



**CALIFORNIA STATE SCIENCE FAIR  
2009 PROJECT SUMMARY**

<b>Name(s)</b> <b>April Jianto; Tzu-Ting Wu</b>	<b>Project Number</b> <b>S1407</b>
<b>Project Title</b> <b>Dancing to the Music: Lefty Canines Groove to Tunes</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The purpose of our project was to find out if dogs, like humans, have a paw preference for their daily activities; and if dogs do indeed have a paw preference, does it correlate to their reactions to music just like humans? Human hand dominance indicates which side of their brain is more developed. Right-hand dominance leads to a more developed left side brain and vice versa. The right brain controls the artistic and creative part while the left brain controls logic and reason. Therefore, right-brain-dominant people are more likely to be musicians and artists. We wanted to see if this was also true with dogs.</p> <p><b>Methods/Materials</b> We acquired our data by distributing surveys/release forms to the owners regarding their dog. Then for each dog, a series of three tests were each performed five times. The first was a handshake test: We asked the dog for a handshake. The second was a tape test: A small piece of masking tape was stuck on the dog's nose. The last test conducted was a treat test where a piece of a dog treat was placed underneath a low-laying piece of furniture. Then after all these tests to figure out the dog's paw preference, the music test was initiated. Two song genres were chosen-- pop and classical and we observed what reactions the dog had to them.</p> <p><b>Results</b> From our data, the results yielded were that for the first test, the handshake test, 16 dogs (53%) of dogs used their right paw; the Tape Test had 22 dogs (73%) use right paw; and the Treat Test had 12 dogs (40%) use right paw. Through the second part of our experiment, the Music Test-- having dogs listen to two different genres of music-- we had 5 left pawed dogs react to the classical music and 6 left pawed dogs react to the pop music.</p> <p><b>Conclusions/Discussion</b> Out of the thirty dogs tested, for each of our tests, more than 50% of the dogs showed right paw preference indicating that our hypothesis is correct. Left pawed, or right brained dominant dogs, do show a greater response to music compared to the right pawed, or left brain dominant dogs. This proved that dogs, like humans, have hemispheric lateralized behavior that matches the theory of lateralization of function of brains. The information gained may help in selection of service dogs or hearing dogs, as left brained dogs with better logic may respond to physical commands better while right brained dogs may respond to sounds better to alert their partner.</p>	
<b>Summary Statement</b> Our project was to determine a dog's paw preference, its correlation to dog's brain dominance, and then whether or not it effected their musical reactions.	
<b>Help Received</b> Borrowing friends' dogs to use as our subjects.	