

科技部補助專題研究計畫成果報告 期末報告

雙重處理模型和修正基底模型的整合性框架研究：論證診斷性的調節作用

計畫類別：個別型計畫
計畫編號：MOST 107-2410-H-003-030-
執行期間：107年08月01日至108年12月31日
執行單位：國立臺灣師範大學管理研究所

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報告附件：出席國際學術會議心得報告

本研究具有政策應用參考價值：否 是，建議提供機關
(勾選「是」者，請列舉建議可提供施政參考之業務主管機關)
本研究具影響公共利益之重大發現：否 是

中華民國 109 年 03 月 12 日

中文摘要：儘管對雙重處理模型和修正基底模型的研究已大量應用於態度形成和變化的理論研究，但卻存在著一項長期未被揭露與探討的理論衝突。本研究認為，如何在高度涉入條件下進行目標評估的既有理論觀點仍然有所衝突。本研究因此提出論證診斷性的調節作用以整合彼此衝突的理論觀點，並據此推導出雙重處理模型與修正基底模型在態度形成與變化上的整合框架。

在接收勸服信息的過程中，可能會產生大量與評量目標中心價值相關的認知反應，本研究定義此勸服信息具有高論證診斷性。此外，在接收勸服信息的過程中，若產生非常少與評量目標中心價值相關的認知反應，本研究則定義此勸服信息具有低論證診斷性。論證診斷性獨立於論證品質和目標評量。因此，論證診斷性較強的勸服性信息足以使具高涉入程度的消費者或社會認知者以論證品質為基礎進行目標評量，此理論機制和雙重處理模型的典型預測相一致。另一方面，論證診斷性較低的勸服性信息卻會使具高涉入程度的消費者或社會認知者，對周邊線索或情境刺激物的不適當作用提升查知敏銳度，並為求準確地進行目標評量，然後導致偏誤糾正。除此之外，本研究同時提出了一個整合性框架，以全面性解釋雙重處理模型和修正基底模型對態度形成和變化的理論機制。並藉由對論證診斷性調節作用的明確識別和探討，以一整合框架解釋並探究雙重處理模型和修正基底模型中之獨特或相同的前因後果為何。

本研究提出一2（涉入：高與低）2（情境變數：有吸引力與普通）4（論證：診斷性強、不具診斷性、無論證、與診斷性微弱）參與者組間因子設計。本研究除了獲得雙重處理模型和修正基底模型的典型發現之外，更重要的理論突破還包括：1）高度涉入不必然會經由中央路徑或系統性流程處理信息，2）在高度涉入的情境下，論證品質的主效果不必然會顯著，（3）在高度涉入的情境下，對偏誤影響或偏誤知識的高度敏感性並不總是能夠引發偏誤修正，（4）偏誤提示並不是引發偏誤修正的必要條件。

中文關鍵詞：雙重處理模型，修正基底模型，涉入，論證診斷性

英文摘要：Even though the dual process models and correction-based models have been largely employed in a variety of studies examining how attitudes are formed or changed, the current study proposes that the interpretation of how target evaluations are made in high involvement conditions fails to converge. A moderating role of argument diagnosticity is suggested in the current study to consolidate the discrepant theoretical perspectives, and an integration framework of the dual process model and the correction-based model in attitude formation and change is derived accordingly

The persuasive message is regarded as high in argument diagnosticity when a large number of cognitive responses relevant to target's central merits can be engendered in

the process of advocating information. On the other hand, the persuasive message is regarded as low in argument diagnosticity when few cognitive responses relevant to target' s central merits can be engendered in the process of advocating information.

Argument diagnosticity is orthogonal to argument quality and target favorability. That is, when consumers or social perceivers are high in cognitive resources, the persuasive message high in argument diagnosticity largely facilitates the impact of argument quality on target assessments. The proposed judgmental process is consistent with the dual process model. On the other hand, the persuasive message low in argument diagnosticity enhances the scrutiny of undue impacts made by peripheral cues or contextual stimuli to high involvement consumers or social perceivers, and further give rise to bias correction in an attempt to accurately make target assessments. In addition, the current study proposes an integrated framework to seamlessly accommodate the dual process model and correction-based model in the theorization of attitude formation and change. By virtue of a clear identification and clarification of the moderating role of argument diagnosticity, the distinctive and shared antecedents and consequences of the dual process model and the correction-based model can then be well comprehended and consolidated in a comprehensive framework.

The current study adopts a 2 (involvement: high vs. low) × 2 (cue: attractive vs. average) × 4 (argument: diagnostically strong vs. non-diagnostic vs. none vs. diagnostically weak) between participant factorial design. Except the typical findings of dual process model and correction based model, more importantly, the current study provides unexplored theoretical resolutions on 1) high involvement does not necessarily result in the information process via central route or systematic process, 2) the main effect of argument quality is not always available when involvement is relatively high, 3) high sensitivity on bias influence or bias knowledge does not always engender bias correction when elaboration likelihood is at a relatively high degree, and 4) bias reminders are not a necessary condition for the activation of bias correction.

