How Nothing Became Something: The Evolution of *Seinfeld*

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Abstract

This thesis argues that no one factor by itself contributed to the explosion of *Seinfeld* into pop culture, and no single cause has ultimately placed it in the pantheon of the greatest situation comedies in television history. Through extensive research and exhaustive viewing, three of the minor factors that led *Seinfeld* to prominence were ultimately being the beneficiary of riding the proverbial coattails of *Cheers* to build a following, being a fledgling show on a foundering network that decided to take a chance on it in order to spurn its demise and not being written to

appeal to a mass audience. Rather the author argues that the two most important factors that have caused *Seinfeld* to be placed among the highest of television pedestals were the two ground-breaking ideals of narrowcasting to a niche audience on a broadcast network and running past the line of controversial subject matter instead of staying well behind it like its predecessors had.

Introduction

Someone once coined the phrase, "Desperate times call for desperate measures." In other words, being backed into a corner is not necessarily a bad thing in a conflict for an underdog because it allows him or her to try new and risky tactics to achieve a goal. This was the situation for NBC president Warren Littlefield in 1992. Because NBC was languishing far behind ABC and CBS in primetime ratings, Littlefield decided to give some leeway in regards to some controversial scripts and episode themes to a struggling show called *Seinfeld*, which was embarking on its fourth season. Littlefield believed that *Seinfeld* could be the key to jumpstart NBC's primetime lineup. He did not, however, have any idea that his actions would have a direct impact on the show becoming one of the greatest half-hour programs in television history.

To succeed, NBC and *Seinfeld* needed other supporters as well. A few key allies, like perfect timing and natural talent, are also needed to overcome obstacles to become something special and unique. It is my argument that it was actually a near-perfect combination of all of those factors that took a struggling situation comedy that was scuffling in its third season on the air and made it into a network behemoth and one of the most critically acclaimed, most-watched and most-discussed programs in television history.

To achieve the kind of network success that paves the road to the riches of syndication, each hit television show has some kind of a niche that appeals to the ever-developing American

primetime audience. *Bonanza*, *Gunsmoke*, *Little House on the Prairie*, and even *Star Trek* appealed to viewers' sense of adventure in discovering new and exciting places for themselves. *All in the Family*, *Chico and the Man*, and *Maude* forced audiences to think outside prejudicial upbringings and realize that the stereotypes they developed only revealed their own personal shortcomings. The 1980s gave America masterpieces like *Miami Vice* and *Moonlighting* that were shot more like movies than television shows. This time though, viewers enjoyed them on the small screen and so weren't compelled to go to the theater to enjoy epic productions. Currently, the line between television and the film industry is at its blurriest; *Alias*, *ER*, *Lost*, *Mad Men* and *The Sopranos* have provided several other niches into broadcasting such as ensemble casts and serial storytelling.

The successful, highest-rated situation comedies of the 1980s like *Cheers* (ranked by Nielsen in the top 10 in eight of its 11 seasons, including one season at the top), *The Cosby Show* (the country's number-one rated show for four consecutive years [Schwarzbaum]), *A Different World* (a top five show according to Nielsen in its first four years [Hunt]), *Family Ties* (a top five program for three of its seasons) and *Growing Pains* (a top 30 show for all but one of its seasons, topping out at number eight in the Nielsen ratings twice) all followed one basic premise: assemble a group of talented actors complete with jokesters and straight men alike, as long as they fit into a family ideal. The main theme of situation comedies before *Seinfeld* was that of a family who grows and learns together, taking away some sort of lesson that increases their wisdom and love for each other at the end of each installment of the show. (While *Cheers* and *A Different World* were not family comedies per se, the cast interacted with each other and were socially similar to the casts of the other three more traditional family comedies.) They were also all essentially three-camera sitcoms that were mostly shot on soundstages in studios. When one

became successful, networks were eager to give money to the new programs that followed the same rubric.

When producers and writers Larry David and Jerry Seinfeld approached NBC president Warren Littlefield about a show that didn't have those same family aspects (i.e., a show starring a stand-up comedian, his best friend, his ex-girlfriend and his crazy neighbor), Littlefield was slow to approve it. David even tried to sell it as a "show about nothing," as was depicted in the story arc of the fourth season with the one-hour episode "The Pitch/The Ticket." (This was of course the episode that led critics and fans to refer to *Seinfeld* as "the show about nothing," since that is how Seinfeld and his friend George Costanza [Jason Alexander] pitched the show idea to the fictional NBC executives.) *The Seinfeld Chronicles* (later renamed *Seinfeld*) struggled to hold a consistent audience. But shortly after its fourth season began, something began to change. The niche audience it did manage to corral was growing rapidly. And after NBC slated *Seinfeld* for the 9:30 p.m. eastern standard time slot immediately after the current top-rated primetime sit-com *Cheers*, it began to garner much stronger ratings than the preceding barroom comedy (Documentary). In fact, after being ranked 42 in the 1991-92 season before its *Cheers* lead-in, *Seinfeld* vaulted all the way up to 25 in the 1992-93 season according to the Nielsen ratings, making it a hit (Castleman and Podrazik 2003, 363).

At the end of its fifth season, *Seinfeld* was shooting to the top of the Nielsen ratings. It is almost always near the top of any "greatest television shows of all time" list, and in many cases, it holds the top spot. It became the show that NBC designed its entire primetime lineup around for its last five seasons on the air. Yet to the untrained media critic, it remains a point of contention as to *how* exactly *Seinfeld* became so beloved with viewers and critics alike.

However, after researching what other television critics and historians have written about the show and re-watching episodes dozens of times, the key to *Seinfeld*'s success can be found in the fourth season of the series. As Littlefield put it, "In the fourth season of *Seinfeld*, the fact of the matter is, Jerry and Larry now had the license to go anywhere they wanted to go. And we were along for the ride. And we just said, 'You know what? Your brilliant minds will take us anywhere'" (Documentary).

The research questions posed herein are: 1) what steps led to the opportunity that NBC gave *Seinfeld* to become the flagship of the network? 2) why did Season Four stand out as the "breakout" season of the show? and 3) what sorts of changes did *Seinfeld* undergo from Season Three to Season Four? While I will discuss the Season Four story arc of Jerry and George's attempt to strike a deal with NBC for a TV show as a whole, I will highlight three episodes from the season, "The Bubble Boy," "The Contest," and "The Junior Mint" as they exemplify the reasons why *Seinfeld* made the sizable leap from good to great.

I argue that Seinfeld and David used a combination of their talented writing skills, a niche audience, a hospitable network that valued critical response, and an opportunity to take big risks in story arcs to take *Seinfeld* from a middling run-of-the-mill sit-com to a legendary blockbuster. While the first three seasons of *Seinfeld* were rather pedestrian and did not stand out from other situation comedies before it, the transition from Season Three to Season Four not only changed the face of *Seinfeld* for its final six seasons but forever changed the landscape of network primetime situation comedies to come.

Historical Background

In the late 1980s, stand-up comedian Jerry Seinfeld was touring comedy club after comedy club until NBC executives met with him about writing a script for a potential show on the network. Seinfeld and Larry David, Seinfeld's friend and fellow stand-up comedian, then worked together on writing a pilot for a show that was initially titled *The Seinfeld Chronicles*. The idea of the show was to follow the life of a stand-up comedian living in New York, and his interactions with three of his closest friends.

This was a bit of a venture from how other hit sit-coms were developed by starring a stand-up comedian. For instance, Bill Cosby played Cliff Huxtable, an OB/GYN on *The Cosby Show*. Tim Allen portrayed Tim Taylor, host of a do-it-yourself cable show called "Tool Time" on *Home Improvement*. Roseanne Barr was Roseanne Connor, a stay-at-home mom and then a part-time diner waitress on *Roseanne*. But as Castleman and Podrazik wrote, Jerry Seinfeld playing a stand-up comedian on *Seinfeld* was what truly branded the show in its own unique way:

> This was a break from *The Cosby Show* formula of using aspects of a stand-up act's persona to create a fictional alter ego in another profession. *Seinfeld* was more in the tradition of *The Jack Benny Show*, casting the star in a fictionalized version of himself. It was a perfect comedy role because, given the nature of his job, Jerry Seinfeld was left with plenty of off-stage time to do nothing in particular but hang out with his friend George Costanza (Jason Alexander), former girlfriend Elaine Benes (Julia Louis-Dreyfus), and across–the-hall apartment building neighbor Cosmo Kramer (Michael Richards, another regular

from *Fridays*), thus earning the show a reputation for 'being about nothing.'

