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Informative Speaking

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Theory of the Event

At it's core, Informative Speaking is just an engaging, 10 minute speech that seeks to inform an audience about something or, in some cases, someone.

Officially, according to the AFA-NIET, Informative Speaking is "An original, factual speech by the student on a realistic subject to fulfill the general aim to inform the audience. Audio-visual aids may or may not be used to supplement and reinforce the message. Multiple sources should be used and cited in the development of the speech. Minimal notes are permitted. Maximum time is 10 minutes."

Conversely, according to the NFA-NIET, Informative speaking is "A speech designed to clarify and/or explain a significant development, process, concept, person, place or topic. Informative speeches are characterized by in-depth content development that likely enhances audience understanding beyond what was previously known, well-established topic relevance, clear organization, credible sources, timeliness, and vocal and nonverbal delivery choices that reflect the speech's purpose."

Again, an Informative speech seeks to inform. That means an Informative speech cannot be persuasive in nature or advocate for something or on behalf of someone. Additionally, there is also a very fine line between Informative Speaking and Communication Analysis. CA (as it's commonly called) is meant to analyze or critique a form of communication, like an advertisement, campaign, or slogan. Informative speaking, on the other hand, doesn't analyze; it informs an audience and implies future actions or observations. If this is still unclear to you, it's best to ask a senior member or coach of the team so we can guide a better understanding about what CA implies and how Info differs.

How to Find a Topic

The beauty of Informative Speaking is that the topic you can choose to write a speech on can literally be almost anything, from scientific discoveries, to social phenomena, to people. However, a competitive topic typically fulfills **three (3)** criteria.

<u>Signficant:</u> A good Informative topic will be important in the context of the real world. Basically, its discovery or implementation will have significant impacts that we can recognize as important. This significance should also be able to be easily quantified, such as "This program can save the United States X amount of money" or "This disease currently affects Y amount of people worldwide."

Example → "Since [Korematsu v. United States] may be simultaneously the greatest civil rights loss and victory in the history of the Supreme Court, as a community full of future activists,

academics, and politicians, it's imperative we understand the Supreme Court case whose reasoning has, and will decide the fate of all future Civil Rights battles." - Daniel Hatoum, 2013

Relevant: While there may be a diverse field of topics appropriate for Info, there must also be a justification for why you are discussing a topic. Running a speech about Vincent van Gogh, for instance, would be a poor choice, unless there was a new and controversial discovery about him, because there is no practical reason for us to be talking about him right now. Relevance can range from from the fact the topic has just been created, new information has been uncovered, or that a book has just been published on it recently.

Example → "[Wakefield's vaccination study] has become one of the most polarizing moments in medical history. On one hand, the Guardian of March 7, 2012 explains that Wakefield now has to defend his findings in an American court. But on the other, the January 7, 2011 Washington Times explains that 40% of American parents are now reluctant to vaccinate their children because of the controversy, which has public health experts understandably worried." - Kyle Ackerman, 2012

The Turn: The turn is the element of an Informative topic that sets Texas Speech apart from the rest of the crowd. Defined in the simplest terms, the turn is a surprise on controversial element of a topic that catches audiences off guard. The philosophy behind it is not only to make for an edgier topic, but also to build a more complex topic that holds an audience's attention. While the turn may not have to do a complete 180 on the topic you've selected, it does have to introduce tension that can make for interesting discussion later in the speech. Often the turn will be fully fleshed out during the speech, but you must both have a turn and be able to introduce it in the intro.

Example → "And yet, [HeLa cell's] origin and the woman whose name they bear have almost been forgotten, locked behind laboratory doors…until now. In her 2010 book "The Immortal Life of Henrietta Lacks," author Rebecca Skloot explains that Lacks' story of a black woman whose cells were captured without permission highlights the questionable ethics and unequal treatment that characterized the medical field of the 1950s: one that forgot Henrietta but kept her cells alive." - Brendan Chan, 2011

While Informative topics are diverse, there are common places to look for them. Listed below are a few places to look. Not every source listed will have the magic topic you want the first time you look and not every source with a good topic will be listed here. But, if you check periodically and remain committed to reading articles that interest you, finding a topic may be easier than you think!

