HANDOUT 1:
QUANTIFYING THE QUALITATIVE

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EXERCISE: Pick one of the following questions and go through the modeling flowchart, preferably with a friend or two.

1. You are the advisor to the benevolent dictator of the kindgom of Bezerkeley, who wants to declare a tax on soda in the kingdom. Determine the optimal taxation level (in cents/ounce) to recommend, keeping in mind 0 cents/per ounce is a possible recommendation.

2. *Quidditch* is a game played on broomsticks, popular in wizarding colleges throughout the world. Determine the best Quidditch strategy for a given profile of opposing team.

3. (MCM Problem B, 2005) Make a model to help you determine the optimal number of tollbooths to deploy in a barrier-toll plaza. Explicitly consider the scenario where there is exactly one tollbooth per incoming travel lane. Under what conditions is this more or less effective than the current practice?

4. Cows, sheep, and other ruminants produce methane in their stomachs as they digest, eventually releasing this greenhouse through one end or the other. Determine the annual global livestock contribution to greenhouse gas emmissions and propose a mitigation strategy.

5. **Write your own awesome question here!**