**Chapter 3: Pavlovian Conditioning Is an Inference Task**

**Web Exercise**

Correlation and Causation.

Correlation is when two variables are related to each other. Many times individuals assume that because two variables are related that one variable caused the other variable; however, this is not always true. Correlation does not mean causation.

Go to <http://rationalwiki.org/wiki/Correlation_does_not_imply_causation>. Read over the sections and then answer the following questions.

1. What is a ‘confounding variable’?
2. In the following scenario discuss what the two variables are and whether correlation causes causation. If it does not, then what is the third, or confounding, variable that is causing the correlation.

Each summer at the beach there seems to be a rise in ice cream sales at the roadside food truck. Also, at the beach there are more cases of people drowning. It appears that there is a positive correlation between ice cream sales and the number of drownings.

Variable 1:

Variable 2:

Correlation vs. causation?

The answers are:

Variable 1: ice cream sales

Variable 2: drownings

Correlation vs. causation? Correlation but not causation. There is a third or confounding variable coming into play, which is the heat. As the temperature rises, more people are buying ice cream. Also, as the temperature rises, more people are going to swim at the beach and therefore, there is a greater chance of people drowning.