(Castleman and Podrazik 2003, 364)

As most pilots go, it was not an instant success when the show premiered in 1989. But NBC still had faith that they had a hit on their hands. They ordered four more episodes of the show from Seinfeld and David—who was one of the executive producers of the show—and those episodes sparked more interest from viewers. NBC then ordered a half-season's worth of shows (13 episodes) for *Seinfeld*'s second season ending in 1991. Executive producers George Shapiro and Howard West saw the show take off with help from writer/director Larry Charles. NBC ran full 26-episode seasons of *Seinfeld* starting in 1992 until it went off the air as the highest-rated program in the Nielsen ratings in 1998 at the end of its ninth season.

While the show was based on the stand-up comedy career of Seinfeld (who played himself on the show), three other major characters played off each other to enhance the comedy by playing the "straight man" and punch line-deliverer throughout the program. They were George, Elaine, and Kramer.

Character Overview

Jason Alexander played George Costanza—a character that Seinfeld and David based on David's personality. Costanza was the "unlovable" "Biff Loman-esque" loser of the show. Loman, of course, was the eternal loser from the famous Arthur Miller play *Death of a Salesman*. While Seinfeld at times appeared shallow and superficial, Costanza could stoop even lower. The short, slow-witted, stocky, bald Costanza inevitably was fired from jobs, lost girlfriends in comically embarrassing breakups, and was even forced to move back in with his parents in his thirties.

Elaine Benes (Julia Louis-Dreyfus), who played Seinfeld's ex-girlfriend, is a bit of a strange character. She continues to date other men, but still spends most of her time with Seinfeld, Costanza, and Kramer. Benes is a successful writer and editor on the show, and is the lone female in a largely male-centered cast. Originally the lone female starring role was given to Lee Garlington, who played a waitress named Claire at the coffee shop frequented by Seinfeld and Costanza. However, Garlington only appeared in the pilot. She was replaced by Louis-Dreyfus for the second episode and every show afterward.

Cosmo Kramer, Seinfeld's next-door neighbor, is perhaps the wackiest character on the program. He's a tall man, with high, wavy hair, and he usually wears vintage clothing that always seems to be a bit too small for his frame. His classic quick burst into Seinfeld's apartment became a recurring theme on the show, as did his ability to live a carefree life in New York without having a steady love interest or a job to support himself with. Kramer was also known for coming up with numerous get-rich schemes that rarely panned out. He offered the majority of physical comic relief on the program with his trademark quick slide entrances through Jerry's apartment door, setting his hair on fire with a cigar, and his inability to remove slim-fit jeans.

Of all the main characters, Kramer was also the bluntest about sharing his true feelings, no matter who was present. Jerry even told Kramer in one episode that he (Jerry) was in the unfortunate position of caring about other people's feelings, intimating that Kramer was oblivious to them. Paolucci and Richardson state that this is why the Kramer character became so popular with audiences: "In these pursuits, our institutional structure often makes it impossible for us to be authentic in our presentation of self, which is why we like Kramer so much. By using humor, Seinfeld is both sympathetic to and critical of our absurd and arbitrary rules and helps us see through them" (Paolucci and Richardson 2006, 46). Yet despite the poor personality traits

exhibited by both George and Kramer, they were named by *TV Guide* as two of television's greatest characters of all time (Sony Pictures).

Show Themes

Seinfeld did not break every mold, however. For instance, one of the main themes that the show writers wanted to get across was the traditional "reset" outcome, not unlike most situation comedies. To exemplify this type of classic sit-com outcome, shows like *Full House* and even *Night Court* feature moments at the end of each episode that demonstrate the strength of the relationships of the characters on the show, or the moral growth of a particular character. Seinfeld and David did not want morals at the end of the show—there would be no sympathetic hugging or lessons learned.

Thomas Hibbs of Boston College painted a stark contrast between the end of older sit-coms and the close of a *Seinfeld* episode as well. While much was accomplished in other sit-coms, even in newer 1980s style shows like *The Cosby Show* and *Cheers*, almost no character development was made at the close of any *Seinfeld* installment: "Compared to the basic, classical structure of older sitcoms, such as *The Honeymooners* or *I Love Lucy*, *Seinfeld* marks a decisive break. While older shows depended on a resolution of a dilemma in order to end the episode happily, the catastrophe in an episode of *Seinfeld* is frequently left unresolved. [*Seinfeld*] goes for the art of the unhappy, but the very funny" (Huston 1999).

Handy writes, "As Larry David, the show's co-creator and longtime guiding light, once quipped, if the show had a motto it was 'no learning, no hugging'" (Handy 1998). Dawson also writes that because the characters fail to learn from their mistakes—unlike the Tanner girls in *Full House* or Judge Harry Stone in *Night Court*—they never grew throughout the show's nine

seasons. And that was by design: "The writers are very aware that their characters have deep failings. Because of their failings, the characters make no progress in their lives. Indeed, George positively revels in his failings" (Dawson 2006).

Hurd writes that it is the over-the-top egomania that audiences find so enjoyable because they don't realize that the show reflects on the worst in each viewer; the viewer believes that he or she "knows someone just like George, Kramer or even Elaine":

> Isolated, narcissistic, urban, "thirty-something singles" float through their existences trying to make sense out of what they ultimately perceive to be a meaningless, patchwork world. We laugh as we watch these actors portray individuals with no roots, vague identities, and conscious indifference to morals outside their self-determined ones. George riotously works out his "pathetic" life "going with" whatever works for him at the moment in jobs, scams, or relationships. The commercial and critical success of this show is attributable not only to the genius of its script, character development, and acting, but also to the way the audience identifies with the fragmented, ludicrous, pastiche of "moments" which make up the characters' lives. (Hurd 1998)

Stephen Gencarella Obrys also states that David's less-than-flattering portrayal of his characters is more of a reflection on some of the nastier personality traits of American television-viewers and society as a whole: "Indeed, the dilemmas that *Seinfeld* reveals—to be caught between one's self-interest and commitment to others, and to be willing to allow democracy to slide into decay—are, as Burke reminds us, part and parcel of the American condition" (Obrys 2005, 406). Irwin and Cara Hirsch also comment that the four main characters on *Seinfeld* can be

cold and unapologetic for their selfish actions—something to which many people in the United States can relate. "A drive discharge understanding is easy here, for Seinfeld and friends indeed are brutally unfeeling at best, and hateful at worst" (Hirsch 2000, 122).

Some of the negative personality traits that were portrayed on the show also came from the writers' ability to create a sense of youthful immaturity despite using actors who were well into their thirties and forties. Morreale writes, "The fact that George's and Jerry's parents were semi-regulars on the show attests to the adolescent positioning of the characters. At the same time, they expressed contemporary malaise in the form of fear of intimacy, manifested in their inability to form lasting commitments" (Morreale 2000, 114).

In Caryn James's review of the series finale in which the four main characters are caught violating a little-known "Good Samaritan" law in a sleepy New England town, she writes that the judge's analysis was why the characters were so popular with viewers: "The characters are, of course, guilty as charged, guilty of 'selfishness, self-absorption and greed,' as the judge says. That's what we liked about them" (James 1998). The uneasiness audiences sense in their own hearts can be hilarious when the viewers watch it with a laugh track from a third-person perspective as well. Rosalin Krieger also writes that the shockingly shallow values that the four main characters exhibit at times opened up the possibility for risqué story lines that were previously taboo for primetime network television: "The introduction of topics and representations deemed uncivil are made possible by channeling them via 'four of the most selfish, self-centered, and yet naive, characters that have been envisaged for American television' following, as discussed earlier, in the mold of the 1950s 'ambivalently Jewish character Sergeant Bilko'" (Krieger 2003, 401).

One of those "uncivil" texts was perhaps the most famous episode of *Seinfeld* in its nine years on the air. In "The Contest," George's mother walks in on him while he is masturbating. This causes George huge embarrassment. As a result, he states he will never "do 'that' again" (The Contest 1992). The four friends place a wager to see which one of them can hold out the longest, but each of them are tempted: Kramer by a naked, attractive woman in an apartment across the street that he spies on; Elaine by being put in the same exercise class as John F. Kennedy, Jr.; George by a sexy nurse giving an equally attractive patient a sponge bath at the hospital at which he is visiting his mother; and lastly Jerry, who is dating a woman who reveals to him that she is a virgin.

While David would display upcoming episodes on a white board in his office, he did not put "The Contest" on it for fear that NBC executives would kill it before it could be taped. But Jason Alexander said it was a great example of staying on the correct side of tastefulness while being uproariously funny. "You knew exactly what it was about, but it was inoffensive. And he never even said the word" (Documentary). Littlefield had his concerns airing the show, but was ultimately immensely pleased with the results: "And that episode that went on the air was absolutely the definition of water cooler television. Everybody, the next morning at work—you did not want to show up and pour yourself a cup of coffee if you hadn't seen that episode" (Documentary).