The Atlantic (http://www.theatlantic.com/)

Huffington Post (http://www.huffingtonpost.com)
Vocativ (http://www.vocativ.com/)
VICE (http://www.vice.com/en_us)
The Verge (http://www.theverge.com/)
Science Magazine (http://news.sciencemag.org/)
Popular Science (www.popsci.com/)
Amazon (www.amazon.com/) [The only place to find topics would be in the books section. Make sure you narrow your search to books that have been published in the last 90 days or have yet to be published.] [NOTE: If you find something on Amazon, check with Derrek before you buy anything, because there's a good chance he was stupid and bought it for no reason.]
Buzzfeed (http://www.buzzfeed.com/) [Very rarely will there be anything usable on here, but occassionally a good topic will pop up.]

Structure

While most of Informative speaking is relatively straight forward, the structure of these speeches is very tricky. That's because unlike Persuasion, CA, and ADS, there's no consistent structure for a single speech. The structure really depends on what your topic lends itself to. Below, however, are a few listed ones that are common and have proven themselves to work.

Background - Application - Implication

I. Intro
II. Background
III. Application
IV. Implication
V. Conclusion

Background - Benefit / Drawback - Implication

I. Intro
II. Background
III. Benefit / Drawback
IV. Implication
V. Conclusion

Background - Case Study - Implication

I. Intro
II. Background
III. Case Study
IV. Implication

Background, Implication (x3)

I. Intro
II. Point 1
    A. Background
    B. Implication
III. Point 2
    A. Background
    B. Implication
IV. Point 3
    A. Background
    B. Implication
V. Conclusion

Background - Turn - Implication

I. Intro
II. Background
III. Surprise Second Point
IV. Implication
V. Conclusion

You may notice that each structure has a few things in common. For example, each structure has an intro, conclusion, and implications. Regardless of what structure you pursue, these three sections are necessary. Additionally, having background on your topic is important for allowing the audience to understand what your Informative is about; however, it does not need to be in the first point, but can be tinkered with based on what structure you choose.

The second point is, therefore, the most fluid. Each of the structures listed above vary in how the less basic information about a topic is handled. To better understand the nuances of each approach, descriptions of the various second points are below.

Application: The application section demonstrates how your topic can be used in various situations. Basically, applicantions are how your topic can be applied to different situations. For example, information about the female orgasm can be applied to our understanding of its health benefits and its use in future health research.

Benefit / Drawback: The benefit / drawback section is designed to highlight the good and the bad of a topic. This section is designed to show how helpful a topic is as well as to critique a topic for its faults.For example, anti-rape underwear could protect women from sexual assault, but it could also create complicated legal messes in the context of consent.

Case Study: The case study section examines one or two instances in which your topic has been used in the past, and how it worked. Essentially, this is the use of a narrative to walk the audience through the topic in action. For example, a case study of social engineering would be illustrating the antics of the famous social engineer "The Ghost."

Surprise Second Point: The surprise second point is exactly what it sounds. It's typically a very explicit examination of the turn that is so important to UT Informative speeches. The construction of a surprise second point has no definitive nature, but depends on what turn you are able to find for your topic. For example, the company Plumpy Nut helps malnutrition through the world, but also if a company full of bad press and controversy.

As you can see, there are an endless amount of structures that can work for Info. Find what you want to talk about, and then have your structure fit that. Also, if you are unclear, please feel free to talk to upperclassmen or returners to Informative. There are so many options and so many possibilities, sometimes just discussing with other people could lead to some great new ideas.

Research

Because Informative is, by definition, based on informing an audience, sources and research are critical to providing you with credibility. Here are some guidelines to follow when it comes to sources.

News / Internet Sources: Information pulled from news or internet sources must be a) from a credible source and b) have been published recently. To determine credibility, a quick Google search on the source name may provide you with details on what source is. Sources should not be blog posts or someone's random thoughts on Tumblr. Preferably, the should be from a credible news organization (Like the New York Times or the Atlantic) or a think tank with legitimacy (Like the ACLU). To determine recency, sources must not be older than the year the season starts (So if the speech season starts in August of 2015, do not use any sources from 2014 or earlier).

Journal Articles: Journals are fantastic places to gather information, and often sound much more credible than a random article from the internet. However, not every journal article will work as a source. Mainly, journal articles must be recent, meaning they must not be older than the year the season starts (So if the speech season starts in August of 2015, do not use any journals from Fall 2014 or earlier).

