Revisit “Prominent Deck B phenomenon” in the Iowa Gambling Task
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Introduction
From 1994 to 2008, Bechara et al. [1, 2] demonstrated that the Iowa gambling task (IGT) can successfully distinguish between normal decision makers and affective deficits. Furthermore, the IGT has been a standardized neuropsychological test for examining various psychiatric and neurological diseases [http://www3.parinc.com/products/product.aspx?Productid=IGT]. In the IGT, decks A and B were bad (final-outcome) decks and decks C and D defined as good (final-outcome) decks [Table 1]. In the most IGT-related studies, normal decision makers often preferred to choose the good decks C and D and avoid bad decks [Figure 1] and patients have the inverted choice pattern. However, there have a growing number of researchers demonstrated that normal decision makers prefer the bad deck B to the other three decks [1], including Bechara et al [2, 3]. Lin et al. [4] labeled this observable fact the “prominent deck B phenomenon”. Actually, this phenomenon directly challenged the basic findings of the Iowa gambling task for 1994.

Method
To further confirm the reproducibility of IGT in 1994, this study recruited 48 college students, including 24 males and 24 females to perform the original version of IGT this year. Each subject played the computer version [Figure 2] of IGT twice (200 trials) to confirm their preferences of decks in IGT.

Results and Discussion
This study indicated that most subjects preferred bad deck B to the other three decks confirming the findings of Bechara et al. for the year 2007 and 2008 [2, 3] [Figures 3, 4], but conflicting with the original findings in 1994 [1]. From a post-analytical perspective, deck B displayed high-frequency gain and considerable losses; namely during an average of ten trials, subjects experienced nine large gains ($100) and one massive loss ($-1250). The Iowa group considered that normal decision makers gradually hunch the internal rule. Restated, subjects progressively inhibit their preference for deck B after encountering a few large losses ($-1250). (In the original study of Bechara et al.) (1994), subjects inhibited their preferences for deck B after encountering two trials of huge loss in average; nonetheless in the study conducted by Bechara et al. during 2007 and 2008, normal decision makers were unable inhibit their preferences for deck B by encountering after encountering an average of three large losses. Namely, the controversial phenomenon is not only discovered by the other research groups, but also exists in Bechara et al. studies between 1994 and 2007.

Conclusion
The “prominent deck B phenomenon” truly existed in the IGT. The inconsistent findings between 1994 IGT and 2008 IGT should be able to be carefully explained by the Iowa group. Additionally, it is worth noting that using the IGT to be a psychiatric and neurological tool for patients, the psychiatrists, neurologists and psychologists should be very cautious in interpreting the IGT results before the “prominent deck B phenomenon” being reasonable explained.

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References