Harry Castleman and Walter J. Podrazik also wrote that it was this type of controversial show subject coupled with brilliant writing to get around the censors that launched *Seinfeld* into the forefront of popular culture: "The topic itself would have been unthinkable a generation before, but in the increasingly explicit TV world it was considered a comic gem" (Castleman and Podrazik, 364).

Another important factor that was key in the development of *Seinfeld* was the previously unused method of "narrowcasting." That is, instead of trying to appeal to a homogenous, broad audience like nearly all situation comedies before it, *Seinfeld*'s writers and producers scripted and directed the show especially for a smaller, specific group of viewers. Because *Seinfeld* had chosen to narrowcast to a niche audience, NBC Broadcast Standards (the division of the network that approved or denied what its shows would air on television) was willing to take a chance on the controversial material. As NBC chairman and CEO Robert Wright stated, "I think the reason is because the audience of the show was narrow. And it was enthusiastic people, and they didn't have a problem with any of this." Wright also stated that because the audience was small, ratings were not high, and thus there were few advertisers who were pulling their advertisements from the program. Seinfeld says, "We kind of assumed that we had an audience that liked what we did. And we weren't thinking about maybe we should do things and make sure everybody gets it. There was a little core group out there that we were playing to" (Documentary).

Opportunity Knocking

Littlefield also stated that after Ted Danson called him and told him that he couldn't do *Cheers* anymore and *Time* magazine wrote an early obituary for NBC, reasoning that it could not survive with the near-simultaneous exits of *Cheers*, *The Cosby Show*, and *The Golden Girls*, it became almost *necessary* for *Seinfeld* to make it. With little else to turn to for primetime programming, Littlefield knew that *Seinfeld* "has to work" (Documentary). Seinfeld also said that he and David were starting to run out of believable, original ideas as well: "We weren't really trying to gain more attention, or we certainly weren't trying to be provocative in any way. We were just—as any TV show is—constantly struggling to come up with new ideas. And when you're struggling, bad ideas start to sound like good ideas. And crazy ideas start to sound like

sane ideas. And that's what happened in Season Four: a lot of crazy ideas started to make sense" (Documentary).

The first idea that seemed to make sense, which Seinfeld called one of David's more brilliant ideas, was to propose a story arc of Seinfeld and Costanza pitching a show to NBC, much like Seinfeld and David did in real life. The idea was met with a bit of skepticism from many, including Castle Rock executive Glenn Padnick, who thought there wasn't a big enough audience to sustain such an involved storyline: "I was of course concerned that here we were doing 'Inside Baseball' on a show that most people didn't know even existed." Alexander called the move self-aggrandizing and a step in the wrong direction as well (Documentary). But what *Seinfeld* lacked in a large audience, it was making up for in glowing reviews. And television critic Ray Richmond said that may have been the difference in NBC not pulling the plug early in the show's tenure. "NBC was one of the few networks that really seemed to care about critical response, more so than CBS, ABC. So when you had a show that was getting critical response, it wasn't going to keep the show on the air in the face of horrendous ratings, but if it was on the bubble, it was going to make the difference" (Documentary).

Because NBC was painted into a corner with no better show prospects, and because Seinfeld and David were desperate for sustainable plot ideas, the controversial and risky topics were ultimately given the green light. By doing so, NBC knew it could be setting back its primetime lineup for years and Seinfeld and David were putting the life of their show at risk. But both parties felt that it was necessary to grow the show, and it could not have worked out better for both sides.

A Concerted Effort to Separate from the Pack

But it wasn't just the situation that forced *Seinfeld* to take risks. Its creators set out to be different from the beginning. While it hadn't made its full content transition to Season Five yet, Season Three featured episodes like "The Parking Garage" and "The Chinese Restaurant," named after the setting of both shows. While most episodes of *Seinfeld* up until that point had adhered to a tried-and-true sit-com formula of taking place in a studio setting that usually featured Jerry's apartment or a corner coffee shop, *Seinfeld* was beginning to leave the studio soundstage for more and more shots. Seinfeld said at the 1999 U.S. Comedy Arts Festival in Aspen, Colorado, "We took the sitcom off the stage. Every week we were outside. That had never been done before" (*People* 1999). Also, as Johnson writes, the show slowly moved from a more traditional-looking sit-com to one that portrayed the growing urbanization of New York. More and more, the shots that directors for the show used were of the actors in very small spaces illustrating the confinement of a large society: "The *Seinfeld* camera rarely travels outside the confines of rooms, multilevel buildings, and compact cars" (Johnson 1994).

"The Junior Mint" was also a landmark "water cooler" episode for the series, given that it was another example of three of the transition traits that support my thesis: the show was shot outside of the familiar confines of Jerry's apartment and the coffee shop, the storylines were more risqué but censor-friendly given their crafty writing, and the dark selfishness of the characters clearly showed through.

In the episode, Jerry asks a woman he meets out on a date, but is embarrassed because he does not know her name. After she tells him it rhymes with a part of the female anatomy, George and Jerry's imaginations run rampant with crafty dialogue that is not offensive, but is the closest

thing to it while still being hilarious. Elaine runs into an old artist boyfriend named Roy who has slimmed down because of a sickness, and she becomes attracted to him again purely based on his appearance. When Roy's medical condition turns dire, George buys up much of his artwork in the hopes that he will die and the value will skyrocket. During Roy's surgery, which Kramer and Jerry watch in the viewing gallery of the operating room with some medical students, Kramer tries to get Jerry to try one of his Junior Mints. Jerry refuses and the candy is inadvertently flipped inside Roy's body cavity. In the end, Roy is spurred onto health when he learns of George's purchase, and Elaine is no longer interested in Roy when he begins to put on weight again after his successful surgery.

While not Emmy-nominated like "The Contest," "The Junior Mint" still left an indelible impression on the viewers, ranking high on many "best *Seinfeld* episode ever" lists. Seinfeld largely dispelled the praise the show received, believing much if it to be hyperbole, "I don't see how dropping a Junior Mint into an operation influenced the '90s" (*People*).

In an interview with Glenn Collins, Seinfeld stated that while his show is classified as a traditional sit-com, he never wanted to make it traditional in any sense of the word. "A sitcom idea, well, you know exactly where it's going to go. But we wanted to do a show where, well, you don't care where it goes. At all. As long as it doesn't go where you think it's going to go. Most sitcoms set up the situation and plug in one-liners. We try—I emphasize, try—to make the situation itself funny" (Collins 1991).

Another episode that set the future foundation of the show and brought humor to the treatment of a disabled individual was "The Bubble Boy." In it, Jerry and Elaine are in a car following George and Susan up to Susan's father's cabin for the weekend. Since Jerry was

recognized in a coffee shop by a fan, he agreed to stop by the fan's house to visit his adult son who lives in a plastic bubble due to an airborne sickness he suffers from.

George drives too fast and Jerry loses him on the highway. As a result George and Susan are forced to endure a surprisingly rude and cocky "bubble boy" for hours. The bubble boy challenges George to a game of Trivial Pursuit, and defeats him soundly. After an argument over a misprint on the possible winning answer, the bubble boy starts to strangle George. In the chaos, the bubble is punctured and ambulances rush to the scene. Meanwhile, Jerry and Elaine finally arrive amidst the craziness. The four of them venture to the cabin. Unbeknownst to them, Kramer has already arrived uninvited and accidentally burned down Susan's cabin with a cigar he received from George, originally given to George by Susan's father.

Only in *Seinfeld* could audiences enjoy the cathartic humor and take pleasure in George and the bubble boy's reciprocal rude treatment of each other. Elaine also takes much delight in the personal suffering of Jerry after getting into an argument with a fan at a truck stop. This episode in particular exemplifies one of the successes of the show: the four main characters take great delight in trying to sabotage the well-being of each other for their own personal enjoyment. Yet even when their misguided approaches to treating their friends with anything but respect backfire on them, it never stops Jerry, George, Elaine, or Kramer from continuing to live self-serving lives, a staple of the series' final five seasons on the air.

Breaking the Mold and Changing the Landscape

Bill Carter sums up the series with four major characteristics that were unique to the show and made it a lasting success, especially after the first three seasons that shuffled the program along at a snail's pace. He notes *Seinfeld*'s emphasis on the small details of life, such as

establishing male friendships; the minutiae of daily life in Manhattan; the inherently self-oriented approach to relationships in the 1990s and the quirks of eccentric characters was key to the show becoming the dominant force in primetime comedy. He writes, "Throughout, *Seinfeld* aimed to be a show that was only about comedy, unleavened by sweetness, sentiment or character development. No one watched the show to see favorite characters face challenges, overcome diseases or feel heartache. The goal was only laughter" (Carter 1997).

