# 20.16: Shaking and Stirring Martinis

**Learning Objectives**

- To test the difference between shaken and stirred martinis

## Research conducted by

This is just made up data.

## Case study prepared by

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## Overview

This is an example to illustrate hypothesis testing and the binomial distribution. The statistician R. Fisher explained the concept of hypothesis testing with a story of a lady tasting tea. Here is an example based on James Bond who insisted that Martinis should be shaken rather than stirred. In this hypothetical experiment to determine whether Mr. Bond could tell the difference between a shaken and a stirred martini, we gave Mr. Bond a series of 16 taste tests. In each test, we flipped a fair coin to determine whether to stir or shake the martini. Then we presented the martini to Mr. Bond and asked him to decide whether it was shaken or stirred. Mr. Bond was correct on $13/16$ trials.

## Questions to Answer

Does Mr. Bond have the ability to tell the difference between a Martini that is shaken and one that is stirred?

## Design Issues

This is only a made-up study.

## Descriptions of Variables

Table 20.16.1: Description of Variables

| Variable | Description |
|---|---|
| Y | 0 = incorrect, 1 = correct |

## Data Files

Martini.xls

## Links

The Lady Tasting Tea

## References


- Salsburg, D. (2002) The Lady Tasting Tea: How Statistics Revolutionized Science in the Twentieth Century. Owl Books