

The Effects of Time Monitoring and Goal Orientation on Persuasion

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시간 모니터링과 목표지향이 설득에 미치는 영향

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Abstract The aim of this research is to investigate the effect of how individuals monitor the time in their life on persuasion and the moderating role of goal orientation and types of persuasive message in the relationship between time monitoring and persuasion. By controlling participants' time horizon perspectives (THPs), an experiment using a 2 (THP: limited vs. expansive) \times 3 (goal orientation: approach vs. avoidance vs. control) \times 2 (message type: emotional vs. knowledge-related) between-subjects design was conducted. Results showed that when participants with limited THP, those who oriented avoidance goals were more favorable to knowledge-related messages, whereas those who oriented approach goals preferred emotional messages. Participants with expansive THP were more persuaded by knowledge-related messages, regardless of pursuing goal types.

Key Words : Socioemotional Selectivity Theory, Time Horizon Perspective, Goal Orientation, Emotional, knowledge-related, Persuasion

요약 이 연구는 설득에 있어서 사람들이 시간을 어떻게 모니터링 하는 지 그리고 목표 지향과 설득적 메시지 유형이 어떻게 시간 모니터링과 설득 사이의 관계에서 조절 역할을 하는 지를 살펴보는 데 목적이 있다. 실험을 통해 시간 지평 관점(제한 vs. 확장)과 목표 지향(접근 vs. 회피 vs. 통제), 그리고 메시지 유형(정서적 vs. 지식 관련)의 상호작용 효과가 검증되었다. 구체적으로, 제한된 THP를 갖는 참가자들은 회피 목표를 지향할 때 지식 관련 메시지에 더 설득된 반면, 접근 목표를 지향할 때는 정서적 메시지에 더 설득되는 것으로 나타났다. 반면 확장된 THP를 가진 참가자들은 목표 추구 유형과 상관없이 모두 지식 관련 메시지에 더 설득되었다. 이 같은 결과는 광고 등으로 대표되는 설득적 메시지의 효과에 있어 피험자의 연령과 그들이 갖고 있는 시간 지평 관점에 대한 고려 뿐 아니라 캠페인 등을 통해 유발할 수 있는 목표의 유형, 그리고 메시지의 구성이 상호유기적으로 영향을 미친다는 것을 보여준다.

주제어 : 사회정서적 선택 이론, 시간 지평 관점, 목표 지향, 정서적, 지식연관, 설득

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1. Introduction

Prior studies have focused on time horizon perspectives (THPs) as motivational shifts to behavioral orientation. According to socioemotional selectivity theory (SST), older adults typically feel that their remaining time is limited, whereas younger adults usually perceive that they still have a long life to live [1,2]. Differences in THP induce dissimilar orientations. People with limited THP tend to concentrate on their current feelings and situations rather than the future and believe that their remaining life will not change dramatically[3,4]. Conversely, people with expansive THP tend to adopt a knowledge-based orientation because they regard the future as more important than the present and are motivated to obtain new information or knowledge for their future[1].

Research shows that THP influences responses to various environmental stimuli (e.g., persuasive messages) according to an individual's orientation. Carstensen (2006) demonstrates that people with limited THP prefer emotional messages to knowledge-related messages because they are likely to be emotion-based oriented [1]. By contrast, people with expansive THP favor knowledge-related (vs. emotional) messages because their primary motivation for information processing is to acquire knowledge [5]. Williams and Drolet (2005)'s study illustrates this phenomenon in the context of memory, showing that participants with limited THP recalled more emotional information than knowledge-related information while participants with expansive THP recalled more knowledge-related than emotional messages[6].

This research builds on the idea that which goal in orient affects how THP plays a role in the persuasion. Individuals evaluate outcomes differently depending on what type of goal they are pursuing[7]. Individuals who pursue an approach goal evaluate performance by focusing

on the positive aspects, while those pursuing an avoidance goal evaluate outcomes by focusing on the negative aspects[8]. Because individuals put greater weight on losses than on gains[9], they experience greater pain from the loss of X than greater pleasure from the gain of X. Thus, avoidance (vs. approach)-oriented individuals who evaluate performance according to the negative aspects focus more on losses[10].