Harry Castleman and Walter J. Podrazik also wrote that self-centered characters somehow always creating conflict even from the mundane details of life was how *Seinfeld* set itself apart from other sit-coms, both past and present:

> Though stories were often based on such everyday activities as waiting for a table at a Chinese restaurant, collecting dry cleaning, or picking up a friend from the airport, all the characters were so totally self-involved that they inevitably introduced complications to the simplest acts…*Seinfeld* made fine comic art out of being judgmental, paranoid, mean-spirited, and distrustful when dealing with the world. As in *The Simpsons* and *Roseanne*, the *Seinfeld* characters knew that the world itself could not be trusted, and they were right, as the series managed to milk engaging comedy out of its borderline neurotic characters. (Castleman and Podrazik, 364)

While situation and opportunity played a critical role in the explosion of *Seinfeld*, those two aspects alone did not create the new standard of situation comedy in the 1990s, 2000s and even the present day. The fact that the *Seinfeld* spinoff, *Curb Your Enthusiasm*, has risen to become one of the top-two comedies in the history of HBO without the aid of a desperate

network or a cushy timeslot is proof enough that the content of *Seinfeld* is what transformed it into such a behemoth of humor. *Curb Your Enthusiasm* is the story of Larry David—who plays himself in the show—and his life post-*Seinfeld* living in Los Angeles. Much of the same aesthetics that made *Seinfeld* brilliant (multiple plots converging together in the last few minutes of the show, egomaniacal characters only out for themselves, and the foibles of everyday life) are perhaps even more pronounced in *Curb Your Enthusiasm*.

Because *Seinfeld* was not concerned with trying to pander to a broadcast audience but instead focused on narrowcasting—a trend that had not yet been applied to a network situation comedy for fear of being canceled and failing to reach the highly financially motivated goal of syndication—it had little trepidation in applying storylines involving masturbation, poking fun at the disabled and even near-fatal Junior Mints. But this narrowcasting fooled the audience into the so-called "third-person" theory. Those viewers who enjoyed watching such self-centered, dark characters were convinced that they were funny because they reminded them of people they knew—family members, friends, co-workers—or because watching such abhorrent behavior made the audience feel better about themselves. All the while audiences failed to realize that they were laughing because deep down, they possessed these qualities. It wasn't people they knew who blurted out their true feelings for others to their faces, made all of their decisions to benefit themselves, and took pleasure in the shortcomings of loved ones—it was the viewers themselves who thought and behaved similarly.

That is the biggest reason why *Seinfeld* was such a hit. Family-oriented sit-coms of the 1980s focused on love, learning, and a few laughs along the way. *Seinfeld* was an opposite with characters who seemingly prided themselves on never improving as people, purposefully undercutting their friends and reveling in the hilarity of the results of behaving so savagely.

Viewers wished that they could act in the same way—in a cathartic way of watching—because they saw similarities in these dark characters and themselves while projecting outwardly that they simply "knew" people like that.

Since *Seinfeld* premiered in 1989, the next two decades have featured several shows that used similar techniques trying to achieve the same success of the program. Some, such as *Friends*, *Curb Your Enthusiasm*, and *How I Met Your Mother* have been huge critical and popular successes. It's not a surprise that all three of those shows were originally inspired by *Seinfeld*. Others like *Emeril* and the American version of *Coupling* have failed famously. The recipe for success is not easy to duplicate, as many talented producers, directors, writers, and actors have been unable to recreate the sit-com magic of *Seinfeld*.

For instance, as Jason Mittell wrote, *Seinfeld* trusted its audience to be intelligent enough to discern and follow four different stories at once, something that post-*Seinfeld* shows have also undertaken. And plot interweaving isn't the only aspect of situation comedy storytelling that *Seinfeld* introduced either, as it also made episodic viewing a thing of the past: "*Seinfeld* typically starts out its four plotlines separately, leaving it to the experienced viewer's imagination as to how the stories will collide with unlikely repercussions throughout diegesis. Such interwoven plotting has been adopted and expanded by *Curb Your Enthusiasm* and *Arrested Development*, extending the coincidences and collisions across episodes in a way that transforms serial narrative into elaborate inside jokes—only by knowing Larry's encounter with Michael the blind man from *Curb*'s first season does his return in the fourth season make sense" (Mittell 2006, 34).

Conclusion

Before Season Four of *Seinfeld*, comedy was based upon the family, be it workplace, nuclear, or non-traditional. Each episode of previous situation comedy usually ended with some sort of moral lesson learned by the characters and explained to the viewers. Risqué storylines were simply off-limits. Actors, writers, directors, show runners, and producers alike almost never wanted to associate themselves with anything controversial for fear of being ostracized from the business or, more importantly, taken off the air before their program could reach syndication, where the majority of television was made. Since Season Four of *Seinfeld*, television comedies run to controversy, not away from it. No longer are shows concerned with appealing to everyone; they are dedicated to appealing to *someone* instead. *Seinfeld* that niche audiences are what keep shows on the air long enough to be syndicated, not mass audiences who have no loyalty to primetime shows that do not appeal to them.

But future show producers need not study the entire series. While the constraints of my research included only one set of eyes reading and viewing the articles and shows, future research would require more critically trained minds watching a wide-array of traditional 1980s situation comedies, the third season of *Seinfeld*, and the fourth season of *Seinfeld*. Television critics and aesthetic experts who have not already studied the show would also provide a much fresher look at the program, more than a decade after it has gone off the air. However, any comprehensive look at the entire series can be boiled down into one smaller piece: the fourth season of the series.

Because the show was launched into a coveted time slot due to many of the dominant 1980s NBC sit-coms going off the air, NBC taking a risk and giving the go-ahead on some of the

controversial storylines, the concerted effort to break free of the traditional sit-com mold, NBC wanting to appease media critics, and writing and producing the show in a narrow rather than broadcasting approach, *Seinfeld* was able to capitalize on a perfect storm of variables in its fourth season to become one of the greatest shows of all time, and has changed the way network comedies have been written and developed over the better part of the last two decades. David himself stated that he still feels the best episodes of the series took place in Season Four.

After all, it took a pretty special series for network president Littlefield to show up on the set and cook eggs, pancakes and waffles for the cast and crew, which he did before one of the first few episodes of the fifth season. NBC enjoyed being one of the top-rated networks for most of the 1980s thanks to shows like *The Cosby Show* and *Cheers*, but Littlefield knew that in order to continue that dominance, something special would have to take their places. And *Seinfeld* was just what NBC needed.

In many ways, *Seinfeld* saved NBC primetime. And NBC was fortunate enough that *Seinfeld*'s best season—the fourth season—went from nothing to something at just the right time.

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Effect of Text Messaging Bans on Fatal Accidents

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Abstract
Do text messaging bans make roads safer? To determine the answer to this question, a multivariate regression model was developed to determine how fatal accidents by state were affected by the following variables: texting bans, cell phone bans, primary versus secondary enforcement, time since bans were passed, vehicle miles traveled per state, gas and beer tax per state, percentage of population under 25 years of age, population density, and unemployment rate. The results indicate that text messaging bans do decrease fatal accidents and also decrease the danger of driving as the vehicle miles driven increases.

Introduction
In 2010, 2.1 trillion text messages were sent in the United States alone (CTIA 2011); that is more than 66,000 every second! Texting has become a staple of everyday life, and for many people not even driving in a car can stop their text messages from hitting the airways. Scientific studies have shown how dangerous texting is while driving, and many states have responded

with bans on texting while driving. Washington was the first state to do so in 2007. Today 30 states and Washington, D.C., have texting bans on all drivers, and eight states have partial bans. With all these bans going into place it is logical to question if these bans are doing what they were intended to do—are text messaging bans making roads safer? This is an important question because what is the purpose of a piece of legislation if it has no effect on the people it was made to protect?

This study is a cross-sectional comparison of states that have bans to states that do not. Variables considered include roadway fatalities by state, texting ban, other cell phone usage bans, primary versus secondary offence, population density, miles traveled on state roadways, blood alcohol content of drivers, beer and gas taxes, unemployment rate, and length of time ban has been in effect. This data was collected from the U.S. Census Bureau (2011), the Fatal Analysis Reporting System (FARS) (2011), and the Insurance Institute of Highway Safety (2011).

Literature Review

Since the cultural adoption of cell phones, there have been multiple studies on the effect of cell phone use on automobile accidents and distracted driving.