Books: When it comes to recency, books are a bit more lenient. Because they often compile massive amounts of research and require more rigorous editing than most other source

destinations you will pull from, books can be from the year before the season starts (So if the speech season starts in August of 2015, do not use any books from 2013 or earlier).

When researching for an Informative speech, the most helpful things to do are to Google your topic, check Amazon to see if there is a book on your topic, and create a Google Alert for your topic. That should provide you with enough information to begin the writing process, and you should always check for new information periodically throughout the year to keep your speech up to date.

Most importantly, be sure to save your research as you continue gathering information, either through a bookmark folder or by printing it on the spot. That ensures that you can periodically source check yourself to make sure dates and information have not been misrepresented. Additionally, adopting this strategy early on will allow for an easier time compiling sources for end of the year folders, where research will be given to the coaches, and information will be double-checked to ensure they are cited correctly and the information is properly represented. Do not forget to start this process early, because having to go back and find difficult to track down sources will only add extra panic before nationals.

Sample Drafts

Christie Liu - 1st Place - AFA 2011

On Feb 5, 2011, a Belgian man named Stefaan Engels completed his goal of running a marathon everyday for an entire year. In a **Feb 8, 2011NPR interview**, Stefaan the "marathon maan" explained that he simply wanted to prove it was possible, and make the rest of us look bad. But, little did he know that, in Mexico, a group of people are making him look like the underachiever. **The March 5, 2011 New Straits Times explains** a collection of tribes in the Copper Canyons of northern Mexico, called the Tarahumarans, are capable of running a mind-blowing 300 miles - without stopping. To put that into perspective, that's like running 12 marathons back to back to back to back...to back to back to back to back... to back to back to back to back ... The Tarahumaran population totals about 70,000, but despite their large numbers, a **TED Talk posted on February 4, 2011, reveals** that the Tarahumaran civilization

has remained isolated and nearly unchanged for more than 400 years. Additionally, **Christopher McDougall notes in his 2009 book Born to Run, that** the Tarahumara tribes have never had an occurrence of heart disease, diabetes, cancer or stroke. Ever. In contrast, considering that the **August 17, 2010, Diabetes, Metabolic Syndrome, and Obesity reports** in 2011 alone over two million Americans will die from the very same diseases that Tarahumaran tribes avoid, and obesity plagues 1/3 of the American population amounting to almost $450 billion in economic costs, it's time to understand how the Tarahumarans have survived without the help of advanced technologies, and discover what we are all innately capable of. So let's first examine the definition and implications of the running ability, nutrition and social structure of a tribe that an **August 31, 2010 Discovery Broadcast** claims is "redefining the limits of human endurance".

In 1928, the Mexican Olympic Committee decided to enter two Tarahumaras, however, no one told them the race was only 26 miles, so when the Tarahumarans crossed the finish line, they kept going. When officials finally caught up with them to tell them to stop, the two men complained, "too short, too short!" Instead of making a that's what she said joke, let's first examine their amazing running abilities and understand the implications on our innate physical potential.

Primarily, Tarahumaran men women, old and young, all run the same long distances. According to the **previously mentioned Born to Run**, the longest distance ran by a tribesman was 435 miles, that's like the distance between the Kearny, Nebraska and Normal, Illinois, so by the time we finish AFA, the Tarahumarans are already in prelims of NFA! Furthermore, in 1995, a Tarahumaran named Juan Herrera competed in the Leadville Trail 100, a 100 mile

ultramarathon in the Rocky Mountains. Despite having never trained for or even seen the course before, 55 year old Juan Herrera *won* the race with a record time that stood for 11 years. Juan's ability reflects upon an entire population that **Christopher McDougall** describes, "never forgotten what it felt like to love running.

Additionally, the Tarahumara ability reveals that human beings are by nature long distance runners. Although the previously mentioned NPR interview depicted Stefaan, as extraordinary, none of the Tarahumarans had the heart to tell Stefaan that he wasn't that special, they also don't speak Belgian. The previously **cited Discovery Broadcast notes** that human beings evolved as a hunting pack running long distances together, in order to survive. Our anatomy from our head to our toes is designed to facilitate long distance running. While, the Tarahumarans have cultivated these innate abilities, our advance technology has rendered the very skill that saved our lives thousands of years ago a running joke. This illustrates that when using technology to shore up our weaknesses, we also *run* the risk of giving up our biological advantages.