英文關鍵詞：Dual Process Model, Correction Based Model, Involvement, Argument Diagnosticity

三、研究計畫內容（以中文或英文撰寫）：

- (一) 研究計畫之背景。請詳述本研究計畫所要探討或解決的問題、研究原創性、重要性、預期影響性及國內外有關本計畫之研究情況、重要參考文獻之評述等。如為連續性計畫應說明上年度研究進度。
- (二) 研究方法、進行步驟及執行進度。請分年列述：1.本計畫採用之研究方法與原因及其創新性。2.預計可能遭遇之困難及解決途徑。3.重要儀器之配合使用情形。4.如為須赴國外或大陸地區研究，請詳述其必要性以及預期效益等。
- (三) 預期完成之工作項目及成果。請分年列述：1.預期完成之工作項目。2.對於參與之工作人員，預期可獲之訓練。3.預期完成之研究成果（如實務應用績效、期刊論文、研討會論文、專書、技術報告、專利或技術移轉等質與量之預期成果）。4.學術研究、國家發展及其他應用方面預期之貢獻。
- (四) 整合型研究計畫說明。如為整合型研究計畫請就以上各點分別說明與其他子計畫之相關性。

An Integrated Framework of Dual Process Model and Correction-Based Model:

The Moderating Role of Argument Diagnosticity

For over the last three decades, the dual process models, i.e., Elaboration Likelihood Model, ELM (Petty & Cacioppo, 1979, 1983) and Heuristic Systemic Model, HSM (Chaiken, Liberman, & Eagly, 1989; Chaiken & Maheswaran, 1994), have been largely employed in a variety of social psychology studies and consumer research examining how attitudes toward issues, persons, products, brands, or judged stimuli are formed or changed. Recent work in marketing research has shown that the overarching implications of dual process models have been extended to examine underlying mechanisms of marketing variables on digital advertising (Bart, Stephen, & Sarvary, 2014; Bruce, Murthi, & Rao, 2017), consumer protection (Steffel, Williams,

& Pogacar, 2016), and product packaging (White, Lin, Dahl, & Ritchie, 2016). Given the ubiquitous use of dual process models in the theorization of attitudinal research, it mandates an even more serious scrutiny on potential inconsistency with extant attitude-related theories.

One probable divergence can be found between the dual process model and the correction-based model (Higgins, Rholes, & Jones, 1977; Wyer & Budesheim, 1987) in that the interpretation of how target evaluations are made in high involvement conditions fails to converge. In the high involvement condition, the dual process models suggest that either a central route (in ELM) or a systematic process (in HSM) would dominate the process of persuasive messages by elaborating the central merits or target relevant information, and in the meantime, the impact of irrelevant cues or contextual stimuli would be minimized or invalidated. The main effect of argument quality on target assessment is expected and there would be no effect on contextual stimuli. However, such a nullified effect of target irrelevant cues on attitude is significantly overturned in research of correction-based model (Petty & Wegener, 1993, 1997). For example, in the study of Martin, Seta, and Crelia (1990), a simple enhancement in involvement (i.e., cognitive resource) resulted in the reversal context effect in which positively perceived contextual stimuli engendered negative influence on target evaluations (i.e., a resetting or bias correction). In the examination of communication

source effects, Kang and Herr (2006) even posited, in the third hypothesis, that extremely high involvement would lead to negative source effects. From the theoretical view of dual process models, boosting cognitive resources to a high (e.g., Martin, Seta, and Crelia, 1990) or an extremely high (e.g., Kang and Herr, 2006) level would only intensify the reliance on the central route or the systematic process, and peripheral cues would not play any determinant role, not to mention the prediction of negative cue effects. Especially, to the extent cognitive resources are escalated, argument quality positively accounts for the favorability of a judged target. Why is there such a phenomenal discrepancy between the dual process model and the correction-based model in the explication of role target irrelevant cues or contextual stimuli play when involvement to process persuasive messages is high or extremely? Does argument quality always account for target assessments as involvement or cognitive resources are sufficiently high? Would bias correction be activated on every occasion when target irrelevant cues or contextual stimuli are blatantly perceived and involvement or cognitive resources are extremely high? The current study is aimed at disentangling the aforementioned theoretical conflicts. In the following, a moderator is proposed to consolidate the discrepant theoretical perspectives, and an integration framework of the dual process model and the correction-based model in attitude formation and change is derived accordingly. Then, an experiment examining the advocated moderation role is

undertaken.

The Moderating Role of Argument Diagnosticity

In the current study, argument diagnosticity is defined as the extent to which the argument is able to elicit a great deal of target-relevant cognitive responses that characterize the quality of judged target. The persuasive message is regarded as high in argument diagnosticity when a large number of cognitive responses relevant to target's central merits can be engendered in the process of advocating information. Argument diagnosticity is orthogonal to argument quality and target favorability. The persuasive messages high in argument diagnosticity can lead to either strong, weak, or neutral argument quality as well as favorable, unfavorable, or neutral target evaluations. When the large number of induced cognitive responses are dominantly positive (negative), the argument quality is strong (weak) (Petty & Cacioppo, 1983) and the target is evaluated favorably (unfavorably). The argument quality and the target judgment are getting neutral while abundant cognitive responses are evenly divided into positive and negative categories. On the other hand, the persuasive message is considered as low in argument diagnosticity when relatively few cognitive responses relevant to target's central merits are evoked in the process of advocating information. When the persuasive messages are low in argument diagnosticity, the target-relevant cognitive responses are minimal so as to unlikely bring about strong or weak argument quality.

