*The following is an excerpt from my preliminary exam in September, 2012. Republished here because it speaks to my thinking and research interests, and was fun to write and is hopefully fun to read.*

**Question 2.** A DC campaign consultant, an engineer from Facebook, and a political science professor walk into a bar in Georgetown. The skeptical old bartender says 'I'm hearing a lot about how the Internet is going to revolutionize political discourse. But I'm watching the TV up there all day long and it all looks the same to me as the good old Nixon days. Can you guys explain to me what you think is happening?' What the bartender doesn't know, is that the three customers started drinking much earlier in the day and are already toasted. So, they are not going to argue about the present. They are going to argue about their hopeful visions of the future — what they hope the most meaningful consequences of technology in political discourse are likely to be over the next decade. In fact, they decide they are going to make it a betting game. Each drinker will make one big claim, explain how and why it is going to evolve over the next few years, and -- just as importantly -- put on the table an observable and falsifiable prediction that reflects the logic of the claim. What do they say? Where do their claims overlap? Who do you think will win the bet and why?

A D.C. campaign consultant, an engineer from Facebook, and a political science professor walk into a bar in Georgetown. The consultant strides in confidently and takes a seat at the bar, while the engineer and professor shuffle in meekly behind him. At 22, the engineer has been feeling overwhelmed by this first trip to D.C., having neglected to bring anything to wear other than jeans and gray hoodies and being totally caught off-guard by the voracious way D.C. residents seem to consume alcohol during happy hour. At this point, he is unsurprised to find as he approaches the bar that the consultant has already ordered. But all in all, he's feeling pretty good after he took that shot of bourbon the consultant put in front of him at the last bar. It probably wouldn't hurt to have another.

The professor, too, is feeling good after a few drinks. But he's always in a good mood when he returns to the nation's capital in the Spring. The freshly-bloomed pink and white cherry blossoms express a purity and a gentle hope for the nation's democracy that he has always harbored deep down underneath all the layers of analytical discipline.

As the professor and engineer sit down next to the consultant, the old, hunched-over

bartender takes notice of the Facebook logo printed on the engineer's sweatshirt and says gruffly, "You know, I'm always hearing about how the Internet is going to 'revolutionize' political discourse and yet I watch TV and it all looks the same to me as the good old Nixon days. When's anything going to change?"

"Who's Nixon?" asks the engineer. "I think the first problem is that you're watching CNN. No one watches CNN and by the way, the revolution is happening on the Internet, not on TV. Do you have Facebook?"

"No, I don't bother with all that tweet crap," the bartender says. "Why would I want to know when someone's taking a dump? That's all people do on those social networks."

"Knowing when someone is taking a dump is precisely the point, though," the professor chimes in. "Much like the American Revolution itself, the Internet has brought respectability and even dominance to ordinary people and the ordinary things they do. It's made every person, and their every moment, equal. Computers can't really tell a poop tweet from a Descartian Meditation on First Philosophy. The possibilities are endless for us to understand, truly, what makes our democracy tick because now we have access to everything people are doing and thinking, all the time. There's a place for every voice, and there's space for us to collect it all (Wood 1993, Berman and Weitzner 1995, references oblique)."

"That's just hippie hogwash," retorts the consultant. "Are you from Berkeley or something? There's one and only one reason why the Internet hasn't made politics less acrimonious yet and that's because we haven't perfected our microtargeting techniques yet. The future will be much more harmonious because you won't have to hear any messages that aren't relevant to you. I mean, think about it, this TV has no idea who it's talking to. On the Internet, we *know* you're a dog."

"Well, that's true," says the engineer, "especially when we roll out Facebook Timeline for Pets. What you're both missing, though, is that everything is better when it's social. If a tree falls

in the forest and no one Likes it, it doesn't matter. Voting is oddly still something people have to do in private, so really there's no reason to do it. What we need is a social ballot—it should tell me which of my friends voted for each candidate and which side they took on all of the initiatives. I mean, I'm from California—we have so many initiatives. I need to know how my friends are voting or I'll have no chance of voting responsibly."

