**Emotional Impact**:

Decomposing the **Process** of Generating **Humor**

**Problem**

People live their lives by stories. People respond to stories not only because of the contain information but because they have emotional impact. Creating emotional impact is a grand challenge. Popular opinion thinks that writing a book or movie or a song with emotional impact requires the magic of inspiration. However, professionals know that it is not magic, that there is a process. However, although there is a process, it is very hard to articulate at a level that novices can follow it. Discovering that process will help novices become creative experts, and will help us scientifically understand emotional impact.

**Solution**

Generating emotional impact is a complex problem: it takes different forms across many different disciplines, it is hard to isolate emotional impact from content, and often people disagree about what has emotional impact and what doesn’t. Our solution is to start by isolating one domain of emotional impact that is easiest to study. The special domain of emotional impact is humor. Humor is short so we can iterate on it quickly, and it has obvious emotional impact of laughter which we can reliably evaluate.

To create the process, we mine the humor literature: philosophical theories from Plato to Daniel Dennet and humorists advice from Bob Hope to Judd Apatow. With these theories, we take a novel approach: instead of deciding who is right and who is wrong, we assume that they all have validity, that every strategy is sometimes useful, but that no strategy is completely correct. Our challenge is to tit all the advice together into a process. We test that process against real people, and evaluate the outcomes.

**Goal**

Our goal is to decompose the act of creating emotion impact into a process novices can experience in a website in under 10 minutes, and eventually and perform as well as experts. We start with humor because it is simple, and then generalize to more challenging domains, such as writing a novel, writing closing arguments in legal cases, journalism, and diplomacy.

**Related Work*;***

**Crowdsourcing** research has effectively decomposed problems into sub-problems so that people can collaborate on them better. However, no project has ever decomposed something has hard or subjective as generating humor. **Creativity tools** have shown that human creative abilities can be augmented with software in domains such as visual arts, music. Often, they don’t decompose the process fully but rather focus on enhancing one aspect of it.**Natural Language Processing (NLP**) has scientifically shown that emotion plays a strong impact in communication. However, thus far computers alone cannot detect it or generate emotional impact. We need a tool like crowdsourcing to fill in the gaps of what computers cannot yet do.

**The literature on humor proposes** a vast number of theories on what humor is and how to produce it. There is some general agreement, for example, that jokes tend to violate our expectation. But there is also dissent, such as not all things that violate our expectations are funny. There is lot of wisdom, but no one has synthesized it into a process yet.

**Progress**

In the domain of humor, we selected a specific subdomain: we wanted to write funny man-on-the-street style responses to read news headlines as appears in the American Voices section of The Onion, a popluar news satire website..

Example Headline: “Uber Adding Panic Button for Chicago Passengers”

Example Response: “It’s nice to know that Uber is willing to do everything it can to protect its customers short of properly screening its drivers.”

Based on the humor literature, we have been able to decompose humor generation process into 7 top-level modules. Here is a simple example of three of those models applied to the Uber headline:

*[Illustration of the 3 modules]*

* Identify Nouns in the Headline: Uber, Panic Button, Passenger, Chicago
* Emotional valence of nouns and a reason
  + Panic Button (Good) – will help keep you safe
  + Panic Button (Bad) – implies there is something that might cause you to panic.
* Identify a flaw: Contradiction: Panic button good and bad.
* Express the flaw in an unexpected way*: a reversal, positive tone (“it’s nice…”, negative comment (“[Uber doesn’t] properly screening its driver”).*

So far, our responses are 37% as funny as The Onion. The Onion is a high bar, and we can improve. For some headlines, we were rated funnier than the Onion.

**Social Impact**

One of the most common and detrimental mistakes learners make is to focus on output rather than process. This results in discouragement and failure. Until a learner experiences the power of following the process first hand, their instinct is to wait for inspiration. We don’t teach process because it is hard to make it transparent. We aim to provide learners examples of a process in a creative, fun, and relatively short. We believe learners can generalize lesson of process to many domains of their life.

**Broader Impact**

If we can generalize emotional impact from humor to novels, then we will have strong evidence that it can also be generalize to law, journalism, negotiation and even diplomacy. Recordings of Kennedy’s cabinet during Cuban Misile Crisis show that to avoid nuclear war, McNamara had be able to suggest the idea of a blockade *without sounding weak*. Emotional impact has global impact.

**Proposed Plan and Outcomes**

We propose to expand on the humor work and build a web site for people to learn the process and collaborate on jokes. Our target is to produce 1,000 jokes, teach the process to 1,000 people and to beat the Onion on funniness.

We will generalize the process of creating emotional impact to the new domain of writing a novel. Our output will be two full-length novels of different genres: mystery and romance that conform to the emotional impact expected of that genre. Our target is 1000 readers. Our stretch goal is to have the book published by an established publisher within the genre.

**Conclusion**

Creating emotional impact is hard, but we can do it by discovering a transparent process for it that anybody can complete. Our current work has used humor as a domain to study emotional impact and can be extended to other domains where emotional impact is import such as law, negotiation and novels.

**Budget**

**References**