An **October 27, 2010 personal interview with Anthropologist Brian Stross,** who recently visited the Tarahumara, revealed that tribes gather together, drink gallons of their homemade corn beer, and eventually the women rip each other's tops off and wrestle each other. Unfortunately, Dr. Stross isn't currently taking reservations for his next trip, but in the mean time, we can first their examine nutrition system, and understand the implications for our definition of healthy.

Initially, the Tarahumara diet baffles most marathon runners. In fact, **tarahumara.com,** when you run 300 miles you get a your own website, **last accessed March 15, 2011**, explains

that 85% of their diet is corn, or corn beer equivalent, and occasionally, they catch their protein by chasing a deer until it collapses from exhaustion. Oh...dear... **The Huffington Post of March 16, 2011,** notes that Tarahumarans use up more calories than an average Tour de France competitor in a single run. Yet their simple diet works because their corn beer not only hydrates them but also gives them the fuel in the form of calories and carbs. Essentially, the Tarahumarans drink till they hit the ground, and the next morning; they get up and hit the ground running, occasionally topless.

Additionally, Tarahumarans show how exercise can overpower a simplistic diet. **Michael Pollan** laments in his **2008 book In Defense of Food** that we see nutrition as baking a cake, the right ingredients in the right ratio will magically make us healthy. Thus, not only are we the fat kids who love cake, but we tend to downplay the importance of exercise. On the other hand, the Tarahumarans completely shatter the ideal healthy intake and view food simply as fuel for the more important activity, running, which allows them to literally out run diseases. Clearly, not only should we seriously consider brewing corn beer, but as the **New York Times of February 16, 2011**, notes, calorie information on menu labels aren't effective in making people healthier, instead there needs to be a bigger focus on effective, consistent exercise.

In the Leadville 100 marathon, Tarahumarans were given flashlights for the dark. Yet, they had no idea how to use the flashlights, so they held them like torches, which made lighting the path...difficult. In order to shed light on the interaction of our two cultures, lets first we examine the Tarahumarans original social structure, and then see the implications of western influence.

First, the Tarahumarans exceed our standards for social harmony. The **national geographic of November 2008 explains** that surrounded by Mexico's rampant drug violence, the Tarahumara live a surprisingly peaceful life, with a crime rate that is close to zero. In fact, **MexConnect of July 1, 1998** reported that psychologists who studied the Tarahumaras found their brains have adapted to evade lying to or cheating a fellow tribesman. This honesty and social harmony transcends into their interpersonal relationships. **John Kennedy notes in his 1978 book Tarahumara of the sierra madre**, that a Tarahumara man named Mauricio often wore women's clothing and made sexual advances towards men. While Mauricio's moves were politely rejected, his tribe did not censure or discriminate against his different behavior.

However, over time, modern influences changed the Tarahumaran culture. **The 2001 documentary Voices of the Sierra Tarahumara** explains that twenty years ago, a railroad built near the village called Mesa de la Yerababuena, introduced modern delights such as chocolates, cars, and nike shoes. Tribe members moved to big cities to earn money and afford such luxuries. Today, there are no more long distance runners in that particular village. Futhermore, the previously mentioned **Born to Run contends**, tribesman affected by modernization were caught cheating in marathons by taking short cuts and side trails. The Tarahumarans show the transition of a society without the influence of money into a culture of materialism, indicating that humans are capable of being honest, but our social structure has to facilitate that integrity.

So the Tarahumara have taught us that it's possible to run down deer, drink gallons of beer, and to stop hating on the queer. After examining both the boundaries and implications of Tarahumara running ability, nutrition, and social structure, hopefully we have preserved a small piece of their lives and salvaged a part of our own. Our minds might have forgotten what we are

physically capable of, but the Tarahumara remind us that from the very beginning we were all born to run.