Wilson and Stimpson (2010) examined trends in distracted driving fatalities and their relationship to cell phone use, specifically texting volume, between 1999 and 2008. In this study, data were obtained from the Fatality Analysis Reporting System (FARS), which records data on U.S. public road fatalities. Wilson and Stimpson (2010) looked specifically at distracted driving fatalities, which are accidents in which drivers were inattentive, careless, or using cell phones, computers, fax machines, onboard navigation, or heads-up display systems. This data was compared to cell phone subscriber data from the U.S. Federal Communications Commission's Wireline Competition Bureau as well as text messaging volume data from Commercial Mobile

Radio Services Competition Reports. Wilson and Stimpson (2010) conducted a linear multivariate regression analysis to examine the relationship between state-level text messaging volumes and the number of distracted driving fatalities. They controlled for variables such as precipitation, temperature, percentage of vehicle miles traveled on urban roadways, total state vehicle miles, state unemployment rate, region, and year. Using this regression analysis they predicted the number of distracted driving fatalities if texting volume was zero. The results showed that the increase in cell phone subscriptions during this time did not correlate to the changes in distracted driving fatalities, but there was a strong relationship between the fatalities caused by distracted driving and the average monthly number of text messages sent in a state. Using their regression model, they predicted that the rapid increase in texting volumes resulted in more than 16,000 additional distracted driving fatalities from 2002 to 2007. Wilson and Stimpson (2010) also claimed that for the average state, an additional one million text messages sent per month would increase the distracted driving fatalities in that state by more than 75%.

Jacobson, Nikolaev, and Robbins (2010) studied the effect of cell phone bans on driver safety. They wanted to know if laws banning cell phone use while driving made roads safer, decreasing accident risk. They examined the accident rates in New York (the first state to have a statewide hand-held cell phone ban) by counties. Jacobson, Nikolaev, and Robbins (2010) compared counties' fatal automobile accidents and personal injury accidents before and after the cell phone ban took effect. Another important variable they looked at was driver density by county. They used a one-tailed t-test to analyze the data. The results showed that 46 out of 62 New York counties experienced a decrease in fatal automobile accidents, 10 of which were at a statistically significant level. All 62 counties experienced a decrease in personal injury

automobile accidents, with 46 being at a statistically significant level. Overall, New York experienced a decrease in both accident categories at a significant level with the ban.

Clarke and Loeb (2009), on the other hand, studied the effects of cell phones on pedestrian fatalities. This was the first study to specifically look at the effect on pedestrian fatalities. Their data came from various U.S. sources and included census data, a National Highway Traffic Safety Administration (NHTSA) study, and Cellular Telecommunications and Internet Association (CTIA) data, all from 1975 to 2002. Clarke and Loeb (2009) used a mathematical model and regression analysis to conduct their study. The variables they included were unemployment rate, per capita ethanol consumption, vehicle miles driven, total interstate, urban and rule highway mileage, population, blood alcohol content, real GDP, year, and number of cell phone subscribers. The results of the study suggested an interesting nonlinear effect. Clarke and Loeb (2009) found that when cell phones first became adopted they had a negative effect on pedestrian fatalities; however, at a certain number of cell phone subscribers the life-saving effect of cell phones overtook the life-taking effect. Then as cell phones subscriptions continued to increase, the life-taking effect again took over. Today, they believe that this life-taking effect is still dominant. As the number of cell phone subscriptions increase, the number of pedestrian fatalities also increases.

All three articles agreed that despite numerous past studies and conflicting results, there is little statistical evidence that increasing cell phone use is directly related to increases in automobile accidents or fatalities. All three, however, suggested that cell phones in some way have a negative effect on automobile accidents and fatalities.

I believe that cell phones have a negative effect on driver safety. We need to look deeper into how people are using their cell phones rather than overall use, similar to Wilson and

Stimpson's (2010) texting volume study. With the popularity of smartphones and the ability to access the Internet and use applications, will we see a greater increase in auto accidents as more and more people adopt this technology? Or will future cell phone technology advance so that the life-saving effect found by Clarke and Loeb (2009) increases and extends to drivers as well as pedestrians?

Economic Model and Data Description

$Accid = \alpha + \beta_1 text + \beta_2 cell + \beta_3\ primary + \beta_4 timepass + \beta_5 vmt + \beta_6 popdens + \beta_7 under25 + \beta_8 ur + \beta_9 beertax + \beta_{10} gastax$

The above equation is the basic economic model for my research. I investigated the effect of text messaging bans on road fatalities by doing a cross-sectional study among U.S. states. The variables used in the study are defined in table 1.

Table 1. Variable definition

Variable	Definition	Expected Effect	Statistics
Accid	Total number of road fatalities in a state in a certain year	n/a	Mean: 154.47 Standard Deviation: 152.66
Anybac	Total number of road fatalities in a state in a certain year with the driver being under the influence	n/a	Mean: 56.50 Standard Deviation: 58.01
Text	Whether or not there is a texting ban in effect.	_	% With Ban: 25.49% % Without Ban: 74.51%
Cell	Whether or not there is a total cell phone ban	_	% With Ban: 11.76% % Without Ban: 88.24%
Primary	Whether the ban is a primary or secondary law	_	% Primary: 77.45% % Secondary: 22.55%
Timepass	The time in months that have passed since texting ban has been in effect	_	Mean: 3.67 Standard Deviation: 10.65
Vmt	The number of vehicle miles traveled in one year (in millions of miles)	+	Mean: 4864.15 Standard Deviation: 5041.24
Popdens	State population density (population per square mile)	+	Mean: 380.60 Standard Deviation: 1357.88
Under25	The percent of the population that is from 5 to 24 years old	+	Mean: 0.2721 Standard Deviation 0.0159
Ur	State unemployment rate	-	Mean: 8.85 Standard Deviation: 2.15
Gastax	The state gas tax in dollars per gallon	-	Mean: 0.2493 Standard Deviation: 0.0728
Beertax	The state tax on beer in dollars per gallon	-	Mean: 0.2701 Standard Deviation: 0.2421

Note: Data for the above variables were collected from all 50 states plus Washington, D.C., for the third and fourth quarters of 2009.

The dependent variable is *fatalities*. This measures the total road fatalities in a state for a quarter (three months). I measured this variable in two different ways. First, I collected data on all fatal accidents for each state (accid). Then I collected data on all fatal accidents involving drivers with any blood alcohol content for each state (anybac). Creating these two dependent variables helped me examine the effect of alcohol consumption on my research. The data for these variables came from the National Highway Traffic Safety Administration Fatality Analysis

Reporting System (FARS). The mean number of total fatal accidents is 154.47, while the mean number of fatal accidents involving alcohol is 56.5. The standard deviations are large for both total fatal accidents and fatal accidents containing alcohol, 58.0 and 152.66, respectively. The highest number of total accidents in a quarter was 743 and the lowest was five.

The first independent variable, and the variable of interest in this study, is *text messaging bans while driving (text)*, specifically which states have them and which states do not. This is a dummy variable, so states with bans were coded as "1" and states without a ban were coded as "0." As of today, 30 states plus Washington, D.C., have bans on texting while driving that equates to about 74.5% of the country with bans. These bans are on all drivers, regardless of age. This data is from the Insurance Institute of Highway Safety (2011), which keeps an updated list of laws restricting cell phone use for every state.

The second, third, and fourth independent variables deal with details of the text messaging bans. *Cell* is another dummy variable stating whether or not there is an all handheld cell phone ban in a state. This means that using a handheld cell phone in any way while driving is illegal. This is important because drivers in states with stricter laws for all cell phone use while driving will probably be less likely to use their cell phone while driving. The more laws there are, the less likely texting while driving will occur. Today eight states plus Washington, D.C., enforce an all handheld cell phone ban (IIHS 2011). *Primary* is defined as the degree to which the ban can be enforced; that is, whether the law is primary or secondary. Primary means that a driver can be pulled over and cited just for texting while driving whereas under a secondary law the driver would have to be breaking another law in order to be cited for texting while driving. This variable helped determine the degree to which the ban is enforced, which has a direct link to the ban's effectiveness. States with primary enforcement should have a lower number of

fatalities; therefore, there should be a negative relationship between fatalities and the third independent variable. *Timepass* measures the number of months that have passed since the text messaging ban was established. The length of time a ban is in place will affect how well the ban is enforced and followed. I would expect that states with longer amounts of time with the ban in place will have lower fatalities, so this would be a negative relationship between the variables. Texting bans are new to a majority of the states so the mean of this variable is relatively small.

Vmt is the number of vehicle miles driven in a state in a given year. This is one of the most important control variables to include when conducting studies on traffic accidents and fatalities. After all, the number one cause for traffic accidents is simply driving. The average number of vehicle miles driven in the data set was 4,864.2 million miles. Due to the variety of state sizes, we see a wide range with this variable. The District of Columbia recorded the least number of miles at approximately 294 million miles while California had the greatest number of miles with 27,975 million miles. This data was collected from the U.S. Department of Transportation Federal Highway Administration (2011).