The theoretical conflict between the dual process model and the correction-based model results from the failure to recognize the moderating role of argument diagnosticity. At the high level of elaboration likelihood, high argument diagnosticity largely facilitates the impact of argument quality on target assessments while low argument diagnosticity gives rise to greater likelihood of bias correction. All aspects of persuasive messages, including central arguments and peripheral cues, are carefully scrutinized when the elaboration likelihood is high. Persuasive messages high in argument diagnosticity suggests that a great deal of cognitive responses central to target merits are elicited to readily support strong, weak, or neutral argument quality in proportion of dominantly favorable to dominantly unfavorable thoughts. Even though peripheral cues or contextual stimuli are conspicuously present, abundant cognitive responses central to target's merits are still likely to dominate target assessments by two reasons: accuracy motivation and process weight shift along the involvement continuum (Petty & Wegener, 1999). Accuracy motivation is a default mode in information process. Target relevant information is more likely to be taken into account in target assessments than target irrelevant information, such as peripheral cues or contextual stimuli, simply because the judgment of target quality is more compellingly validated by means of the support from information relevant rather than irrelevant to the representation of target. In addition, the process weight for the central route vs. the

peripheral route or the systematic process vs. the heuristic process is changed to the extent of elaboration likelihood. More weight (such as 80%) is assigned to the central route or the systematic process and less weight (such as 20%) is designated to the peripheral route or the heuristic process as involvement is getting higher, and vice versa. The proportion to which peripheral route or heuristic process is focused would not be enlarged unless elaboration likelihood is getting lower. Thus, persuasive messages high in argument diagnosticity suffices consumers or social perceivers high in involvement to base their target assessments on argument quality, which is consistent with the theorization mechanism and the general prediction made by dual process model.

However, when argument diagnosticity is relatively low, merely few cognitive responses central to target's merits are elicited out of the process of persuasive messages, even at a high level of accuracy motivation and a high ratio of the central route to the peripheral route process or the systematic to the heuristic process. With fairly limited cognitive responses profiling target quality, it is unlikely for argument quality to play a determinant role in target assessments. That is, high involvement or more cognitive resources may result in positive main effect of argument quality on target assessments only when argument diagnosticity is relatively high. What happens when argument diagnosticity is low? The overwhelming cognitive resources are forced to process persuasive messages irrelevant to target's merits, i.e., peripheral cues or contextual

stimuli. Even at a high level of involvement, since hardly any discriminating cognitive responses are produced out of the effortful elaboration in the central route or the systematic process, the supposed low process weight on the peripheral route or the heuristic process is going to be readily inflated such that most of the attentions are paid to elaborate peripheral cues or contextual stimuli. Will such a concentration on the process of peripheral cues or contextual stimuli bring about the positive main effect of cues on target assessments, just like when involvement is low? Not necessarily. Aside from the reinforced process on simple associations and cues, high elaboration likelihood is likely to intensify accuracy motivation to a higher extent than low elaboration likelihood such that the cues' irrelevance or illegitimacy to the categorization of target representation may be especially brought into attention. Such a perceived inadequacy to characterize target quality by irrelevant cues or contextual stimuli might then be regarded as a judgmental bias (Wegener & Petty, 1997; Wilson & Brekke, 1994) and correction processes might be activated subsequently, consistent with typical settings of collection-based models. In other words, persuasive messages low in argument diagnostics impels consumers or social perceivers high in involvement to sensitize the inept role of peripheral cues or contextual stimuli to accurately make target assessments, and then result in bias correction.

The proposed moderating role of argument diagnosticity not only comprehensively

accommodates the long-lasting (yet still not disclosed) theoretical conflicts between the dual process model and the correction-based model, but also unequivocally predicts attitudinal formation or change heretofore unexplored by extant theories. For example, following the manipulation paradigm of the dual process model at a high level of elaboration likelihood, the typical findings of main effect per argument quality are well supported only when argument diagnosticity is relatively high, but any effect out of argument quality as well as central route or systematic process is annulled when argument diagnosticity is relatively low. In particular, low argument diagnosticity accounts for why a typical study setting designed for the dual process model might lead to the activation of bias correction. On the other hand, the validity of the general manipulation setting of the correction-based model is readily subject to argument diagnostics. Attitudinal correction is only at work when argument diagnostics is low. Even controlling for high bias knowledge and plentiful cognitive resources (e.g., Kang & Herr, 2006), persuasive messages high in argument diagnostics substantially supports the role of argument quality at a much considerable weight on the central route or the systematic process, and therefore the remaining weight to initiate the attention to target irrelevant cues or contextual stimuli is attenuated, not to mention the limited cognitive resources assigned to bias correction.

An Integrated Framework of Dual Process Model and Correction –Based

Model

The current study proposes an integrated framework to seamlessly accommodate the dual process model and correction-based model in the theorization of attitude formation and change (see Figure 1). By virtue of a clear identification and clarification of the moderating role of argument diagnosticity, the distinctive and shared antecedents and consequences of the dual process model and the correction-based model can then be well comprehended and consolidated in a comprehensive framework. The diagrammatic presentation of the interplay between the dual process model and the correction-based model provides an immediate resolution to many misunderstandings and paradoxical views on how attitudes are formed or changed. For example, 1) high involvement does not necessarily result in the information process via central route or systematic process, 2) the main effect of argument quality is not always available when involvement is relatively high, 3) high sensitivity on bias influence or bias knowledge does not always engender bias correction when elaboration likelihood is at a relatively high degree, and 4) bias reminders are not a necessary condition for the activation of bias correction.