Kyle Ackerman - 6th Place - NFA 2012

As a successful physician and researcher, Andrew Wakefield was surprised to find himself awarded the #1 spot on Medscape's 2011 list of the world's worst doctors. His crime? Questioning the safety of a seemingly harmless vaccination, then announcing his suspicions as fact and inciting a worldwide anti-vaccination panic. Oops. As the January 7, 2012, Austin American Statesman explains, the vaccination debate was ignited in 1998 when a British medical journal, *The Lancet,* published initial findings from Wakefield that suggested a causal link between the MMR (Measles, Mumps and Rubella) vaccine and autism. While many of us are already familiar with the controversy surrounding vaccines, the majority of us are unaware of how the movement started - Wakefield's initial published research. The study has become one of the most polarizing moments in medical history. On one hand, the Guardian of March 7, 2012 explains that Wakefield now has to defend his findings in an American court. But on the other, the January 7, 2011 Washington Times explains that 40% of American parents are now reluctant to vaccinate their children because of the controversy, which has public health experts understandably worried. But Wakefield's research and the movement it ignited have incredible significance that go beyond our hospital doors. Whether you believe that vaccinations are linked to autism or are the only responsible way to protect your child from disease, exploring the complex history of the controversy can help us understand how medical information enters public discussion and the role we play in the process. So let's first, examine Dr. Wakefield's 1998 study, then weave our way through the two most important developments surrounding the

research, before finally exploring some implications of the movement that Dr. Paul Offit from the Center For Disease control told NPR on January 7, 2011, has millions making "Deadly choices."

According to Time Magazine of February 24, 2011, "The fear of vaccines began in the 18th century with the smallpox vaccine - which many people thought could turn humans into cows." To understand today's moovement, let's take a closer look at Dr. Wakefield's study and initial reactions to it.

According to CNN of January 5, 2011, to begin his research, Wakefield selected 12 seemingly healthy children and conducted a general checkup. Then, to cover all his bases, Wakefield also administered lumbar punctures and colonoscopies to the children. In the previously mentioned Lancet article, Wakefield claimed to have found a syndrome called autistic enterocolitis, a bowel condition linked with autism that causes swelling of the lymphoid tissue, which occurred after vaccination. He also noted that eight of the twelve children's parents identified what were described as "behavioral symptoms" after the administration of their child's MMR. Essentially, Wakefield concluded that the MMR vaccine significantly increased a child's chances of becoming Autistic.

Despite the study's small size, it ignited a firestorm. As the March 12, 2012 Daily Telegraph outlines, the day of the Lancet's publication, Wakefield held a press conference and called for suspension of the MMR vaccine. Soon, fear reached epidemic levels and as the March 19, 2012 Wall Street Journal reported, "Vaccination rates dropped sharply," even though Wakefield's study was and still is the only research to suggest a causal link. Today, more than

ten percent of children in the United States have not been vaccinated at all and thirty percent are behind schedule.

Aside from the shocking nature of Wakefield's study, as the September 28, 2011 Time Magazine outlines, the greatest twist in the story happened in May 2010 when the Lancet retracted the study on the grounds that it was entirely fabricated. To understand what this development means for both the scientific community and public health, let's examine what actually happened and then look at Wakefield's response.

As the British Medical Journal of January 11, 2011 explains, attorney Richard Barr hired Wakefield to conduct the study for half a million dollars, because he was trying to compile evidence for a class action lawsuit. Moreover, Natural News of February 15, 2012 explains that Wakefield falsified the timeline – five of the children had symptoms prior to vaccination, and even more alarming, three others never developed autism. Additionally, in the middle of creating the study for Barr, Wakefield was simultaneously working on crafting his own measles vaccine – leaving him with a potential profit of millions if he could get the MMR vaccine off of the market. Even though, as the August 25, 2011, US Institute of Medicine report summarizes over 1,000 different studies have all negated a link between Autism and vaccines, the January 7, 2011 Washington Times asserts, "The scientific community's dismissal of Wakefield didn't stop the anti-vaccine movement." But don't fear, parents have started taking matters into their own hands, which always leads to abundant success. ABCNews of November 6, 2011 explains that many have started purchasing lollipops online licked by a child with a specific illness to give to their child, circumventing vaccination.

With the public expose and a slew of evidence against Wakefield, the case seemed shut. However, as Forbes of January 5, 2012 elaborates, "[Wakefield has now filed a defamation lawsuit against] British investigative journalist Brian Deer, who first broke the story." Wakefield told ABCNews on January 6, 2012 that he had not seen some of the records cited [against him while writing his 1998 paper]. Therefore, he suggests, it was impossible for him to have deliberately misstated their contents. Further, [the lawsuit asserts that] the British Medical Journal's original expose neglected to mention the fact that it had received payments from the very vaccine manufacturers whose products need further investigation, an accusation that the Journal has admitted.