2. Literature review

2.1 Time Horizon Perspective (THP)

Laura L. Carstensen and her colleagues has argued that information processing depends on THP. Their findings showed that older adults with limited THP showed a preference for familiar targets, whereas younger adults with expansive THP did not show this preference[1]. In the face of a hypothesized constraint on time, both older and younger individuals preferred familiar targets [11]. In the study using advertising campaigns containing affective vs. knowledge-related advertisements, Fung and Carstensen (2003) show that older adults hold more positive attitudes toward products related to loving or caring messages than products related to the absorption of knowledge or future success[2]. Younger adults' preference was quite opposite.

A subsequent research found an age-related motivational shift caused by aging[4] by investigating the effect of aging on preferences for and memories about advertisements. Participants in this study read 10 sentences with information about a product that contained either emotional or knowledge-related words, depending on the condition. Results showed that older adults with a limited THP presented more favorable attitudes toward the first option and recalled relatively more information in affective (vs. knowledge-related) about experimental message, whereas the opposite patterns were

found for younger adults with an expansive THP.

2.2 Relationship between THP and Goal

Literature has investigated approach-avoidance goal orientations from various views[12]. The behavior of an individual pursuing an approach goal is instigated by a desirable event or positive possibility whereas the behavior of an individual pursuing an avoidance goal is induced by undesirable events or negative possibilities[8]. Thus, overweighting of losses appears more extreme to those who focus on negative consequences than to those who focus on positive outcomes[9,10]. Therefore, the feeling of fear of loss when people pursue an avoidance goal is greater than the feeling of pleasure of acquisition when people pursue an approach goal. Hence, this study expected that the fear of resource loss felt by people with limited THP would be more than the pleasure gained from the pursuit of resource acquisition by people with expansive THP. Moreover, it is also predicted that when THP interacts with goal type, the limited THP-avoidance goal interaction would be more prominent than the expansive THP-approach goal interaction.

SST researchers have argued that age-related patterns based on THP can be changed when time constraints are forced and thus individuals adopt a perception of time different from "what is predicted by their place in the life cycle (p. 166, [13])." Consistently, this study maintains that when younger people perceive that time horizons are constrained, their focus orients goals related to emotional gratification rather than goals related to knowledge acquisition. Using advertising campaigns, following experiment investigated the effect of THP on attitudes with regard to the type of message, comparing groups of participants primed with an avoidance goal orientation, primed with an approach goal orientation, and not primed with

a specific goal.

Based on previous studies, the following hypotheses were proposed:

- H1. When individuals perceive time as finite, they would be more favorable to knowledge-related (vs. emotional) messages in avoidance goal pursuing condition
- H2. When individuals perceive time as finite, they would be more favorable to emotional (vs. knowledge-related) messages in approach goal pursuing condition.
- H3. When individuals perceive time as open-ended, they would be more favorable to knowledge-related (vs. emotional) messages, regardless of pursuing goal type.

3. Experiment

3.1 Method

a. Participants and design. Participants were 287 undergraduate students (age range: 20–28 years; female 42.5%), who participated in exchange for a nonmonetary reward worth \$5. They were randomly assigned to conditions in a 2 (THP: limited vs. expansive) \times 3 (goal orientation: approach vs. avoidance vs. control) \times 2 (message type: emotional vs. knowledge-related) between-subjects design. The dependent variable was attitudes toward the product in the experimental advertising campaign.