The remaining variables include, *state population density, population under the age of twenty five, state unemployment rate, state gas tax, and beer tax*. These are all common variable used in state-level studies dealing with traffic accidents and alcohol consumption. These variables were collected from U.S. census data (2011) and data from the Tax Foundation (2011).

Regression Analysis and Results

I ran several regressions to determine the best model. When running regressions to determine what combination of variables created the best fit regression I used total fatal accidents *(accid)* as my dependent variable. Once the best model was determined I ran the same

regression on fatal accidents where alcohol was involved *(anybac)*. My original regression with

the 10 original variables produced the following results found in table 2:

Table 2: Total fatal accidents

Variable name	Estimated coefficient	Standard error	T-ratio 91 DF	P-value
Text	-38.843	20.63	-1.883	0.063
Cell	-48.258	15.49	-3.116	0.002
Primary	24.949	22.76	1.096	0.276
Timepass	0.28978	1.013	0.286	0.776
Vmt	3.09E-02	8.21E-04	37.64	0.000
Gastax	-115.66	58.13	-1.99	0.050
Beertax	26.628	14.64	1.818	0.072
Under25	-247.9	248.4	-0.9981	0.321
Popdens	1.02E-03	6.26E-03	0.1621	0.872
Ur	1.2074	1.89	0.6389	0.524
Constant	91.014	76.8	1.185	0.239

Note: $R^2 = 0.9561$, R^2 adjusted $= 0.9512$.

This regression had an adjusted R^2 value of .9512, which shows that the variables included do a

good job in explaining the variance in fatalities. However, not all the variables are statistically

significant. This led me to run a variety of tests to create the best model possible. After running

many regressions and econometric tests, I came up with my best model, displayed below:

Accid = α + $\beta_1$text + $\beta_2$cell +$\beta_3$vmt + $\beta_4$gastax + $\beta_5$beertax + $\beta_6$beertaxsq + $\beta_7$textavgvmt

In the final model some variables from the original regression were eliminated. There

were also a few variables added. The most important variable added was *textavgvmt,* which is an

interaction term between text and the deviation from the average vehicle miles traveled in a state.

For example, this variable for Illinois in 2009 with a texting ban would be 3,328 (8192-4864),

the difference in vehicle miles traveled from the mean multiplied by one. States with lower than

average vehicle miles traveled, like Delaware, will have a negative number: -4,145 (719-4864).
For states without a texting ban this variable will be zero. This variable made the final regression
more significant and made the interpretation of the text ban variable easier to understand and
apply. The final regression was run twice, first with *accid* as the dependent variable and second
with *anybac* as the dependent variable. The statistical results for both regressions are shown
below in tables 3 and 4.

Table 3: Total fatal accidents final regression

Variable name	Estimated coefficient	Standard error	T-ratio 94 DF	P-value
Text	-14.95	8.745	-1.709	0.091
Cell	-27.986	10.11	-2.769	0.007
Vmt	3.24E-02	1.00E-03	32.39	0.000
Gastax	-100.02	47.26	-2.116	0.037
Beertax	111.65	44.2	2.526	0.013
Beertaxs	-87.545	37.09	-2.36	0.020
Textavgv	-4.60E-03	1.17E-03	-3.925	0.000
Constant	11.38	15.54	0.7325	0.466

Note: R^2 = 0.9600, R^2 adjusted = 0.9570.

Table 4: Fatal accidents including alcohol

Variable name	Estimated coefficient	Standard error	T-ratio 94 DF	P-value
Text	-10.038	4.702	-2.135	0.035
Cell	-8.9523	6.136	-1.459	0.148
Vmt	1.28E-02	8.63E-04	14.77	0.000
Gastax	-47.955	30.71	-1.562	0.122
Beertax	48.326	23.13	2.09	0.039
Beertaxs	-36.745	20.32	-1.808	0.074
Textavgv	-3.42E-03	8.53E-04	-4.003	0.000
Constant	2.7444	6.345	0.4325	0.666

Note: R^2 = 0.9217, R^2 adjusted = 0.9158.

The final regression output with *accid* as the dependent variable showed six out of the seven variables to be statistically significant. The variables *cell, vmt, gastax, beertax, beertaxsq*, and *textavgvmt* were all significant at the 95% level. The text variable had a p-value of 0.09 so it is significant at the 91% level. This regression provided the highest adjusted R^2 value, 0.9570. This means that the variables included in my best regression account for 95.70% of the variation in total fatal accidents. This high number shows that the data is of high quality and the model is good.

The same regression run with *anybac* as the dependent variable showed four out of seven variables to be statistically significant. *Text, vmt, beertax*, and *textavgvmt* were all significant at the 95% level. *Cell* recorded a p-value of 0.148, *gastax* was 0.122, and *beertaxsq* was 0.074. This regression showed less explanatory power with an adjusted R^2 of .9158.

Cell phone bans were shown to decrease total fatal accidents in a state by approximately 28 accidents per quarter (three months). Approximately nine of those fatal accidents per quarter involved alcohol according to the *anybac* regression. However, this was not statistically significant.

The regressions showed a significant increase in fatal accidents as the vehicle miles traveled in that state increases. For every 100 million miles driven in a state per year, you can expect approximately 3.24 fatal accidents per quarter. From that same 100 million miles, approximately 1.28 out of the 3.24 fatal accidents per quarter would involve alcohol.

Gas tax only showed significance in the total accidents regression. If a state increases its gas tax by $.01, you would expect to see a decrease in fatal accidents by approximately one per quarter. The effect on alcohol-related accidents was approximately half of the total, showing that

a $.01 increase on the gas tax would decrease fatal accidents involving alcohol by approximately 0.48 per quarter.

The regressions showed that beer taxes increase fatal accidents until the beer tax is nearly $0.65 per gallon. This was not expected and may be the result of an omitted variable that beer tax rate is correlated with, such as drinking habits. However, when beer taxes become greater than $0.65 per gallon there is a negative effect on fatal accidents. Therefore, a state that wanted to curb fatal accidents by increasing a beer tax would have to charge more than $0.65.

In terms of the variable of interest, these results indicate that texting bans do in fact decrease fatal accidents. This is significant at the 90% level for total fatal accidents and at the 95% level for fatal accidents involving alcohol. When interpreting this variable in the regressions, we must interpret both text and the interaction term between texting bans and the deviation from the mean vehicle miles travel as the same time. The regression shows that in terms of total fatal accidents, in states that drive the average vehicle miles traveled in a year (≈4,864 million miles) a texting ban will decrease fatal accidents by 14.95 per quarter. Fatal accidents involving alcohol account for approximately 10.038 of those accidents per quarter. So we can conclude that texting bans only decrease non alcohol-related accidents by approximately 4.95 per quarter.

The beta on the interaction term tells us that as vehicle miles traveled in a state increases, states with texting bans will see less of an increase in fatal accidents. For example, a state with no texting ban that is one standard deviation above the mean vehicle miles traveled in a year will see an increase of approximately 163 total fatal accidents per quarter compared to the average state. If that same state had a texting ban, it would see a decrease of 14.95 fatal accidents per quarter plus an additional 23.19 less fatal accidents per quarter. So a state one standard deviation

above the mean in terms of vehicle miles traveled and a texting ban in place will only see a 124.86 increase in fatal accidents per quarter instead of the full 163 it would see without a texting ban. This shows that texting bans curb the effect of vehicle miles traveled on fatal accidents.

Conclusion

Are text messaging bans making roads safer? Yes, based on the research above texting bans do in fact decrease the number of total fatal accidents and accidents involving alcohol. This study shows a significant relationship: as vehicle miles traveled increases, states with texting bans see a smaller increase in fatal accidents. This lessened effect of vehicle miles traveled on fatal accidents can be simply put—texting bans make driving less dangerous on a mile-per-mile basis.

In conclusion, this research shows through multivariate regression analysis the effect of texting bans on fatal driving accidents. This research, although limited, did produce significant results. Given the opportunity to continue this research, I would change a few aspects. First, I would collect more data over longer periods of time. This data only reflects two quarters of 2009; a wider range of data would provide more significant results. I would also include additional variables, such as percent of driving population under 25 and rural versus urban driving miles. A deeper look into this research would be required before making text messaging and driving policies based on this analysis.

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The Impact of Public Opinion on Policy-making Processes in the European Union: The Case of Immigration Policy

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Abstract

Much of the research done on European Union (EU) public opinion has focused on the influence of the public on the direction of integration. However, there has been limited research that addresses the impact of public opinion on the process of national and supranational policy-making in general. This study draws from previous research on the nature and impact of EU public opinion while looking at recent changes in the immigration debates in Germany and France. Here I attempt to uncover the effects of politicizing debates in Europe on the ability of the supranational and national legislators to produce policies in contentious policy areas. This study looks at the cases of Germany and France, utilizing the example of immigration policy to further illustrate the impact of public opinion on these processes. I then conclude with possible

implications of increased public participation in the EU policy-making process to provide some insight about the complex issue of democracy in Europe.

