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| **Conclusion**  To analyze the data that we had collected during a five-week period of 30 trials of running each individual mouse through the maze, we decided to use two methods. First, we entered the data into the Microsoft Excel program and created graphs to discern the difference between the control and variable groups� times in the maze and then looked at the raw numbers of the mice. Second, we conducted the ANOVA statistical test to further ensure that we analyzed our data correctly.  After charting the data in graphs (present in the Data section of our website), we decided that, indeed, we correctly predicted the results of our experiment: the variable group�s time did not decrease as fast as the control group�s times. In fact, the variable group�s times running through the maze often increased, showing that the effects of the violent sound does have detrimental effects on the memory of mice. We also looked at the raw numbers of each mouse�s times to view trends. By having five trials without either group being exposed to the violent sounds, we created a basis with which to compare further trials.  Though some mice�s times seemed to fluctuate freely in the maze, those mice in the control group continued to have random times throughout the rest of the experiment. However, in the variable group, the mice with the seemingly random times during the first five trials ended up steadily increasing their running times when listening to the violent sounds. The control mice that seemed to decrease their times in the maze in the first five trials, generally continued to decrease their times throughout the next 25 trials (for both maze configurations). One example is that a mouse went from running the maze in the first trial at a time of three minutes and twenty seconds to two minutes and twenty seconds in trial 20. On the other hand, the variable mice that seemed to decrease their times in the maze the first five trials, generally increased their times when exposed to the violent sounds (again for both maze configurations). An example of this is one mouse going from fifteen seconds in the first trial to around five minutes in the last few trials of the first maze configuration. Because one mouse�s time was around five minutes when first starting out in the maze and another�s time was under a minute, it was important to compare the mice to themselves to look for time trends.  One factor that worried us was that we were not testing the memory of the mice and that the times were completely random. To make sure that this was not the case, we used the statistical ANOVA test under the recommendations of Amador�s statistics teacher, Mrs. Nash, to rule out chance alone by comparing the variable and control group as a whole. The ANOVA test analyzes data from more than two samples and compares them. The test gives the tester a p-value, which indicates how accurate the data is. After conducting the ANOVA test, the results suggested that there is a significant difference between the maze times of the control and variable groups as a whole, as our p-value was approximately zero. The p-value zero signifies that the difference in times was the result of some other factor besides chance, as the difference in the times would occur zero out of one hundred times when left to chance alone. In our case, violent sound derived from media productions was the factor that influenced the discrepancy in each group�s maze times.  Though we could have run into a problem if the results of comparing the control group and variable group as a whole had not coincided with the results of comparing each individual mouse to itself, the two tests gave us the same results. However, a few factors exist that could have tainted our results. The death of some of our mice in the beginning of our experiment was an unexpected occurrence, though we hope to have prevented any problems by splitting the older mice with the younger mice between the control and variable groups. In addition, we only had groups of five and four mice each, and the statistical ANOVA test relies on the fact that large test groups exist. Larger specimen groups could produce more accurate results. In addition, two of our mice were very fat, though we split the two into the different groups. Also, we used only one tape of violent sound clips.  Though we tried to vary the types of sounds used as much as possible, we could not possibly use the wide range of sounds that the average person is exposed to. Also, we are relying on the fact that the mice were motivated to move through the maze. Luckily, the results of the ANOVA test imply that chance did not play a part in our experiment, suggesting the mice were motivated.  Though we recognize that there are a few outstanding factors that could have played a part in our results, we conclude that the violent sounds the variable group was subjected to did have a negative impact on their memory. Each of the mice in the variable group showed an increase in the times through the maze; while the control group did not show an increase, and three of the four control mice decreased their times. If it is true, as our research has suggested, that the behavior of mice can be compared to the behavior of humans, then it is highly possible that the same violent sounds that the mice were exposed to could negatively affect human memory. In addition to the statistical analysis of our data, we made a few basic observations that suggested the variable mice were disturbed by the sounds that they heard such as backing into corners, shaking, and whipping their tail. Considering the fact that we took many of the sound clips from the CD collections of our friends, from radio, and from box office smashes, maybe some people want to rethink the choices they make about entertainment!  [**Recommendations**](http://docs.google.com/recomm.html)  [[Home](http://docs.google.com/home.html)][[Introduction](http://docs.google.com/introduction.html)][[Hypothesis](http://docs.google.com/hypothesis.html)][[Procedure](http://docs.google.com/procedure.html)][[Data](http://docs.google.com/data.html)][[Conclusions](http://docs.google.com/conclusions.html)][[Bilio/Links](http://docs.google.com/biblio.html)]  [[2001 Projects](http://docs.google.com/index.html)][[2000 Projects](http://docs.google.com/AP2000/index.html)][[1999 Projects](http://docs.google.com/AP99/index.html)][[1998 Projects](http://docs.google.com/AP98/index.html)] |