

## Appendix A Task Instruction of Experiment One (in Chinese)

一、本實驗中您將參與一場選牌遊戲，這場遊戲有數回合。然而您事先無法知道總共有幾回合，因此請您持續玩牌直到電腦停止，結束本實驗。

二、遊戲一開始您會獲得 2000 元資金，而遊戲結束時會結算您總共贏多少錢或輸多少錢。

三、實驗程序如下：

- 1) 等下玩牌時，螢幕上會呈現 A、B、C、D 四副牌。
- 2) 在每一回合中，您必須從四副牌裡選擇其中任一副翻選。
- 3) 接著電腦會告知您本回合結果，符號-/+代表輸/贏，而數字代表您輸贏的金額。有時候當您選牌後，電腦除了會告訴您贏多少錢，也會告訴您同時輸了多少錢。舉例而言，若同時出現+500 和-10，代表您贏 500 元，並同時輸 10 元。
- 4) 之後電腦會出現您從遊戲開始至今的「累積金額」。

四、遊戲注意事項：

- 1) 每一回合您都可以隨意選擇其中任一副牌。
- 2) 在您選牌之後，您所選擇的牌顏色會轉變為紅色或黑色，但牌的顏色和輸贏無關係。
- 3) 每副牌都會讓您輸錢，並且輸贏規則已經事先設定，因此電腦並不是讓您隨機輸錢。您可以找到其中規則，儘量少選擇讓你輸較多的壞牌，已達到最高的獲利。
- 4) 現在請您幫右手放在鍵盤“3”、“6”、“9”、“\*”上，並且此四按鍵也分別對應螢幕上 A、B、C、D 四副牌。正式實驗開始前會有選牌對應的練習題，若都沒有問題才開始正式實驗。

## Appendix B Task Instruction of Experiment Two (in Chinese)

一、您將參與一場選牌遊戲。遊戲一開始，您會獲得 2000 元的資金，而遊戲結束時，電腦會結算您總共贏多少錢或輸多少錢。本遊戲的目的，是希望您能在遊戲中盡可能地贏錢。

二、本遊戲有數回合，然而您事先無法知道總共有幾回合。因此，請您持續玩牌至電腦結束本遊戲。

三、每一回合的程序如下：

- 1) 每一回合開始時，螢幕上會出現 A, B, C, D 四副牌。此時，您可以開始思考這一回合想選哪一副牌來翻。
- 2) 隔一段時間後，電腦會發出「叮」一聲，表示您可以開始選牌了。請在聽到「叮」聲後，從這四副牌中任選一副來翻選。
- 3) 接下來，電腦會告訴您此次選牌的結果。符號「+」或「—」表示您選的這張牌讓您贏錢還是輸錢，而符號後面的金額則是表示您贏錢或輸錢的金額。注意！有些時候，電腦會同時讓你贏錢與輸錢。例如「+500, -200」表示您此回合贏了 300 元。
- 4) 最後，電腦會告訴您，此次選牌之後，您還剩下多少資金。

四、遊戲注意事項：

- 1) 每一回合您都可以隨意選擇其中任一副牌來翻選。
- 2) 在您看到選牌結果的同時（即贏多少錢或輸多少錢），您所選擇牌的顏色會轉為紅色或黑色。不過，牌的顏色與輸贏結果無關。
- 3) 此遊戲中，電腦不會隨機讓你輸、贏錢。每張牌的輸、贏錢金額在遊戲一開始時即已決定。
- 4) A, B, C, D 四副牌中，某些牌會讓您輸得較多，某些牌會讓您贏得較多。因此，多選「會讓你贏得多的牌」，或少選「會讓您輸得多的牌」，則會讓你最

終贏得較多的錢。

5) 本遊戲的目的，是希望您能在遊戲最終盡可能地贏錢。如果您發現無法贏錢，也請您盡可能地不要輸錢。

五、正式實驗開始之前，會先進行幾題練習題，之後會有一段 3 分鐘的休息時間，最後再進行正式實驗。

## Vita

Kuan-Hua Chen received Bachelor's degree of Arts from Special Education Department at National Taiwan Normal University in 2003, and received Master's degree of Science from Department of Psychology, National Chengchi University in 2007. During the 3-years-studying for Master's degree, Kuan-Hua took RA position for 3 NSC-supported-research-projects. In addition, he also assisted to manage the ERP research lab in the Research Center for Mind, Brain, and Learning, and the Cognitive Lab in Psychology Department. His research interests are primarily on issues about emotion. Using electropsychological and psychophysiological measurements, He focuses on the questions of (a) How is emotion processed in the brain and in the body? And (b) how does emotion influence people's decision making?