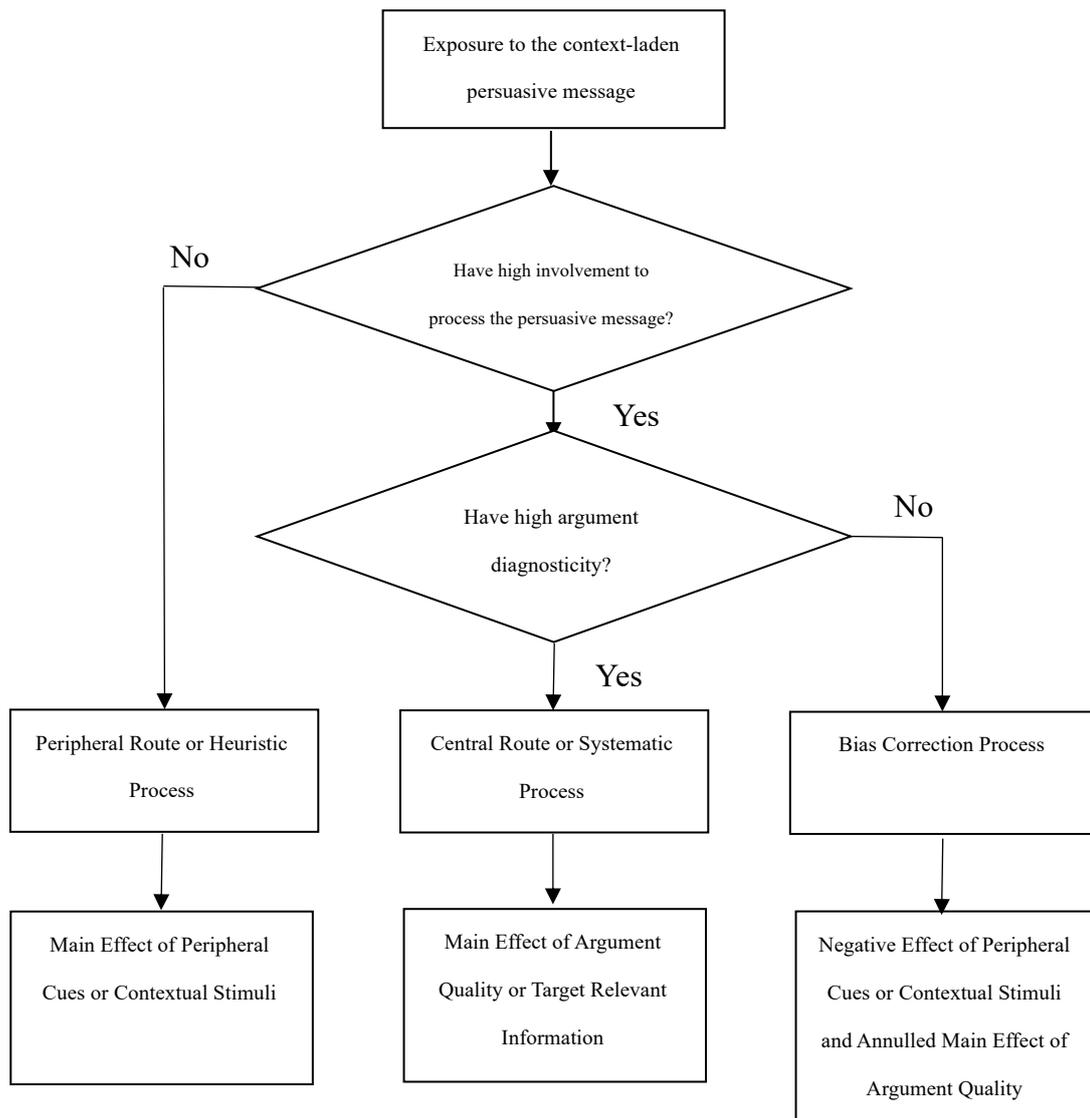


Figure 1. An Integrative Framework of Dual Process Model and Correction-

Based Model

Research Hypotheses

Five hypotheses are posited as follows. Hypothesis 1 and 2 are applicable when diagnostic arguments are available, and the remaining three hypotheses are pertinent

when argument diagnosticity is relatively low.

Hypothesis 1 :

Under the condition fostering high elaboration, high argument diagnosticity, and laden irrelevant cues delivered in the persuasive message, irrespective of bias sensitivity or bias knowledge, product attitudes will be more favorable when diagnostically strong arguments rather than diagnostically weak arguments are present (i.e., no correction occurs). The irrelevant cues will have a minimized impact on product attitudes.

Hypothesis 2 :

Under the condition fostering low elaboration, high argument diagnosticity, and laden irrelevant cues delivered in the persuasive message, product attitudes will be more favorable when the relatively favorable cues rather than relatively unfavorable cues are present (i.e., no correction occurs). The argument quality will have no impact on product attitudes.

Hypothesis 3 :

Under the condition fostering high elaboration, low argument diagnosticity, and

laden irrelevant cues delivered in the persuasive message, product attitudes will be more favorable when relatively unfavorable cues rather than relatively favorable cues are present (i.e., over-correction occurs). The arguments with low diagnosticity will have no impact on product attitudes.