The four men fall quiet for a moment. "Look, I'm not saying the Internet can solve all of our problems," says the professor. "But I think it can clarify what's happening on the ground—you know, what people are thinking, what they really care about, what's important to them. So much of the acrimony we see on the TV screen is a result of the fact that there are all of these talking heads interpreting what the American people care about, and yet we have almost everything we need to know about what people really care about right there in the social media. If everyone could see 'the truth' about how the American people really feel, there wouldn't be so much blathering in the media.

"So here's my prediction," the professor continues. "First, we'll see sentiment analysis improve dramatically, so that we know how people individually and collectively are feeling and what they're paying attention to at any given moment. Researchers have already taken some intriguing steps toward developing a so-called 'hedonometer' that tracks how people feel over time (Colander 2007, Golder and Macy 2011, Mislove et al. 2010, Kamvar and Harris 2011, Kramer 2010)." The professor makes parentheses with his hands while citing each author. The others look on with blank stares. "The second thing we'll see is that this kind of sentiment analysis will get linked to another trend in technology around entities. Have you heard of Google's Knowledge Graph? It's an attempt to figure out all of the nouns in the world and how they're related to one another (Singhal 2012). On Facebook, everything *is* an entity, or noun. Couple analysis of how people feel with what they're feeling it *about* and we have a whole new ballgame."

The Facebook engineer looks slightly perplexed, but intrigued.

"And so how does this bring us to the Athenian ideal?" the bartender asks.

"It doesn't, but it helps us get closer to understanding what the public really cares about so there are fewer wrong guesses about it. One of the major findings of my field is that the people, the masses, are pretty woefully uninformed about the ways of the political world and don't sense the logical inconsistencies in statements like, 'Keep the government's hands off my Social Security' (Converse 1964). My favorite thing Converse ever said, because it sounds so arrogant, was that 'what goes on in the heads of the less informed' wouldn't be relevant for us to study if they 'could at least be counted upon to follow the lead of more informed people.' But since we can't count on them to always follow elites, we should try to get inside their heads. Another bigwig in political science, John Zaller, said that people's receptivity to messages from political elites depends on their level of political knowledge (Zaller 1992). And so I think the Internet will soon allow us to see what kind of reception the ideas of elites and leaders are getting among the masses, if any, rather than having them assume it. We won't need polling to do it. What's important to people will bubble up.

"Now, I know that niche sites like Reddit are already doing this sort of 'bubble up' thing, but I think with sentiment analysis and 'entities' we're going to see this on a much bigger and more general scale. But if you go back to the political theory, the Thomas Jeffersons and Jeremy Benthams didn't think people could or should engage so much on the level of specific *issues* as on the level of values (Althaus 2006). And here's where I'd place emphasis on the *sentiment* part of sentiment analysis. You know, reasons are really just the things we make up to explain something we've felt, intuitively (Haidt 2001, Jervis 2006). Our emotional attachments drive our reasoning when it comes to beliefs, not the other way around. That's why they call it 'motivated reasoning' (Redlawsk, Civettini and Emmerson 2010). So how about we capture people's moral intuitions, their feelings, their sentiments? Feelings *about* entities are easier to

aggregate than trying to make sense of all the reasons. Converse said that 'democratic theory greatly increases the weight accorded to numbers in the daily power calculus,' so let's let the numbers speak for themselves."

"Uh, wow," says the Facebook engineer. "So you think social media is a window into people's moods and feelings about entities in public discourse. And this leaves less room to misrepresent or misinterpret public opinion."

"Mhmm."

"Hmm," the consultant mutters. "So what makes social media an unbiased representation of public opinion? I mean, sure, Facebook has a billion users, but that could be a biased population; no offense. And Facebook is a performance, just like all of social life (Goffman 1956). Social desirability alone should give you pause. People don't post what their friends won't like. Listen to him"—the consultant gestures toward the engineer—"he doesn't even think something matters if friends don't Like it. And as much as Facebook wishes it were true, people don't post what they're doing all the time. They only post what's salient enough that they reach for their phone or their keyboard."