In The New York Times of April 20, 2011, a leader of the anti-vaccine movement named J.B. Handley explained, "To our community, Andrew Wakefield is Nelson Mandela and Jesus Christ rolled up into one." His research has rewritten the rulebook on public health; leading us to two implications: dogmatic circumvention and the privatization of medical research.

First, the scientific community's swift condemnation of Wakefield highlights the dogmatic nature of the medical world. Credible or not, it is interesting to evaluate the power (or lack of power) we ascribe to the opinions of people who dare to deviate from mainstream medical practices. Before this study, Andrew Wakefield was a respected researcher and physician. Now, despite the fact that The Chicago Tribune of February 28, 2012 explains that doctors have begun refusing to see parents who do not follow the strictly conventional vaccine cycle or, in effect, people who still believe Wakefield, the movement is still gaining influence. By using shocking information to challenge dominant ideals, Wakefield inspired an incredible amount of people to take a stand against rigid stances, thus circumventing the dogma. This

phenomenon forces us to reconsider whether we should critique the powerful messengers in our lives, or the power behind the messages themselves.

Finally, Andrew Wakefield's fabrication challenges the state of the research and publication process. On May 24, 2010, the day Andrew Wakefield's medical license was revoked, The Guardian reported that this study got into the Lancet because a private corporation paid him to conduct it. Effectively, Wakefield sold his credibility. The Guardian further explains, "Medical journals are ranked by their "impact factors," a score based on how often the papers they publish are cited by other researchers." Therefore, a more controversial study is more valuable. In a world where money matters and controversy sells, we have to see scientists and all academics as more human than we have, and use logic to critique science rather than trusting the ivory tower as a failsafe.

Whether motivated by financial interests or the sincere desire to protect children from a disorder that itself is barely understood, one thing is certain: Andrew Wakefield forever changed the landscape of vaccination. After examining Wakefield's study, its recent developments, and how it might impact the world, it is clear that regardless of the validity of Andrew Wakefield's original study, its outcomes are undeniably important. In 2011, Time Magazine added Andrew Wakefield to their list of the greatest scientific frauds. Only time will tell us if Wakefield's findings are true, tenuous, or merely innocuous.

<u>Kevin King - 1st Place - AFA and NFA 2014</u>

In July of 2012, a Walmart store manager in Canada received an urgent phone call from headquarters. Wal-Mart executive Gary Darnell called the manager to say his store had been selected for a new pilot program and he needed information. **CNNMoney on August 8, 2012**

explains, in a matter of minutes, the manager provided Darnell with the employee payroll, shift schedules, and other private information. The only problem, there was no pilot program and Darnell has no recollection of making this phone call - which makes sense, because the phone call actually came from a casino in Las Vegas and Gary Darnell was actually Shane MacDougall, a security researcher and competitor at the American Social Engineering Contest. **Daily Dot on September 7, 2014 elaborates,** the contest is part of the annual DEFCON hacking convention held in Las Vegas, in which competitors perform security breaches on Fortune 500 companies using methods of social engineering - a technique used to get around security systems to obtain information by exploiting vulnerabilities in the humans guarding the information. For example, instead of trying to crack a password by installing a virus, you call the tech support agent, convince them to reset the password, and give it to you. **Social Engineering Inc. on April 28, 2014 explains,** last year, socially engineered attacks accounted for 1.8 million victims in health care fraud, 2.4 million in phone fraud, and over 37 million in email fraud. Concerningly, **EM Associates April 2014 study notes,** more than half of employees do not receive any security awareness training. To not only shed insight into the fastest growing security threat in corporate America, but also, provide a powerful lesson in a new era of privacy, we'll first explore what exactly social engineering is, then see an attack in action, before finally, engineering some implications to what author and social engineer Chris Hadnagy dubs "the art of human hacking"

The most iconic example of a social engineer is Spielberg's 2002 film Catch Me If You Can, the retelling of 1960s con man Frank Abagnale's elaborate masquerade of check fraud. To understand how social engineering, or "SE", has evolved since Abagnale, it's important we first cover the bases of social engineering.

