Reviewer’s report

Title: Are women better than men at multitasking?

Version: 2 Date: 23 January 2013

Reviewer: Wenfeng Chen

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Major Compulsory Revisions

1) The results are contrasting with the literatures and the authors have discussed Mantyla et al.’s study. But it remains unclear whether the women advantage in multitasking can be attributed general skills (e.g. switch abilities and strategies) or only specific to the tasks in current study, it is better to include other literatures to make a more profound conclusion.

For example, Buser and Peter (2012) found men handle forced switch multitasking relatively better than women, but the difference is not significant (p = 0.62); women are better at organizing their own schedule, but this difference is not significant either (p = 0.35). Judd et al. (2011) found male students were significantly more likely to task switch and multitask than female students in net environment.

I think the authors should elaborate more on the available diverse findings about the gender difference in multitasking.


2) Experiment 1: It is not convincing to exclude participants based on separate experimental conditions. Why not use the overall performance? Clearly the fact that there are more poor performance in incongruent task-switching condition or mixed condition must be due to greater difficulty in this condition. If selectively excluding these subjects and remaining the better subjects, will the new results reflect the task-switching difference? So a good justification should be given.

3) Experiment 2: Need some explanations on why women outperformance only in key search task. Why the conclusion for gender difference of multitasking can be only based on the performance difference in key search task? Although it is not statically significant, the result did provide some support on the fact that men outperform women on the arithmetic task, contrast with the authors’ claims. Furthermore, the subject number of Experiment 2 are far less than in Experiment 1. So a good explanations should be given.

4) Experiment 2: Give more details on the RT data, e.g. the unit. It seems the unit
of RT is second. If so, the total time for the three tasks is 508 (312+160+36) seconds for Male, 557 (341+180+36) seconds for Female. There is a gender difference, and the total time is greater than 480 seconds (8 minutes, as mentioned in the procedure). The paper would benefit if these details are clarified.

5) Although there were no effects of gender for the error rate, there was a trend for RT-ACC tradeoff between males and females, i.e., females made more errors while responded more quickly. It is important to know whether this tradeoff accounts for the gender difference in RT.

6) Page5: How are the incongruent/congruent trials defined in pure block? Please clarify how the task is implemented to form incongruent/congruent trials. How many switch/repeat trials? How the trials arranged? Are the number of task-switch trials and task-repeat trials balanced?

Minor Essential Revisions

1) Page4 Line2: was there age difference between gender? If yes, did it contribute to the gender difference?
2) Page 5 the last line: “two each for task-mixing” seems wrong.
3) Page6 line 3: “with people”; line11 “using a similar approach using ANOVA”
4) Page6 line12: is “pure block” average of shape block and filling block?
5) Page6 line4 and line 13: 763±10 vs. 762±10? Mistake?
6) Page6: why some analysis mentioned gender effect, other did not?
7) Page7: Experiment 2 was run in Hertfordshire University, why Research Ethics was approved by Leeds?
8) Page8: The agreement index of the scorers should be provided

Level of interest: An article of limited interest

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:

No competing interests