimulus, i.e. the more attention resources the individual invests in the target, the greater the N1 amplitude.

The results of EEG experiments showed that the regulatory focus had no main effect on the production of N1 ingredients, $F(1,38) = 0.152$, $P=0.699$, $\text{partial}\eta^2 = 0.004$, which indicates that the regulatory focus has no effect on attitude towards privacy. Since the two groups of subjects had no significant differences in the cognitive resources and attention level of their learning commitment to private events, and similar abilities to resist external stimuli, there was no obvious difference in the amplitude of N1 ingredients induced by unrelated auditory stimuli between the two groups. However, after privacy learning, the attitudes towards privacy of both the promotion focus group and the prevention focus group have changed significantly, and the difference of the attitude changes of the promotion focus group is obviously higher than that of the prevention focus group, because privacy is a vague concept for the public, and most of the individuals' attitudes towards privacy are weak in intensity and uncertainty, so individuals will have a deeper understanding of privacy events and change their original attitudes after learning them. However, for the learning of the same event, individuals with prevention focus are able to carry out a more in-depth analysis of all the information^[17] not merely on the surface, but also further process the obtained information and integrate the original information to evaluate it when they are different from their own cognition. However, individuals with promotion focus often analyze events based on emotional and superficial information^[16], and are more likely to change their attitudes without deeply thinking about the real harmfulness of the events. Therefore, the attitude change of individuals with prevention focus is relatively small.

For the promotion focus group, there was no obvious difference in volatility between the groups with close and long social distances ($M=-11.34, SD=3.67$) ($M=-11.01, SD=2.38$), that is, the two groups had the same cognitive resources input and the same degree of resistance to interference. However, regardless of social distance, attitudes towards privacy had changed significantly after learning, but the change of the group with a close social distance was significantly greater than that of the group with a long social distance, because the promotion focus group tends to choose relying on intuition or direct clues provided by the surrounding environment. Moreover, some studies have shown that users' cognition of privacy issues mostly comes from the experiences of a few other people and they generally think that such things will not happen to themselves and will have a stronger sense of identity and familiarity with people with the same background and experience^[18]. Because the group with a close social distance learned about domestic privacy events, they would have a stronger sense of substitution, believed that this series of privacy leaks and privacy hazards would happen to themselves, and be more aware of the nature of privacy events, which made it easier to change their original attitude towards privacy, so their attitude changed greatly.

For the prevention focus group, the amplitude of the group with a long social distance ($M=-12.13, SD=4.47$) was significantly higher than that with a close social distance ($M=-9.39, SD=4.03$), indicating that the cognitive and attention levels of the privacy learning content investment of the prevention focus group with a close social distance were much higher than those of the group with a long social distance, which meant that the subjects in the group with a close social distance might have greater interest in privacy event learning. Previous studies have shown that individuals who invest more cognitive resources will have more changes in attitude accordingly^[32]. However, there was no obvious difference in attitude change between the group with a close social distance ($M=0.64, SD=0.50$) and that with a long social distance ($M=0.61, SD=0.51$) ($t(18)=0.841, P>0.05, d=0.38$) in the prevention focus group, possibly because the prevention focus group had higher cognitive needs, refined the knowledge obtained from the outside world, and recognized the nature of information better, and even if they invested fewer cognitive resources and attention to events that were far away, it would not affect their re-cognition of private events, and no matter how far away it was, the processed information obtained by the subjects had smaller differences. Therefore, the social distance had little influence on it, that is, the attitude change before and after privacy learning was not significant in the group with close/long social distances in the prevention focus group.

V. Summary and Prospect

Although the CLT has been widely used in consumer behavior research and other fields, unfortunately, it is rarely verified and applied in the field of information behavior research of Internet users. In this study, the regulatory focus theory and the CLT were combined to explain the change of attitude towards privacy of different personality traits under different social distances, and the influence of attention and cognitive resources on attitude change was discussed by using ERP.

In this study, behavioral data were used to explain the individual's behavioral tendencies in different situations, and EEG data were used to explain the distribution of attention resources of individual learning status, which can help Internet enterprises to make users feel more satisfied and more willing to disclose more personal information in the process of using, improve enterprise application and increase enterprise competitiveness.

However, this study also has some limitations. It only discusses the effect of attention on attitude change, but does not explain it from the aspects of emotion and cognitive load. Moreover, the experimental subjects are not universal. In the future research, it is hoped that the sample scope and sample size can be expanded, the generalization can be enhanced, and explanation mechanisms such as emotion and cognitive load can be introduced.