Hypothesis 4 : (the extreme case of low argument diagnosticity – no argument)

Under the condition fostering high elaboration, no arguments, and laden irrelevant cues delivered in the persuasive message, product attitudes will be more favorable when relatively unfavorable cues rather than relatively favorable cues are present (i.e., over-correction occurs).

Hypothesis 5 :

Under the condition fostering low elaboration, low argument diagnosticity (or no arguments), and laden irrelevant cues delivered in the persuasive message, product attitudes will be more favorable when the relatively favorable cues rather than relatively unfavorable cues are present (i.e., no correction occurs). The argument quality (if there is any) will have no impact on product attitudes.

Method

Design and Procedure

Three hundred twenty college students participate in the experiment for an opportunity to win one of ten US\$33 equivalent gift certificates. Participants are randomly assigned to a 2 (involvement: high vs. low) \times 2 (cue: attractive vs. average) \times 4 (argument: diagnostically strong vs. non-diagnostic vs. none vs. diagnostically weak) between participants factorial design.

Participants receive one of sixteen experimental booklets and are told that they will be reading ads excerpted from various magazines and the reading comprehension toward these ads will be examined. Four ads are included in the booklet within which the third ad serves as the target and the remaining ads are fillers. Before viewing each ad, a short passage of the corresponding company introduction similar to the brief magazine feature is present. Some seemingly ad comprehension questions are then subsequent to the exposure of each ad. The company introduction of the fictitious target brand is designed to manipulate motivation to think carefully about the target product. In the high-motivation condition, participants are told that the fictitious target brand is going to be launched in the local area next month and college students are its main target customers.

Result

Manipulation Check

Involvement. A 2X 2X 4 ANOVA on the involvement check shows only a main effect of Involvement, $F(1, 304) = 66.23, p < .001$. Participants exposing to the passage encouraging high relevance and accuracy report higher involvement ($M = 4.99$) when viewing the target ad than the case would be otherwise ($M = 4.31$). Other effects are insignificant, $ps > .1$.

Cue. A 2X 2X 4 ANOVA on the cue check shows only a main effect of cue, $F(1, 304) = 38.94, p < .001$. Participants exposing to the target ad endorsed by the attractive endorser report the endorser more likable and attractive ($M = 5.01$) than their counterparts exposing to the average endorser in the target ad ($M = 4.23$). Other effects are insignificant, $ps > .1$.

Argument. A 2X 2X 4 ANOVA on the argument check shows only a main effect of argument, $F(1, 304) = 20.63, p < .001$. Participants exposing to the strongly diagnostic arguments report the highest persuasiveness ($M = 5.20$). None diagnostic and none arguments are perceived as moderate in persuasiveness ($M = 4.66$ for the condition of none diagnostic arguments and $M = 4.48$ for no argument conditions). The weakly diagnostic arguments are reported to be the least persuasive ($M = 4.06$). The post hoc Bonferroni test shows that strongly diagnostic arguments are statistically more persuasive than the remaining argument conditions, $ps < .005$, so do the weakly diagnostic arguments, $ps < .05$. Consistent with the manipulated design, none diagnostic

arguments do not differ from no argument in terms of perceived persuasiveness, $p = 1.00$.

Target Evaluation

A 2X 2X 4 ANOVA on the target evaluation shows a main effect of cue, $F(1, 304) = 18.12, p < .001$, a main effect of argument, $F(1, 304) = 3.04, p < .05$, an interaction effect of involvement by cue, $F(1, 304) = 14.10, p < .001$, an interaction effect of argument by cue, $F(1, 304) = 7.35, p < .001$, and most importantly, an three-way interaction effect, $F(1, 304) = 6.43, p < .001$.

For participants who are in the high involvement, diagnostically strong arguments bring about more favorable target evaluation, $M = 4.90$, than diagnostically weak arguments, $M = 4.38, F(1, 76) = 5.09, p < .05$, in support of Hypothesis 1.

As for the low involvement condition, the attractive endorser significantly enhances the target favorability, $M = 4.85$, than when average endorser is exposed in the target ad, $M = 4.03, F(1, 76) = 17.26, p < .001$. Hypothesis 2 is therefore supported.

In the condition of high involvement and weak argument diagnosticity, bias correction is expected to be at work. When the arguments are not diagnostic, target evaluation, $M = 4.95$, is more favorable when the endorser is average than when the endorser is attractive, $M = 4.00, F(1, 38) = 9.81, p < .005$, in support of Hypothesis 3.

The similar pattern is found when no argument is present in the target ad in that

endorser attractiveness negatively influence the target evaluation, $M = 3.90$ vs. 4.65 , $F(1, 38) = 6.22$, $p < .05$, in support of Hypothesis 4.

For participants who are low in involvement, encountering arguments at low diagnosticity supports the main effect of endorser attractiveness. Attractive endorser engenders the more favorable evaluations, $M = 4.60$, on the target than the average endorser, $M = 3.83$ vs. 4.65 , $F(1, 76) = 19.57$, $p < .001$, in support of Hypothesis 5.

