Experiment

Since the point of my project is to find out the level of communication that humpback whales use, I tried to design an experiment that would support a specific level of communication. My project has two parts, a survey and an experiment.

My survey was designed to get the opinions of experts in this field who have spent time and field work to try to solve the mystery of whale communication. My hopes were that first-hand experience could help me in drawing conclusions, in conjunction with my experiment. The questions I asked were:

1) Do you believe that communication between humpback whales is philosophical (sounds as letters use to form words), essential (sound signifies behavior or reaction), or a combination of both?

? Philosophical

? Essential

? Both

2) Why do you believe this?

3) What do you think is the function of simple sounds? Why?

4) What do you think is the function of complex sounds? Why?

5) What do you think is the function of humpback whale songs? Why?

6) What do you think is the function of non-vocal communication? Why?

7) Why do you think patterns in humpback whale songs are repeated?

8) How does human songs relate/compare/contrast to that of the humpback whales?

9) How does human language relate/compare/contrast to that of the humpback whales?

10) What is the biggest question left to be solved about humpback whale communication?

11) How did you form your opinions; experimentation, literature, or other?

? Opinions

? Experimentation

? Other \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

12) Anything else you may like to add?

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In my experiment I wanted to compare humpback whale song patterns and structure to that of humans. I figured that if they were similar in pattern and structure then that would support a philosophical level of communication, and if it didn't, then if would support an essential level of communications. In order to compare them, I needed to compare their frequencies over time.

For my experiment I needed sonagrams and recordings of the songs I wanted to use. I was able to gain access to the Signalyze software program from St. Olaf College, which is a computer program that reads a song and prints out the frequencies and relative loudness of a frequency at a particular point of time in the song.

My control "song " was silence. The variables were sonagrams of various types of human music, including pop, reggae, alternative rock, and classical, which I compared with recordings of humpback whale songs.

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