b. Procedure and materials. Before the experiment began, participants were introduced that the purpose of the study was to measure the effectiveness of a new product ad. They were randomly assigned to one of three experimental goal conditions. Those in the goal priming conditions had three minutes to read the scenario which contained several sentences to activate the approach or avoidance goal about buying sunscreen cream.. The scenario contained

several sentences to activate the approach goal (see Appendix A.1) or avoidance goal (see Appendix A.2) about buying sunscreen cream. In the control condition, participants were asked to read a constellation matching scenario that was unrelated to this study. All participants then completed a filler task and saw an experimental advertisement for a relatively unknown sunscreen cream brand, and statements describing the target product. To manipulate participants' THP, Williams and Drolet (2005)'s experimental design was used[4]. Those in the limited THP condition read messages with the first and last lines emphasizing the brevity of time, such as "Life is short" and "Savor the moment." Those in the expansive THP condition read messages with the first and last lines emphasizing the expansiveness of time, such as "Life is long" and "Enjoy life forever." With regard to message type, the emotional messages were presented as "Go out into the bright world with magical XXX sunscreen cream!" and the knowledge-related messages were presented as "XXX sunscreen cream, SPF 47+/PA+++.!" Participants then answered three items about their attitudes toward the advertised product (e.g., goodness, positiveness, favorableness) on a 7-point scale (1="not at all", 7="extremely"; $\alpha=.86$), as described in Min (2020)[14]. Subsequently, they responded to a 7-point scale (1="not at all", 7="extremely") on the two items for the goal manipulation check based on Mogilner *et al.* (2008) [7]. Next, they answered two questions about the emotional nature of the advertisement ("This advertisement made me focus on my feelings about the brand" and "This advertisement is directed at making me feel something about the brand," Pearson's $R=.68$, $p<.001$) and two questions about its knowledge-related nature ("This advertisement made me focus on my thoughts about the brand" and "This advertisement was directed at making me think something about the brand"; Pearson's $R=.71$, $p<.001$) on a 7-point scale (1="not at all",

7="extremely"), based on Drolet *et al.* (2007)[3]. In line with Williams and Drolet (2005)[4], to measure participants' THP, one sentence was provided to all participants ("Enjoy your life") and asked them to describe their THP using three items on a 7-point semantic differential scale (e.g., "This statement made me think about endings/beginnings", "time is limited/time is limitless"; $\alpha=.81$). Next, participants responded to three items to control for other variables ("Do you have experience using this sunscreen cream?" "How often do you use sunscreen cream?" and "Have you ever heard of this sunscreen cream?") on a 7-point scale (1="not at all", 7="extremely") and also provided their age and gender. Finally, all participants were debriefed and thanked.

3.2 Results

A 2(THP) \times 3(goal orientation) \times 2(message type) ANOVA on attitudes revealed a three-way interaction was also significant ($F(2,272)=6.79$, $p<.005$) see the Table. To examine the pattern of the three-way interaction closely, a 3(goal orientation) \times 2(message type) ANOVA for each THP type was performed. In the limited THP group, participants were most persuaded when they pursued an avoidance goal ($M_{appro}=4.00$ vs. $M_{avoid}=4.62$ vs. $M_{con}=4.03$; $F(1,136)=8.97$, $p<.001$). Results of planned contrast showed that participants in the avoidance goal group had more favorable attitudes toward the advertised product than those in the control group ($t(272)=4.13$, $p<.001$), and there was no significant difference in attitude between the control and approach groups ($t<1$). The goal orientation \times message type interaction was significant ($F(1, 136) = 13.06$, $p<.001$). The results of a planned contrast showed that participants who were oriented to the avoidance goal evaluated the knowledge-related (vs. emotional) messages more positively ($M_{emo}=4.08$ vs. $M_{know}=5.11$; $t(272)=5.01$, $p<.001$) whereas both

those who read the approach goal scenario ($M_{\text{emo}}=4.22$ vs. $M_{\text{know}}=3.78$; $t(272)=2.13$, $p<.05$) and those who read the control scenario ($M_{\text{emo}}=4.25$ vs. $M_{\text{know}}=3.81$; $t(272)=2.21$, $p<.05$) held more favorable attitudes toward emotional (vs. knowledge-related) messages.