Thomas Jefferson, the third president of the United States, said, "The force of public opinion cannot be resisted when permitted freely to be expressed. The agitation it produces must be submitted to." However, certain topics in the United States, such as immigration, have been debated at length, with the public being widely split on what actions the government should take to resolve such issues. Within the United States the immigration debate has centered around issues of cheap labor, humanitarian assistance, and homeland security. Due to the multifaceted nature of the debate and the polarized opinions of the public, the government has found it hard to have a coherent policy on the issues.

Outside of the United States the immigration debate has often revolved around similar issues and with similar controversy. Within the relatively new structure of the European Union (EU) attempts to maneuver public opinion on such highly debated topics has been difficult. As a supranational organization that makes decisions that affect each member state, finding consensus is often a difficult, daily task. Fortunately not all issues that the EU makes decisions on are so contentious, with most issues stirring limited public interest (Follesdal and Hix 2006). This reduces the impact of public opinion on many areas that the EU now regulates.

This paper looks at what makes policies salient in the EU and how the resulting public opinion affects the national and supranational legislative processes in these areas. I utilize two case studies, Germany and France, and their recent developments in the immigration debate to hypothesize about these effects.

Literature Review

Public Opinion and EU Policy-Making

The EU is often criticized for its "democratic deficit," meaning that the institutions are failing to fulfill the duties of a democracy. The debate about how democratic the EU is, or whether it ought to be democratic at all, has been a contentious one. According to Andrew Moravcsik's argument, this lack of democracy is not necessarily a bad thing, but is due to the lack of interest by the public in the work of the EU (Follesdal and Hix 2006). This means that for EU representatives to be accountable to the public interest, there must first be public interest and public opinion on the issues. Follesdal and Hix (2006), however, claim that with an increase in contestation over EU positions and more debates over the policies discussed in the EU, more people will be interested in these topics and the EU will be better able to represent European citizens. Assuming that the EU can accurately work in the people's interests, therefore, is not enough.

As the EU becomes increasingly transparent and attempts reforms, citizens are slowly gaining more understanding of the policy-making process at the supranational level and there is a slow shift toward increased accountability. Currently citizens seem to hold little power within the EU policy-making process through common democratic processes. However, as explained by Follesdal and Hix (2006), by politicizing and deliberating over the policies in the EU, citizens can gain an increased role in these policy areas through increased pressure for more accountable representatives in the supranational structure of the EU. This will increase the public opinion flow around EU-level policies and increase pressure on representatives to be accountable to their constituents. And alongside true European elections, with adequate participation and a focus on the future of Europe as a whole, and not individual nations, it is possible that the EU can address

its limited democracy in policy-making in such ways. For now it seems that in most areas, public opinion is limited on EU policies and has limited effects on supranational policy-making.

Many politicians understand the negative impacts that increased public pressure can have on their ability to pass necessary but somewhat unpopular policies. Often the EU is able to pass pro-European polices that would not pass in most national legislatures and avoid blame for their unpopularity through normal democratic checks (Putnam 1988; Moravcsik 1998, 2). For instance in the areas of immigration, French President Nicolas Sarkozy recently passed many policies that cracked down on a growing rate of Roma immigrants in such a harsh manner that he lost a lot of public support ("Sarkozy Vows" 2010). However, if similar actions were taken at the supranational level, the lack of understanding about the EU's policy-making structure would likely result in confusion on who to hold accountable for such unpopular decisions. Increased pressure on EU representatives will limit the ability of the EU to play this role as accountability increases. But without accountability the EU has limited checks to make sure that it is acting in the public's interest.

When Public Opinion Really Matters

An increase in public interest in EU-level policy-making process will likely take quite a while, however, due to a lack of public interest and knowledge on the EU policy-making process. But in some contentious policy areas there is already clear pressure on representatives to take public opinion into account. Often these are policies that have been highly politicized at the national level and tend to center around issues that directly affect the larger public. In these highly salient areas, governments are restrained in their ability to forgo national sovereignty and allow the EU to make decisions on these policy areas due to domestic pressures. This includes issues of national identity, which can drive negative views of integration or immigration when

national identity is strong, or can drive positive views of the EU when national identity is weak (Luedtke 2005, 102; Kritzinger 2003, 226). In addition to national identity, issues of economic cost and benefit are also highly politicized. Research has shown that both citizens and governments tend to oppose any high-cost policy actions within the EU, and such economic factors are weighed when formulating opinions on integration (Hooghe 2003, 292-93).

Irrespective of whether a policy is related to national identity, economic benefits, or other issues, it is clear that the ability of politicians to correctly frame and politicize issues and maneuver public opinion is important to maintain their popularity. For instance, research has found that "where elites are united on Europe, national identity and European integration tend to coexist; where they are divided, national identity produces Euro-skepticism" (Hooghe and Marks 2005, 437). This shows how framing and politicizing identity issues can affect public opinion on related policy areas. Additionally, incumbents at the national level must take into account their public support before changing the direction of European integration. Therefore, when their public support is relatively high, accounting for greater political security, elites show a greater willingness to ignore public opinion and push for further integration (Nguyen 2008). When elites are more willing to increase integration, they cannot unilaterally make these decisions and therefore must balance "what they sincerely desire, what their constituents ask for, and how those two considerations are weighed in a particular political context" (Nguyen 2008, 287).

Public Opinion and the Immigration Debate

Among the highly politicized policy areas at both the national and supranational level in Europe is immigration. Because of the highly debated nature of immigration in Europe, public opinion on the issue has been important in the policy formulation process on both levels. While the national governments still maintain a large amount of control over immigration policies, the

issue of immigration has become a two-level game in Europe beginning with the 1997 Amsterdam Treaty, when the supranational structure now known as the EU gained some control over the area of immigration (Luedtke 2007, 1). In this way, both the EU and national governments have the ability to pass down laws or regulation on immigration, resulting in competition for control over this policy area. Obviously, the overlap in jurisdiction can result in conflicting actions on the two levels. However, as explained before, the supranational process can result in the passage of laws not favorable at the national level due to a limited level of accountability within the EU.

Whether the EU should have more control over immigration has therefore resulted in divergent opinions in correlation with the politics of the two-level game. Adam Luedtke (2007, 34) explains that the "high political salience of immigration, in combination with strong domestic protection for immigration rights" correlates with interest of governments to forgo national sovereignty and allow the EU to take over immigration policy, allowing national governments to pass the blame for an unpopular policy in this area to the EU and maintain their popularity. On the opposite hand, "political salience, in the absence of strong national rights protections, pushes government to *oppose* EU control over immigration policy" (Luedtke 2007, 32). This is due to the high cost to national governments of imposing stricter rights protections for immigrants which would likely be passed down by EU directives. Here there is a relation to the argument by Hooghe (2003), outlined above, which states that both elites and citizens are unwilling to take actions at the EU that would be costly. Therefore, those which have strong protections for immigrants wish to push the burden of these unpopular policies to the EU, where those without strong rights protections for immigrants are unwilling to undertake these unpopular and costly directives. This shows how governments continue to balance the costs and benefits of

such policies when addressing the issues of immigration, and how this further complicates the ability of the EU to take action in this area.

While this debate has slowed the progress of EU legislation on immigration, there have been a few directives passed by the EU. Among the most important is the EU directive on the status and rights of long-term residents, which attempted to standardize treatment of immigrants across countries (Luedtke 2007, 1). While this law was initially generous toward immigrants, the debate over the directive eventually watered it down to be less generous than many existing national laws, including those like France, with a government that wished to use the EU directive as a means of passing laws that they could not pass at the national level (Luedtke 2007, 1). Therefore, while the immigration debate has entered the supranational sphere of policy-making, the EU still has a limited ability to take action in this area. While these actions are far from ending the immigration debate in Europe, they are significant. They have constrained movement by national governments on the treatment of immigrants without clearly solving many of the problems that public opinion has been centered on, including economic costs and national identity.

Reactions to the struggles with immigration have varied across the EU. Some countries, such as Germany, are seemingly willing to work within EU parameters to address immigration by continuing on a path of assimilation and demand-driven immigration, although somewhat unsuccessfully (Jacoby 2011). On the other hand, France, discontent with its immigration situation, has decided to overstep EU law with the expulsion of a large part of its Roma population, and faces action for violating EU directives on the free movement of people and human rights obligations ("EU Warns" 2010).