### Research Interests

Physiological and neural correlates of emotions  
Emotion and decision making

### Education

**1999 - 2003 B.A.**

Special Education, National Taiwan Normal University, Taipei,  
Taiwan

**2004 - 2007 M.S.**

Experimental Psychology, National Chengchi University,  
Taipei, Taiwan

### Honors & Awards

**1999, 2001 - 2002**

-- Excellent Academic Achievement Scholarship, Shin Kong Life  
Scholarship Foundation, Taipei, Taiwan

**2003**

-- Research Creativity Award in 2003, National Science Council

**2004 (Fall), 2005 (Spring & Fall), 2006 (Spring)**

-- Excellent Academic Achievement Award, College of Science, National  
Chengchi University, Taipei, Taiwan

**2006 (Spring & Fall), 2007 (Spring)**

- Academic Publication Award in 2006, College of Science, National Chengchi University, Taipei, Taiwan

## **2007**

- Representative of graduate students of Psychology Department to attend 2007 Graduation Ceremony and to receive diploma

### **Academic Membership**

American Psychological Association  
Association for Psychological Science  
Cognitive Neuroscience Society  
Society for Neuroeconomics

### **Professional Experiences**

#### **Principle Investigator**

- 2002-2003 NSC supported independent research project “Exploring multiple intelligences in students who had dropped from school: An exploratory study” (Research Creativity Award)

#### **Research Assistant**

- 2003 NSC supported project “Developing curriculum of Naturalist Intelligence based on the model of Multiple Intelligence”
- 2004-2005 NSC supported project “Taiwanese's geographic categories and biases”
- 2005-2006 NSC supported project “The mechanisms of numeric anchoring effects”
- 2006-2007 NSC supported project “Creating a high quality learning, relaxing and sleeping environment through affective and attentive computing”

#### **Conference Participations**

- 2004-2006 Annual Meetings of Taiwanese (Chinese) Psychological Association, Taipei (2004), Chung Li (2005), Taipei (2006).
- 2006 Annual Meeting of American Psychological Association, New Orleans.
- 2007 Annual Meeting of Cognitive Neuroscience Society, New

York, NY.

Annual Meeting of Association for Psychological Science,  
DC.

Meetings for Neural Systems of Social Behavior, Austin, TX.

### **Teaching Assistant**

2007 “2007 Brain and Education Workshop” (for elementary and high school teachers), held by Graduate Institute of Learning and Instruction, National Central University

### **Professional Learning**

2005 “The 2nd Annual Summer Institute in Cognitive Neuroscience, Taiwan”, Aug 3- Aug7, held by Laboratories for Cognitive Neuroscience, National Yangming University

2006 “Workshop for Source Localization in ERP”, Nov 22- Nov 23, held by Institute of Linguistics, Academia Sinica, Taiwan

### **Laboratory Management**

2005-2006 Co-Manager of Cognitive Research Laboratory, Department of Psychology, National Chengchi University, Taipei, Taiwan

2006-2007 Manager of ERP Research Laboratory, Research Center for Mind, Brain, and Learning, National Chengchi University, Taipei, Taiwan

### **Others**

2002-2004 Voluntary counselor in Taipei City Counseling & Guidance Center of the China Youth Corps

2003-2004 Intern teacher in Municipal Jianguo High School, Taipei, Taiwan

### **Publications**

*Chen, K. H.* (2003). *Exploring multiple intelligences in students who had dropped from school: An exploratory study*. Unpublished manuscript. [In Chinese]

*Chen, K. H.* (2004). The construction and concept of naturalist intelligence.