In the expansive THP condition, participants exposed to the scenario related to the avoidance goal (vs. approach goal vs. control) were more persuaded by the advertisement messages ($M_{\text{appro}}=4.12$ vs. $M_{\text{avoid}}=4.93$ vs. $M_{\text{con}}=4.40$; $F(1,135)=14.59$, $p<.001$). A planned contrast revealed that pursuing an avoidance (vs. approach) goal led to more favorable attitudes ($t(272)=4.80$, $p<.001$), but there was no difference of attitudes between the approach goal and control groups ($t(272)=1.68$, $p>.10$). Participants preferred the knowledge-related messages ($M=4.83$) to the emotional messages ($M=4.19$; $F(1,135)=36.11$, $p<.001$). The goal orientation \times message type interaction was not significant ($F(1,135)=1.01$, $p>.10$). The results of a planned contrast showed that all participants in each goal orientation group preferred knowledge-related messages to emotional messages knowledge-related messages to emotional messages (approach goal: $M_{\text{emo}}=4.01$, $SD=.96$ vs. $M_{\text{know}}=4.45$, $SD=.89$; $t(272)=2.15$, $p<.05$; avoidance goal: $M_{\text{emo}}=4.55$, $SD=.36$ vs. $M_{\text{know}}=5.30$, $SD=.39$; $t(272)=3.61$, $p<$

.005; control: $M_{\text{emo}}=4.04$, $SD=.41$ vs. (approach goal: $M_{\text{emo}}=4.01$ vs. $M_{\text{know}}=4.45$; $t(272)=2.15$, $p<.05$; avoidance goal: $M_{\text{emo}}=4.55$ vs. $M_{\text{know}}=5.30$; $t(272)=3.61$, $p<.005$; control: $M_{\text{emo}}=4.04$ vs. $M_{\text{know}}=4.76$; $t(272)=2.26$, $p<.01$). There were no significant effects of control variables ($ps>.10$).

4. General discussion

In the limited THP condition, participants pursuing an avoidance goal held more positive attitudes toward the knowledge-related (vs. emotional) messages; by contrast, participants in both the control and approach goal conditions preferred the emotional messages to the knowledge-related messages. In the expansive THP condition, all participants in each goal pursuit group were more persuaded by knowledge-related (vs. emotional) messages. Therefore, the data indicated that the effects of THP on preference was dependent on which goals people orient.

Despite the limitation that only undergraduates participated in the experiment, current study provides meaningful implications to marketing practitioners by showing when and how THP and pursuing goal type play roles in persuasion. A brand strategy that treats older adults as key

Table 1. Experimental results

THP	Goal	Message	Mean	t-value	p-value
Limited condition	Approach orientation	Emotional	4.22	$t(272) = 2.13$	$p < .05$
		Rational	3.78		
	Avoidance orientation	Emotional	4.08	$t(272) = 5.01$	$p < .001$
		Rational	5.11		
	Control	Emotional	4.25	$t(272) = 2.21$	$p < .05$
		Rational	3.81		
Expansive condition	Approach orientation	Emotional	4.01	$t(272) = 2.15$	$p < .05$
		Rational	4.45		
	Avoidance orientation	Emotional	4.55	$t(272) = 3.61$	$p < .005$
		Rational	5.3		
	Control	Emotional	4.04	$t(272) = 2.26$	$p < .01$
		Rational	4.76		

customers would be more effective if it tailors which types of benefits are emphasized in the advertisement message based on each product's goal. In this study, younger adults tended to prefer knowledge-related to emotional messages, regardless of whether the products or purpose of their purchase were oriented to approach gain or avoid loss. Therefore, when promoting a brand to younger adults, marketers might encourage them to think logically and computationally rather than emotionally.

Prior studies on SST indicate that individuals with limited (vs. expansive) THP consider interacting with others a primary aim in their life for building social connectedness and intimacy of relationships[15]. This study suggests that product type influences attitudes depending on THP. Because products are often one of tools used to signal others, when people with limited THP buy public-facing products, they would tend to choose more elaborate purchases than when they purchase privately used products. The current study investigates preferences for privately used products in experiments. Research investigating other product types based on various perspectives would shed more insightful light on understanding consumers' behavior.

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