

ABSTRACT

Two distinctive but inter-related modes of thought, conscious and unconscious thought (i.e., CT & UT), have been identified for a long time. But what has been accompanying such recognition is a strong bias toward rational thought in terms of theorization and research. The rational choice theory has dominated the field of decision making for several decades. Recently, social psychologists proposed a theory of unconscious thought (UTT) with six principles supported by ample experimental evidence (e.g., Dijksterhuis et al., 2006). The present research aimed at investigating the roles of conscious and unconscious thought in complex decision making and some possible moderators of the unconscious thought effect (UTE, i.e., performance under the guidance of UT is better than that under the guidance of CT.) through a series of experiments on decision making.

In Chapter 2, Experiment 1 using the deliberation–without-attention paradigm replicated some previous findings surrounding the relations among thought mode (conscious vs. unconscious), complexity of the decision, and quality of the decision. The participants whose attention was distracted for some time (i.e., the unconscious thinkers) performed well in both simple and complex decisions whereas the participants whose attention was focused on the choices without distraction (i.e., the conscious thinkers) performed well in simple decisions but poorly in complex

decisions. However, for complex decisions, an expected significant difference between the unconscious and conscious conditions was not obtained, implying that there could be some UTE moderators. The possible moderating effect of decision complexity on quality of decision was investigated in Experiment 2 by increasing the numbers of attributes (and thus complexity) associated with the available options.

Chapter 3 investigated whether the unconscious effect would vary as a function of thought processing time (Experiment 3), and the reasons behind (Experiment 4). The results showed that given longer thought processing times, the unconscious thinkers outperformed the conscious thinkers. It implied that thought processing time was one of the possible UTE moderators. Given longer thought processing times, the conscious thinkers' attention was distracted to irrelevant information (i.e., noise) while the unconscious thinkers may gain more time to slowly integrate a large amount of information and weight the choices better (according to UTT principles). Hence a longer time hurts conscious thinkers but facilitates unconscious thinkers. This possibility was examined in Experiment 4.

Chapter 4 investigated whether expertise was one of the UTE moderators in complex decision making and the reasons behind. The results of Experiment 5 showed that the UTE varied as a function of expertise. Experiment 6 investigated whether the reason was because the experts were able to organize the relevant

information together into chunks which the non-experts were unable to do, and such a chunking effect benefited from the fact that UT could deal with a large amount of information and weight the information better compared to CT. Experiment 7 investigated another possibility, that is, experts' ability of filtering out irrelevant information benefits from UT which can weigh the option attributes better than CT.

The findings reported in Chapters 2, 3, and 4 therefore have indicated that unconscious and conscious thought both play important roles in different situations in decision making. Conscious thinkers perform well in simple decision but poorly in complex decision, whereas unconscious thinkers maintain good performance in both simple and complex decisions, or even sometimes better in complex ones. The UTE is not always strong in complex decision making. More moderators such as complexity of task, thought processing time, and expertise should be considered in order to make a good choice in complex decision making.

摘要

意識思維和無意識思維，這兩個既不同的但又相互關聯的思維模式，已存在了很長時間。但是，一直伴隨這種認識的卻是對理性思維在理論和研究方面的很深的偏見。理性選擇理論佔據了決策領域的主導地位幾十年。最近，社會心理學家在大量的實驗證據支持的基礎上，提出了一個無意識思維理論（UTT）及其六項原則（例如，Dijksterhuis 等，2006）。本研究旨在通過一系列決策實驗，探討意識思維和無意識思維在複雜的決策中所起的作用和一些可能存在的無意識思維效應（也就是無意識思維指導下的行為顯著優於意識思維指導下的行為，簡稱 UTE）的調節變數。

在第二章中，實驗一重複前人研究，研究思維模式（有意識思維與無意識思維），決策複雜性，和決策質量之間的關係。注意力被轉移了一段時間的實驗參與者（即無意識思考者）在簡單和複雜的兩種程度的決策中都表現出色，而注意力都集中在思考選項的參與者（即意識思考者）在作簡單決策中表現不錯，但在作複雜的決策時表現不佳。然而，在複雜決策中，在無意識思維和有意識思維的兩種條件下沒有獲取預期的顯著效應，這意味著可能會有一些 UTE 的調節變數。實驗二通過增加決策中選項的屬性數目（從而增加複雜性）來探討決策複雜性對決策質量調節作用。

第三章探討 UTE 是否會因思維處理時間的變化而變化（實驗 3），及其變化的原因（實驗 4）。結果表明，在有較長的思考時間時，無意識思考者明顯做

得比即意識思考者好。這意味著，思維處理時間是其中一個 **UTE** 調節變數。如果給予較長的思維時間，意識思考者的注意力就將被轉移到一些跟選擇不相關的資訊（即噪音，干擾），而無意識思考者可能從而獲得更多的時間來慢慢整合大量的資訊和更好地衡量每條資訊的重要性（**UTT** 原則）。因此，較長的思維處理時間不利於意識思考者，但有利於無意識思考者。這種可能性在實驗 4 進行了探討。

第四章考查是否專業知識是另一個複雜決策中 **UTE** 的調節變數，及其背後的原因。實驗 5 結果表明，**UTE** 因專業知識程度變化而變化。實驗 6 調查其原因是否是因為專家們能夠組織相關的資訊並且匯集成塊，而非專家不能做到，這種“組塊效應”獲益於無意識能夠處理大量的資訊和衡量每條資訊的功能。實驗 7 研究另一種可能性，那就是專家過濾掉無關資訊的能力，獲益於無意識可以較好地衡量屬性的功能。

綜合第 2，3 和 4 章的研究結果報告可以看出，意識思維和無意識思維在複雜決策的不同情況下都起著重要的作用。意識思維可以令思考者在簡單決策任務中能夠做出較好的決策，但在複雜決策中表現很差，而無意識思考者在無論簡單還是複雜的決策任務中都保持較好的或者表現出更好的決策能力。這樣看來，複雜的決策中的 **UTE** 並不總是很強。人在無意識思維指導下進行複雜的決策時應考慮更多的影響因素（即 **UTE** 調節變數），例如任務複雜性，思維處理時間和專業知識程度等，從而作出一個更好的決策。