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References

- [1] Kim, D.M. Koohikamali, Does Information Sensitivity Make A Difference? Mobile Applications' Privacy Statements: A Text Mining Approach, 2015.
- [2] Litt, E, Understanding social network site users' privacy tool use. *Computers in Human Behavior*, 29(4).1649-1656, 2013.
- [3] Trepte, S., et al., Do People Know About Privacy and Data Protection Strategies? Towards the "Online Privacy Literacy Scale" (OPLIS), Springer Netherlands. 333-365, 2015.
- [4] Joinson. A. N, et al. Privacy, Trust, and Self-Disclosure Online. *Human-computer Interaction*, 25(1).1-24, 2010.
- [5] Chan, T, K. H, et al. Why Do I Keep Checking My Facebook? The Role of Urge in the Excessive Use of Social Networking Sites. In Hawaii International Conference on System Sciences, 2015.
- [6] Bansal, G, F.M. Zahedi, and D. Gefen, The impact of personal dispositions on information sensitivity, privacy concern and trust in disclosing health information online. *Decision Support Systems*, 49(2).138-150, 2010.
- [7] Krasnova. H, N.F. Veltri, and W.E. Garah, Effectiveness of justice-based measures in managing trust and privacy concerns on social networking sites: An intercultural perspective. *Communications of the Association for Information Systems*, 35.83-108, 2014.
- [8] Petty, R. E, P. Briñol, The elaboration likelihood and meta-cognitive models of attitudes: Implications for prejudice, the self, and beyond. 172-187, 2014.
- [9] Tormala, Z.L, The role of certainty (and uncertainty) in attitudes and persuasion. *Current Opinion in Psychology*, 10.6-11, 2016.
- [10] Smith, S.M, et al. The role of amount, cognitive elaboration, and structural consistency of attitude-relevant knowledge in the formation of attitude certainty. *European Journal of Social Psychology*, 38.280-295, 2018.
- [11] Dienlin, T. S. Trepte, Is the privacy paradox a relic of the past? An in - depth analysis of privacy attitudes and privacy behaviors. *European Journal of Social Psychology*, 2015, 45(3):285-297.
- [12] Albarracín, D. S. Shavitt, Attitudes and Attitude Change. *Annual Review of Psychology*, 2018, 69(1):1-29.
- [13] Mosteller, J. A. Poddar, To Share and Protect: Using Regulatory Focus Theory to Examine the Privacy Paradox of Consumers' Social Media Engagement and Online Privacy Protection Behaviors. *Journal of Interactive Marketing*, 39.27-38, 2017.
- [14] Zhu, P. X. Zhu, and W.U. Wei, Empirical Research of Network Consumers' Purchasing Behavior Based on Regulatory Focus Theory, 2018.
- [15] Lalot, F. A. Quiamzade, and J.M. Falomir - Pichastor, Is regulatory focus related to minimal and maximal standards? Depends on how you ask. *European Journal of Social Psychology*, 48(2).174-186, 2018.
- [16] Pham, M. T. T. Avnet, Ideals and Oughts and the Reliance on Affect versus Substance in Persuasion. *Journal of Consumer Research*, 2004, 30(4):503-518.
- [17] Wan, E. W. J. Hong, and B. Sternthal, the Effect of Regulatory Orientation and Decision Strategy on Brand Judgments. *Journal of Consumer Research*, 35(6).1026-1038, 2009.

- [18] Liviatan, I. Y. Trope, and N. Liberman, Interpersonal Similarity as a Social Distance Dimension: Implications for Perception of Others' Actions. *Journal of Experimental Social Psychology*, 44(5).1256, 2018.
- [19] Tormala, Z. L. P. Briñol, and R.E. Petty, when credibility attacks: The reverse impact of source credibility on persuasion. *Journal of Experimental Social Psychology*, 2006, 42(5):684-691.
- [20] Y, T. L. N, Construal-level theory of psychological distance. *Psychological Review*, 117(2):440-463, 2010.
- [21] Liberman, N.M.D. Sagristano, and Y. Trope, The effect of temporal distance on level of mental construal. *Journal of Experimental Social Psychology*, 38(6).523-534, 2002.
- [22] Nussbaum, S. Y. Trope, and N. Liberman, Creeping dispositionism: The temporal dynamics of behavior prediction. *Journal of Personality & Social Psychology*, 84(3).485-97, 2003.
- [23] Yan, D. J. Sengupta, Effects of Construal Level on the Price-Quality Relationship. *Journal of Consumer Research*, 38(2).376-389, 2011.
- [24] Trope, Y., N. Liberman, and C. Wakslak, Construal Levels and Psychological Distance: Effects on Representation, Prediction, Evaluation, and Behavior. *Journal of Consumer Psychology*, 17(2).83-95, 2007.
- [25] Zhao, M. J. Xie, Effects of social and temporal distance on consumers' responses to peer recommendations. *Journal of Marketing Research*, 48(3).486-496, 2011.
- [26] Arts, J. W. C, R.T. Frambach, and T.H.A. Bijmolt, Generalizations on consumer innovation adoption: A meta-analysis on drivers of intention and behavior. *International Journal of Research in Marketing*, 28(2).134-144, 2011.
- [27] Ahmed, L. J.W. de Fockert, Focusing on attention: the effects of working memory capacity and load on selective attention. *Plos One*, 2012, 7(8).e43101.
- [28] Barden, J. R.E. Petty, The mere perception of elaboration creates attitude certainty: Exploring the thoughtfulness heuristic. *J.Pers, Soc.Psychol*, 95(3).489-509, 2008.
- [29] Idson, L. C. E.T. Higgins, How current feedback and chronic effectiveness influence motivation: everything to gain versus everything to lose. *European Journal of Social Psychology*, 2000, 30(4):583-592.
- [30] Baek, T. H. M. Morimoto, STAY AWAY FROM ME: Examining the Determinants of Consumer Avoidance of Personalized Advertising. *Journal of Advertising*, 41(1).59-76, 2012.
- [31] Luck, S. J. et al., Visual event-related potentials index focused attention within bilateral stimulus arrays. II. Functional dissociation of P1 and N1 components. *Electroencephalography & Clinical Neurophysiology*, 75(6).528-542, 1990.
- [32] Calitri, R. et al., Associations between visual attention, implicit and explicit attitude and behaviour for physical activity. *Psychology & Health*, 24(9).1105-1123, 2009.