"Well, that's true," the professor says, "but, first, we can measure how well what happens on social media maps to more scientific samplings of opinion. People are already doing this with some encouraging results (O'Connor 2010). I think we can also measure the social desirability bias by experimenting with anonymity. Second, techniques like smartphone experience sampling can be used to randomly sample people to get a more holistic view of what people are feeling or thinking about at any given time (MacKerron and Mourato forthcoming, Killingsworth 2009 and Global Pulse 2011). I won't rule that out as a possibility, though it would take a company like Facebook to make that happen at scale without annoying people too much. Third, I think social media is more interesting than polls because it allows the masses to define the terms of the debate. Memes are a cool way this happens (Dennett 1990). Why wait for Gallup's

terrible 'do you approve or disapprove of so-and-so' questions to come out four days later when you can see what people think about entities in real time?"

"You're still assuming, though, that there will be agreement on how to represent what people think or feel," the bartender chimes in. "And there's always so much tussle over stuff like that (Clark et al. 2005), especially because the representation will feed back into the system. Not to mention that there could be competition such that there may never be one 'truth.' I think your whole idea is doomed. Makes for good research though."

"Thanks," the professor replies tersely.

"What's *your* prediction, kid?" the bartender says, referring to the engineer.

"WAIT A SECOND," the consultant yells, "I'm the only one drinking. You all are getting too serious."

Groaning slightly, the engineer and the professor order drinks from the bartender. When that's done, the bartender turns to look expectantly at the engineer.

"Well, my prediction is a lot shorter and obviously more realistic," he says. "Have you seen the latest cover of *Nature*? We did an experiment on Facebook with a bunch of academics to see what kind of influence Facebook could have on voter behavior, and found that seeing that a bunch of your friends have voted is significantly more likely to get you to vote than a generic message encouraging you to vote. I mean, I'm simplifying but that's what they found (Bond et al. 2012)."

"Yeah, but the effect was only somewhere around a .3% increase in probability that you would actually vote, as verified in the voter records. People were 2% more likely to say they'd voted but only .3% more likely to have actually voted" the professor says.

"It's the first study. I'm looking forward, not backward. In any case, there's safety in numbers and I think that applies to politics, especially to voting. My prediction is that voting will become social. It's only a matter of time before voting machines use Facebook Open Graph to

tell all of your friends how you voted. Of course, all of the privacy settings and stuff would apply. But this is what the future will look like. Arthur Lupia says voters can use the recommendations of organizations they trust to vote as if they were fully informed or 'rational' (Lupia 2006). Why not the people you trust? Just line up your friends on each side of the issue, and see which side has more friends. Politics will be so much better when voting is social."

"That's a good point," the consultant replies. "And because you can follow organizations on Facebook, too, you can get the full picture of how you should vote from your friends and from those organizations you trust, all in one place. But you're crazy if you think people will broadcast their ballot to all their friends."

"People have broadcasted crazier things to their friends."

"True," says the professor, "but then we get these weird exponential effects where the choices of earlier voters have an outsized impact on everyone else's voting. I'm not sure we should go there."

"It's no different than your hedonometer thing. Let me tell you my prediction," continues the consultant. "Because I've just been sitting here while you guys go on and on. Here's where the real advance in political discourse comes in. In 5 years, you'll be able to pay me to run ads for you, and you'll never waste a dollar on someone who's not going to change their mind. If you're a conservative candidate, right now on Facebook you can rule out all the liberals who will never vote for you. That's only the tip of the iceberg. Because then you can pair your door-to-door efforts with all of your Internet advertising, so after the undecided voter is done talking to your volunteer, they're already seeing more of your ads when they turn back around to their Internet-connected TV. Facebook is experimenting with ad targeting based on email address, so it makes this kind of end-to-end advertising possible (Ha 2012). It cuts down on the inefficiency so there's less advertising on average, and thus less acrimony in our political discourse. Hulu encourages you to connect to Facebook. Your iPhone 5 is gonna connect to

Facebook. And if it's not Facebook, it's Google. Google's got a dossier on you, too. Believe me, these advances will make everyone's lives better. You'll thank me later."

"That kinda creeps me out," the engineer says.

"Me too," the professor agrees. A short pause ensues.

"But I think he wins this one, guys" the bartender says. Another pause.

"Yeah," everyone says together.

"Well, what ad do you think will run up there on that TV, then, seeing as it's public and everyone can see it?" The bartender gestures upward.

"I'm pretty sure we'll all be seeing different ads on our Google Glasses," the consultant says.

"Yeah," everyone says again.

"Shots?" says the bartender.

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