Title Options:

1. Decomposing Humor: An Iterative Process for Generating News Satire
2. Decomposing Humor: Crowdsourced Problem Solving
3. Crowd-Created Humor: Decomposing Creative Problem Solving
4. Crowd-Created Humor: Creativity and Problem Solving

Abstract:

* A longstanding challenge in crowdsourcing is to **decompose hard problems** into steps that can easily be solved.
* One problem that does not decompose easily is generating **humor**. Humor requires creative and intelligence. It is hard enough to be considered long out of reach for machine intelligence.
* However, comedians often describe humor as **problem-solving**. We take the view of humor as problem-solving and present a process than the crowd or individuals can use to systemically generate high-quality humor.
* To pose humor as problem solving, we define the inputs and output of the process, we have an iterative process with rounds of flare-and-focus, as well as evaluation until the goal is reached.
* The key steps is knowledge **synthesis** in the focus stage where we employ **design patterns** and **requirements** for humor
* Our results are X.
* We discuss how to generalize generating humor to other forms of problem solving.

Introduction:

* A longstanding challenge in crowdsourcing is to **decompose hard problems** into steps that can easily be solved.
  + The benefit of task decomposition is that we can more easily **combine multiple people** if they have independent subtasks.
  + Each **person would be able to do more** than they would be able to do on their own.
  + Additionally, if a problem were hard enough, a decomposition is valuable to have even one person working alone do what they would not be able to do.
* **Some tasks decompose trivially**.
  + Labeling 1 million images parallelizes easily, and the crowd is used for sheer volume of participation.
  + Decomposing a task can also help insure quality. Find-Fix-Verify.
  + Some of the more interesting crowdsourcing problems involve decomposing problems where different perspectives are necessary such as deciphering blurry text.
* **Humor does not decompose easily. It requires creativity and intelligence.** 
  + Humor is hard to define. Philosophers from Plato in 500BC to Dennett in 2013 have tried to define humor.
  + Humor is subjective – not everybody finds the same things funny, so how can it be evaluated? How can we think of it as problem solving if the goal is subjective?
  + One reason we think humor requires intelligence is that it involves synthesizing knowledge. How can that be done automatically?
* Our solution is to view humor as problem solving
  + This idea comes from comedians’ advice on writing humor.
  + Input, output, and a path between them.
  + Problem solving literature for techniques and apply them to this domain.
  + Humor is a great toy domain for problem solving. Short, in theory anyone can do it. Only requires reading, writing, thinking ability. Many examples, for something creative and subjective it is relatively easy to evaluate – ask people if they find it funny.
  + Our process focuses on a narrow domain of humor: News Satire in the form of Man-on-the-Street style responses to real news headline. We discuss in what ways we expect our process to generalize to other forms of humor and to general problem solving.
* We build on the brainstorming literature. The crowdsourcing literature. The problem-solving literature?
* In this paper we present a decomposition of the humor generation progress that humans with general writing ability, but no humor experience can systematically follow. We compare their humor to The Onion, and find it is N% as funny. We find that combining ideas from various members of the crowd improves the humor quality by M%.

Contributions:

* Model humor as problem solving.
* Decomposition of a creative problem solving task into a process that one or multiple people can follow
* A computational model for generating one specific kind of humor. Follows an iterative flare-and-focus pattern with 5 kinds of sub-steps:
  + Decomposition, Analysis, Expansion, Synthesis, and Combination
* Allow the crowd to perform information **synthesis** using **design patterns**.
* Users are N% as funny as The Onion
* Users are M% more funny with the system than without it
* Users are K% more funny when combined, than when alone