Contribution

The contribution of the current study in the theorization of attitudinal formation and change is multifold. First of all, the moderating role of argument diagnosticity is first identified and examined to better understand the mechanisms underlying the information process at a relatively high degree of elaboration likelihood. Secondly, the current study not only first establishes and recognizes a long-lasting theoretical inconsistency in the attitudinal research, but also addresses a resolution to disentangle the theoretical conflicts. Thirdly, an integrative framework is proposed to comprehensively accommodate dual process model and correction-based model. Fourthly, the unique and common antecedents and consequences corresponding to the judgmental process accounted for by the dual process model and correction-based model are well examined and documented. And lastly, the attitudinal research boundary

is well extended to cover the theoretical scenarios and empirical implications heretofore
unexplored.

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Consumers' Attitude Recalibration: The Role of Attitude Confidence

Imagine a scenario: by learning from a news report, consumers are aware that a famous brand has spent a bunch of money in hiring a likable celebrity to endorse its new product, but the truth is that the endorser has never used this product. How will consumers react to this information? Some consumers may largely adjust their initial positive impressions on this new product to a more negative direction; while other consumers may only discount their initial positive impressions slightly, or even retain their initial positive impressions by completely neglecting this information. For a given potential of bias being noticed, which factor(s) might account for consumers' different reactions to the biasing influence? Why do some consumers recalibrate their product assessments to a larger degree, but other consumers to a smaller degree?

The use of contextually-primed marketing tactics such as prestigious themes, hedonic settings, likable music, or attractive endorsers has been found to bias consumers' judgments every day (Chien, Wegener, Hsiao, and Petty 2010; Chien and Hsiao 2015; Herr 1989; Petty, Schumann, Richman, and Strathman 1993). Due to information explosion and accelerated knowledge accumulation, it is more likely that consumers are able to detect the potential biasing agent(s) of a company's persuasive message (e.g., either from the attacking messages of the competitors or other resources such as ubiquitous opinion sharing in internet). Consumers might even develop their own strategies to cope with these persuasive attempts (cf. Persuasion Knowledge Model: Friestad and Wright 1994). According to the FCM (the Flexible Correction Model: Wegener and Petty 1995, 1997), when people are aware of the potential bias and have high involvement in making accurate decisions, they tend to correct their judgments in a direction opposite to their perceived biasing direction. Consistent with this proposition, recent research has found that consumers reacted against positive marketing attempts by correcting their product judgments toward a negative direction, when they were aware of the biasing agents and were highly-involved in making accurate product decisions (Chien and Hsiao 2015; Gorn, Goldberg, and Basu 1993; see Wegener and Petty 2001 for a review).

Nevertheless, little attention has been paid to the potential factor(s) which determine the different corrective magnitude. The current research is aimed to explicate this research question by proposing that attitude confidence is one important factor determining the corrective magnitude. According to the naïve theory-based bias correction models (Wegener

and Petty 1997; Wilson and Brekke 1994), corrective processes are driven by social perceivers' use of naive theories. That is, people generate perceptions of the bias(es) at work and correct their judgments in a direction opposite to their perceived biasing direction and with the amount identical to their perceived biasing amount in order to reach accuracy (Wegener and Petty 1995, 1997). Thus, if people perceive they have been biased a lot, they are inclined to correct their judgments to a larger degree; however, if they perceive they have not been much biased, their corrective degree should be little. Which factor would influence the extent to which people perceive they have been biased? The current research proposes that the higher the attitude confidence on the initial judgment, the less the extent to which the consumer perceives her/his initial judgments has been biased, and therefore the less the magnitude of the subsequent judgmental recalibration or correction. The degree to which an individual believes a particular judgment made is accurate (Berger 1992), or a subjective sense of conviction or validity regarding one's attitude (Festinger 1954) has been generally referred to as attitude confidence (for a review, see Gross, Holtz, and Miller 1995). Attitude confidence is thought as a meta-cognitive property attached to a persons' attitude; that is, it is a person's cognition for her/his initial cognition (Petty, Briñol, Tormala, and Wegener 2007). Consumers who are more confident on their initial product attitudes are the ones who feel more certain about the accuracy of their initial attitudes. When later being reminded of any potential persuasive bias embedded within the initial judgmental context, these consumers should feel less necessity to adjust their initial attitudes. Thus, our first hypothesis (tested in Study 1) is:

H1: Under conditions encouraging corrections, consumers who have higher attitude confidence in their initial product judgments would correct less for the potential of bias than those who have lower attitude confidence.

Moreover, it is proposed that one potential antecedent of attitude confidence is consumers' product knowledge. Consumers' product knowledge is the product or service information retrievable from long-term memory that is able to be verified for accuracy (Alba and Hutchinson 2000; Brucks 1985; Carlson, Vincent, Hardesty, and Bearden 2009). Consumers who have different levels of knowledge have been found to have different information search (Brucks 1985) and information processing (Rao and Monroe 1988). For example, past research has found that consumers with extensive product knowledge exhibit a greater selectivity in the information they consider as a basis for decisions (Brucks 1985), and

more likely to overlook useful information and stop learning new information (Wood and Lynch 2002). Previous literature has posited that attitude confidence is dependent on the degree of expertise (Alba and Hutchinson 2000) or the knowledge status (Gross, Holtz, and Miller 1995). That is, consumers who are more knowledgeable about the target category should feel more certain about the accuracy of their product judgments, in comparison with consumers who are less knowledgeable (Gross, Holtz, and Miller 1995). As a result, they should correct their judgments to a less degree when being reminded of the potential biasing context within which their initial judgments are embedded. Our second hypothesis (tested in Study2) is:

H2: Under conditions encouraging corrections, consumers who have more product knowledge would feel more confident in their initial product judgments and thus would correct less for the bias than those with less product knowledge.