First, who exactly are these social engineers? **Alternative Network on July 28, 2014** details, the world of social engineering draws myriad people: professional spies, information brokers, hacktivists, and even, disgruntled employees. Above all, SE's hid in plain sight - often disguised in roles like the friendly janitor, the curious customer, and for McDougall the false authority.

With that in mind, what exactly does an attack look like? In their **February 18, 2015 report "Hacking the Human Operating System" Intel Security** breaks down an attack in four steps. Step One, Research: SE's collects research from social networks, company websites, any public information to help engineer an attack. Step Two, Targeting: SE's target an employee to manipulate - often times they'll become familiar with the target's hobbies, likes, and dislikes. Step Three, the Approach: this is where SE's separate the employee from the information, using a fake email, a telephone call, and often, a face to face interaction. Step Four, the Encounter: employees react to the attack, either revealing information or deflecting it all together.

MacDougall's attack on the Wal-Mart manager reinforces the notion that there is no security patch for human error. **The Cyber Intelligence Index reports** last year alone 95% of successful security breaches were the result of human error. To further understand the techniques used by social engineers, we'll first, dissect an attack and then I'll perform one of my own.

In the summer of 2013, an SE known only as the "Ghost" began collecting information on a local company to perform a routine network breach. After a month of the Collection phase, the Ghost identified his target - Amanda, the company receptionist. During the targeting phase he scanned her Facebook, Twitter, and Instagram; noting her love for the show Dexter and status as a single mother. Eventually the Approach phase presented itself - the company was hiring. "The

Ghost" submitted a fake resume, and eventually earned an interview. On the day of the interview, he posed as a down on his luck single father, who arrived 5 minutes late after rushing to drop his kids off. With Amanda's attention, he began the Encounter phase. A sympathetic conversation about being single parent transitioned to a friendly conversation over the show Dexter. Then realizing he forgot his resume, he asked his new Dexter buddy if he could use her company computer to print his resume from his USB. Amanda agreed, and just like that The Ghost installed an infected file labeled resume.pdf, granting him access to the company network from his computer back at home. Interestingly enough, the strategies used by the Ghost walk a fine line of social engineering, and common devices we all use.

For instance, _____.

The aforementioned Daily Dot explains, the rise of SE attacks has draw some notable attendees to the American Social Engineering Contest - the FBI, NSA, and Department of Defense. The pervasive, and threatening, use of social engineering leads us to two implications; a paradigm shift in security and the weaponization of social information.

First, the methods used by social engineers has fueled a paradigm shift within the security industry. For decades security has operated under the mentality that we need to build walls, tall enough, and thick enough, but as **CSOOnline on January 5, 2015 notes,** social engineering forces us "to start looking inside the walls for the breach". As a result, **Techtarget on March 3, 2014 explains,** companies have shifted focus from software security to training employees on how to recognize and combat social engineering attacks. Michele Fincher, security researcher **Social-Engineering Inc. on August 14, 2014,** we are witnessing a "culture change", one that requires round-the-clock security and forces employees to think in an entirely different way.

Because when it comes to social engineering in the workplace - the only thing worse than no security, is a false sense of security.

Second, social engineering weaponizes the role social media plays in our lives. **TechTarget on March 4, 2014 elaborates**, websites like LinkedIn, Facebook, and Twitter are social engineers dream come true - allowing them to harvest anything from job histories to emotionally compromising posts. The reality is we freely give out information that may seem benign, but opens the door to attacks. As a result, **Wall Street Journal of May 11, 2014 notes**, by the end of 2015 over 60% of companies will have programs in place to monitor employee's social media - a dramatic increase from just 10% in 2012. And while they claim it's about PR, in actuality, it's one of the only ways to reduce a socially engineered attack. If social engineering is the bow, then social media is the arrow. As these attacks continue to rise, we'll each have to ask - are you willing to insure corporate security at the expense of your social identity?

Today after exploring the world of social engineering, understanding what an attack looks like, and constructing implications we've shed light on the methods of social engineers. In his book, Ghost on the Wires, FBI's most wanted social engineer Kevin Mitnick explains, it's the most effective communicators that make the best social engineers. So, in an activity that prides itself on being the strongest communicators, we are the prime demographic - you've already got the skill set … so what's next?