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Performance Improvement of Cognitive Tasks by using Self-observation

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Self-observation, as a means of introspection, has been highly valued. With the development of science and technology, the method of describing and observing human's body information quantitatively has been greatly developed. However, the traditional ways, which observe ourselves directly, are still remained at a relatively early stage. Previous studies had found that self-observation would be helpful for some motor performance, but whether self-observation can have the same effects in cognitive tasks is still unrevealed. This thesis will explore the relationship between the self-observation and the performance of cognitive tasks through two different acoustical stroop test.

In the first experiment, I tried to find the relationship between the self-observation and a cognitive task without body movements. Briefly speaking, I found that self-observation could improve the performances slightly if people made some mistakes, but on the whole, self-observation didn't improve either reaction speed or accuracy.

In the second experiment, I took some steps backward to import some body movements into the same cognitive task as the previous experiment. This change had improved the accuracy obviously in both the self-observation group and the control group, but it's hard to find any

difference between the performances of both groups. The self-observation group made quicker reaction and more mistakes during the early stage. In the late stage, the performance of both group converged at similar level.

During the second experiment, I asked the testers whether they could predict their accuracy right after the test session. It was found that the testers in self-observation group made much good performance on the prediction than the testers in control group. This might imply that self-observation could make more improvement in complex cognitive tasks rather than the simple stroop test.