STUDY 1

Participants and Design

A total of 40 college students in an introductory Marketing course participated in the experiment for getting extra course credits. Participants were randomly assigned into a 2 (Confidence Priming: high vs. low) \times 2 (Bias-Reminding Tagline: with vs. without) mixed design with Confidence Priming as a between-participant factor and Bias-Reminding Tagline as a within-participant factor.

Stimuli and Procedure

The cover page informed participants that the purpose of the experiment was to examine college students' comprehension abilities and attitudes toward some articles and advertised products. Then they were instructed to view three ads and to indicate their evaluations toward the advertised products. The target ad (a fictitious brand, "Zema" organic body lotion) was placed as the last one. The first ad (which would serve as a bias-prompting ad in the retest stage) was for a fictitious supermarket, "PT Mart". In the "PT Mart" ad, no product features or central arguments were provided; only a full-size picture of supermarket interior and a brand logo were presented in the ad. Participants then continued to view the second ad serving as the filter (a real ad for a bike brand, Merida). Upon finishing the evaluation of the second ad, participants encountered an ostensible scenario-simulation task designed to

manipulate the attitude confidence. Participants were asked to list five events in which they felt most (or least) confident throughout their whole life in the condition of priming high (or low) confidence. Previous study has found that priming such self-reported confident (or unconfident) experiences was likely to cause relatively high (or low) confidence level in the attitudes formed subsequently (Petty, Briñol, and Tormala 2002). After that, participants continued to view the third ad for the target product. In the target ad, a celebrity endorser, a picture of product, and a brand logo (i.e., Zema organic body lotion) were presented. Participants were asked to evaluate the target product on three seven-point semantic differential scales anchored by 1 and 7 (bad/good, negative/positive, and unfavorable/favorable). Next, participants were asked to indicate how confident they were when evaluating the target product on three seven-point semantic differential scales anchored by 1 and 7 (unconfident/confident, uncertain/certain, and not assured/assured). Besides, they were asked to rate the perceived product relevance of the celebrity endorser on two seven-point semantic differential scales anchored by -3 and 3 (not suitable/suitable and irrelevant/relevant). Participants also rated the perception of the celebrity endorser on three seven-point semantic differential scales anchored by 1 and 7 (dislikable/likable, negative/positive, and unfavorable/favorable).

Six weeks later, same participants were called back to participate in another experiment. To reduce the suspicion on the relation between the test and the retest stage, participants evaluated five ads (instead of three ads) in the retest stage. The first three ads and the task of confidence priming were the same for these two stages, except that participants were reminded of the potential biasing agent (i.e., endorser) by the first ad (PT Mart ad) which incorporated the following taglines: “You get what you pay for! People often pay for quality-irrelevant surcharge, such as pricy endorsers and exaggeratory in-store decoration. But in PT Mart, we save every penny for you. That’s why our price is so low. At PT Mart, you only pay for what you can take home!” After seeing the first ad, participants were asked to evaluate PT Mart and indicated whether they believed that consumers often paid unnecessary money when they purchased a product (e.g., celebrity endorsement and redundant package) on a dichotomous scale (i.e., yes or no), and how they thought the influence of celebrity endorsement would be on their product assessments/perceptions on two seven-point scales anchored by -3 (making product evaluations/perceptions worse) and 3 (making product evaluations/perceptions better). These two questions served to check the manipulation of bias awareness. Besides, before seeing the third target ad, participants were manipulated to have high involvement to process the target ad by being told that there were selected from a small

group of samples and their opinions were very important. It was expected that bias corrections would more likely occur under such condition where participants were reminded of the potential bias and held high involvement to make target decisions.

After viewing the target ad, participants evaluated the target product and indicated their confidence level on target judgments in the same way as in the test stage. Then, they continued to view and evaluate the remaining two filter ads (which did not appear in the test stage). In the end, participants finished the manipulation checks identical to those in the test stage, and then were debriefed and thanked. No one identified the study purpose in the open-end suspicion probe.

STUDY 2

Participants and Design

Forty college students participated in the experiment for extra course credits. Participants were randomly assigned into a 2 (Product Knowledge: high vs. low) \times 2 (Bias-Reminding Tagline: with vs. without) mixed design with Product Knowledge as a between-participant factor and Bias-Reminding Tagline as a within-participant factor.

Stimuli and Procedure

The cover page informed participants that the purpose of the experiment was to examine college students' comprehension abilities and attitudes toward some articles and advertised products. In the first part of study, half of participants were instructed to read an article from Consumer Report telling consumers the important criteria to evaluate the quality of organic soy milk, while the other half of participants read an article with approximately same length related to the criteria for judging projectors. Participants in the high knowledge condition were then asked to answer a few questions subsequently including whether the article helped them judge the organic soy milk on one scale anchored by 1 and 7 (barely enhance/largely enhance), and whether the article was helpful in evaluating organic soy milk on one scale anchored by 1 and 7 (not helpful at all/very helpful). Participants in the low knowledge condition, answered some questions related to the projector article.