**Conference Abstract & Posters**

- Chang, Y. F., Yen, N. S., Chung, H. K., & **Chen, K. H.** (2007, May). *The role of question type and knowledge in anchoring effect*. Poster presented at the 19th annual convention of the Association for Psychological Science, Washington, DC, USA.
- Chen, K. H.**, Yen, N. S., Chang, Y. C., Chen, P. T., & Liao, K. M. (2005, October). *Testing somatic marker hypothesis with manipulating suboptimal emotional stimuli*. Paper presented at the 44th Annual Meeting of the Chinese Psychology Association, Chung Li, Taiwan.
- Chen, K. H.**, Yen, N. S., Lai, Y. R., & Chang, Y. C. (2007, May). *Emotional picture related late positive potentials are observed in Taiwanese population*. Poster presented at the 2007 annual meeting of the Cognitive Neuroscience Society, New York, NY, USA.
- Chen, K. H.**, Yen, N. S., Liao, K. M., & Chang, Y. C. (2006, August). *Somatic marker hypothesis is not replicated with unconscious manipulations*. Poster presented at the 114th annual meeting of the American Psychological Association, New Orleans, LA, USA.
- Chiang, Noelle C. R., Yen, N. S., **Chen, K. H.**, & Chen, P. T. (2005, October). *Taiwanese's geographic categories and biases*. Paper presented at the 44th Annual Meeting of the Chinese Psychology Association, Chung Li, Taiwan.
- Chung, H. K., **Chen, K. H.**, Yen, N. S., & Chang, Y. F. (to be presented). *Testing the "Prominent deck B" phenomenon in Iowa Gambling Task*. Poster presented at the 46th annual meeting of the Taiwanese Psychology Association, Tainan, Taiwan.
- Chung, H. K., Yen, N. S., **Chen, K. H.**, Yen, T. H., & Hsiu, S. P. (to be presented). *Deck C and D are preferred even when expected values in the Iowa Gambling Task are controlled*. Poster presented at the 5th annual meeting of the Society for Neuroeconomics, Hull, MA, USA.
- Wang, C. C., Yen, N. S., Liao, K. M., **Chen, K. H.**, & Liu, T. L. (2006, May). *The effects of task difficulty and spatial ability on the Mozart effect*. Poster

presented at the 18th annual convention of the Association for Psychological Science, New York, NY, USA.

Yen, N. S., Chang, Y. F., Chen, L. T., & **Chen, K. H.** (2006, September). *Basic anchoring effect can not be replicated*. Poster presented at the 45th annual meeting of the Taiwanese Psychology Association, Taipei, Taiwan.

Yen, N. S., **Chen, K. H.**, Chung, H. K., & Wang, C. C. (2007, May). *Sound-evoked emotion related ERP is observed in P2, P3 and late slow-waves*. Poster presented at the 19th annual convention of the Association for Psychological Science, Washington, DC, USA.

Yen, N. S., **Chen, K. H.**, Lin, S. Y., & Chen, P. L. (2006, May). *Numeric anchoring effects at conscious and unconscious level*. Poster presented at the 18th annual convention of the Association for Psychological Science, New York, NY, USA.

Yen, N. S., **Chen, K. H.**, Wang, C. C., & Chang, Y. F. (2006, September). *Subliminal anchoring effect is not replicated with different questions being used*. Poster presented at the 45th annual meeting of the Taiwanese Psychology Association, Taipei, Taiwan.

Yen, N. S., Lai, Y. R., Chang, Y. F., Yeh, T. H., & **Chen, K. H.** (to be presented) *The effect of expectancy on feedback-related negativity*. Poster presented at the 5th annual meeting of the Society for Neuroeconomics, Hull, MA, USA.

Yen, N. S., Lai, Y. R., **Chen, K. H.**, Chung, H. K., & Yeh, T. Z. (2007, May). *The effect of the association strength between action and target on FRN and P300 in a guessing task*. Poster presented at the 2007 annual meeting of the Cognitive Neuroscience Society, New York, NY, USA.