In the second part of the study, participants were instructed to view three ads and indicate their evaluations toward the advertised products. The first ad was for a fictitious supermarket, "PN Supermarket", the second ad was a filler ad, and the third ad was the target ad for a

fictitious organic soy milk, “Giuma”, endorsed by an irrelevant/likable celebrity. In the ad for “PN Supermarket”, a full-size picture of supermarket interior and a brand logo were presented. In the target ad for “Giuma”, an irrelevant/likable endorser, a picture of product, and a brand logo were presented. After seeing the target ad, participants were asked to evaluate the target product on three scales anchored by 1 and 7 (bad/good, negative/positive, and unfavorable/favorable). Next, participants were asked to indicate how confident they were when evaluating the target product on three scales anchored by 1 and 7 (unconfident/confident, uncertain/certain, and not assured/assured). Then, relevance of the celebrity endorser was measured on two scales anchored by 1 and 7 (not suitable/suitable and irrelevant/relevant), followed by measurement of the endorser’s likability on three scales anchored by 1 and 7 (dislikable/likable, negative/positive, and unfavorable/favorable). Besides, they were asked to list the criteria to evaluate organic shampoos.

Six weeks later, same participants were called back to participate in another experiment. To reduce the suspicion on the relation between the test and the retest stage, participants evaluated six ads (instead of three ads) in the retest stage. The first three ads were the same for these two stages, except that participants were reminded of the potential biasing agent (i.e., endorser) by the first ad (PN Supermarket) which incorporated the following taglines: “You get what you pay for! People often pay for quality- irrelevant surcharge, such as pricy endorsers and exaggeratory in-store decoration. But in PN Spermarket, we save every penny for you. That’s why our price is so low. At PN Supermarket, you only pay for what you can take home!” After seeing the first ad, participants were asked to evaluate PN Supermarket and indicated whether they believed that consumers often paid unnecessary money when purchasing a product on a dichotomous scale (i.e., yes or no), and how they thought the influence of celebrity endorsement would be on their product assessments/perceptions on two scales anchored by -3 (making product evaluations/perceptions worse) and 3 (making product evaluations/perceptions better). Besides, before seeing the third target ad, participants were manipulated to have high involvement to process the target ad.

After viewing the target ad, participants evaluated the target product and indicated their confidence level on target judgments in the same way as in the test stage. Then, they continued to view and evaluate the remaining three filter ads. In the end, participants finished the manipulation checks same as in the test stage; besides, they were asked to list the criteria to evaluate organic soy milk. Then, they were debriefed and thanked. No one identified the study purpose in the open-end suspicion probe.

GENERAL DISCUSSION

In consumer research literature, even though it is a more and more widespread, recognized phenomenon that consumers may spontaneously correct for biases in their product judgments, little research has investigated consumers' attitudinal correction, not to mention the extent of such correction. The current study, to our knowledge, is the first one examining the process for different magnitudes of attitudinal correction in consumer settings. Moreover, the present research attempts to further extend the boundary of correction research by associating some idiosyncratic (e.g., objective product knowledge) factor with the extent to which the initial product judgment is corrected. Our findings also suggest several avenues for future research. There may be other factors which can have an impact on attitude confidence. It has been found that attitudes based on high levels of elaboration are generally thought to be more resistant (i.e., to change less) (Wegener, Petty, Smoak, and Fabrigar 2004). Recent research (Barden and Petty 2008) further found that "perception" of the amount of elaboration might be one mediator for the effect of the actual amount of elaboration on attitude certainty (i.e., "thoughtfulness heuristic"). The effects of these other variables on attitude confidence and thereafter on correction extent await future research.

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107年度專題研究計畫成果彙整表

計畫主持人：蕭中強		計畫編號：107-2410-H-003-030-			
計畫名稱：雙重處理模型和修正基底模型的整合性框架研究：論證診斷性的調節作用					
成果項目		量化	單位	質化 (說明：各成果項目請附佐證資料或細項說明，如期刊名稱、年份、卷期、起訖頁數、證號...等)	
國內	學術性論文	期刊論文	0	篇	
		研討會論文	0		
		專書	0	本	
		專書論文	0	章	
		技術報告	0	篇	
		其他	0	篇	
國外	學術性論文	期刊論文	1	篇	Part of conceptualization ideas of theory based correction model have been incorporated in the following publication:Chien, Yi-Wen, Chung-Chiang Hsiao, Duane Wegener, and Richard Petty (2019), "Setting aside Mood-biased Thoughts and Judgment. Theory-based Bias Correction," Internal Journal of Social Psychology, 34, 623-651.
		研討會論文	0		
		專書	0	本	
		專書論文	0	章	
		技術報告	0	篇	
		其他	0	篇	
參與計畫人力	本國籍	大專生	0	人次	Students learned how to conduct academic research in a variety of aspects, including literature review, pretest questionnaire design, pretest data collection, pretest data analysis, main experiment design, data collection, and data analysis.
		碩士生	2		
		博士生	0		
		博士級研究人員	0		
		專任人員	0		
	非本國籍	大專生	0		
		碩士生	0		
		博士生	0		

	博士級研究人員	0	
	專任人員	0	
<p style="text-align: center;">其他成果</p> <p>(無法以量化表達之成果如辦理學術活動、獲得獎項、重要國際合作、研究成果國際影響力及其他協助產業技術發展之具體效益事項等，請以文字敘述填列。)</p>			