With the issues of immigration in both Germany and France being highly contentious, often revolving around similar problems, it is unclear why these nations have taken divergent actions on the issue. In this paper I attempt to uncover what influence public opinion and the politics of policy-making processes of both the national and supranational legislatures in the EU have on the issue of immigration in France and Germany. I hypothesize that split public opinion, coalition politics, and supranational standards and laws constrain actions on the national and supranational level, especially when the policy area is highly salient. I then conclude with possible implications an increase in public interest in EU policy-making can have on the supranational policy-making process. This includes whether or not democratic accountability is favorable due to the constraints resulting from strong public opinion.

Case Studies

Immigration Situation: Germany

Within Germany, the issue of immigration has revolved largely around economic costs and benefits, making it highly debated. In the 1960s Turkish immigrants migrated to Germany and became a source of cheap labor, which was needed at the time (Carle 2007, 150-51). These immigrants were seen as a short-term necessity for the economic growth of the nation. However, over time the need for workers in Germany changed from purely cheap labor to an increasing need for skilled workers. In 2001, Germany attempted to pass legislation that would attract skilled workers, especially information technology professionals (Jacoby 2011, 3). However, Germany's economic growth has resulted in it becoming a destination for all kinds of immigrants, especially for asylum-seekers and refugees, who often provide no benefit to the nation, with some 440,000 immigrations arriving in Germany for humanitarian reasons in 1992

alone (Bauder and Semmelroggen 2009, 4). This increase in other types of immigrants led Germany to attempt to restrict immigration to "utility-driven immigration" by putting together a system to "select immigrants based on human capital that could benefit Germany's economy" (Bauder and Semmelroggen 2009, 4-5). This included various measures to address the lack of skilled workers in Germany, which remained a "serious threat to continued growth" (Jacoby 2011, 3). However, these attempts were not matched with success, with a limited reduction in unwanted immigration and a limited increase in needed immigrants (Jacoby 2011, 3). Balancing needed workers and addressing the issues of integration has contributed to the contentious debate around Germany's immigration system.

Immigration debates, in addition to focusing on economic issues, have also largely been centered on identity and nationality issues. Due to the large number of Turkish immigrants in Germany, the ability of immigrants to integrate and assimilate to German culture has become a major issue in the German society. Even in the early days of the immigration debate, the issue often revolved around ethnicity and national identity and the ability of non-ethnic Germans to integrate into German culture, making the debate increasingly contentious (Carle 2007, 151). In recent debates German Chancellor Angela Merkel (2005–present) has proposed "citizenship requirements that place the onus on migrants to conform to German culture. Those not capable of being assimilated in this manner will be encouraged to leave" (Carle 2007, 149). To aid immigrants in the assimilation process the state began providing integration courses in 2005, which account for some 140 million Euros of German public expenditure (Jacoby 2011, 2). These programs have attempted to balance the need for workers and the pressure for integration, but are still unsuccessful in addressing all of the issues related to the growing rate of immigration in Germany.

Immigration Situation: France

As in Germany, immigration in France has also been a subject of contentious debate, especially in relation to economics. Like Germany, France allowed immigration early in its history as a source of cheap labor. However, "what was initially a simple question of economics in terms of a cheap and flexible workforce has, since 1974, been transformed into an issue with social, political, and cultural as well as economic dimensions" (Marthaler 2008, 383). With a decrease in the need for a large cheap labor source, labor migration was halted in 1974. However, like Germany, as the market changed France became increasingly interested in skilled workers. This resulted in many policy attempts to increase attraction to highly skilled individuals, including the creation of new "skills and talents" permits for workers in 2005 (Marthaler 2008, 390). France has also become an immigration destination for other types of immigrants. In 2005, some 70 percent of immigrants in France had come not for work, but for family reunification (Marthaler 2008, 383). With the growing rate of immigration, France saw a shift in immigration policy focused on "selective" immigration that was "tailored to France's economic requirements" under President Nicolas Sarkozy (Marthaler 2008, 390). Sarkozy attempted to address the issues of "unwanted" immigration while balancing the need for skilled workers, but, much like Germany, these policies were not particularly successful.

In addition to economic issues, identity and racial issues have been especially significant in the debate over immigration in France. With a large Roma population, including some 15,000 illegal immigrants and a variety of other ethnic minorities, the issue of immigration has increasingly been related to strong racial tensions (Gillis 2010, 2). As with Germany, non-European or ethnic minorities have been a target of concern, with immigrants being labeled as a "threat to French national identity, living off of state handouts, fuelling crime and creating a

climate of insecurity and even subversion" (Marthaler 2008, 384). President Sarkozy has been at the forefront of campaigns against immigrants and has highly politicized the debate around security issues. In 2007, Sarkozy targeted immigrants, saying, "if there are people who are not comfortable in France, they should feel free to leave a country which they do not love" (Marthaler 2008, 391). In these ways the president has attempted to address some of these immigration concerns expressed by the public.

Politicized Debate: Germany

While immigration has been largely contentious due to its direct impact on citizens, the debate around immigration in Germany is increasingly being politicized as a way to influence public opinion. As Bauder and Semmelroggen (2009, 9; 22) explain, immigration has often been an attractive topic for opposition politics, and party and parliamentary politics have also been important influences on the debate. Their study examined the discussion of immigration in the German parliament and how parties have politicized the debate around issues such as economics. Even in the early years of the immigration debate, the ability of a politician to address the concerns of the public in relation to immigration was often important for their political success. In 1985, former Chancellor Helmut Kohl's "failure to curtail immigration boosted the prospects for parties to the right of the Christian Democrats" (Carle 2007, 151). This shows political importance of the issue of immigration and how action on immigration has had important implications for incumbents.

In recent debates politicians have taken various stances on the issue of immigration in Germany, showing that immigration continues to be a highly salient and contentious policy area. Angela Merkel herself has claimed that multiculturalism has "utterly failed" in Germany (Jacoby 2011, 2). Horst Seehofer, the minister-president (comparable to a U.S. governor) of Bavaria,

stated that "Germany did not need any more immigrants from 'other' cultures and called for a crackdown on 'integration refusers'" (Jacoby 2011, 2). These leaders show how the inability to fix the immigration issues in Germany has led to a growth in pessimism over immigration. However, others have taken a more positive view toward immigrants, such as Federal President Christian Wulff, who claims that Islam belongs in Germany (Jacoby 2011, 2). These quotes show how the issue of immigration has evolved, especially the idea of integration.

Much of this recent political debate on immigration has been the result of elite choices to politicize the debate. During 2007, when Angela Merkel's approval rating was soaring as a result of her actions on the economic recession and the environment, the issue of immigration attracted little attention ("2 Years" 2007). However, as her approval rating began to drop in 2010, the issue of immigration quickly became important in Germany. The debate revolved around Merkel's statement about the failure of multiculturalism in Germany, which was a relatively accurate appraisal of its assimilation failures. However, this debate was increasingly seen as a "response to her party's disastrous approval ratings" and an attempt to reach "out to disgruntled conservatives and to many Germans who harbor strong prejudices about immigration" in order to gain political support ("Merkel Walks" 2010). While Merkel was likely utilizing this rhetoric for political reasons, it seems the government's inaction on the real issues is likely to blame for the lack of success for this political stunt.

Politicized Debate: France

In a similar manner, Sarkozy has increasingly politicized the immigration debate in France in an attempt to shore up his political support. For example, although immigration was only salient to some 14 percent of the public in 2002, Sarkozy quickly made immigration a main priority in the run up to election (Marthaler 2008, 387). "Sarkozy's strategy was to win back far-

right voters by directly addressing their concerns," and by framing the issues as a "law and order issue" and cracking down on immigration, Sarkozy was successful in addressing the concerns of the far-right and winning their support (Marthaler 2008, 387-88). Much like the case of Germany, recent debates about the issue have focused on how best to use the situation to gain political support.

However, if public support seemed to be in favor of Sarkozy's tough stance on immigration, this is does not explain his loss of support after the Roma crackdown. One issue in his strategy may have been that immigration was politicized to gain the support of a small far-right group, and therefore Sarkozy's attempts to address their concerns resulted in a radicalization of his immigration policy position, but did not bolster support from the average French citizen. Additionally, although framed as a security issue, many saw the policy move as a diversion for the economic difficulties facing the nation (Bennhold and Castle 2010). This further reduced the credibility of the President's actions because much of the public felt that the actions against the Roma were unjust considering their politically weak nature (Gillis 2010, 2). So while cracking down on immigration seemed to be a political move when support was low, it is clear that Sarkozy's actions were not in line with public opinion on the issues. Although he was able to take action, these actions were clearly misled.

Government Structure: Germany

While both Germany and France have been able to politicize the debate on immigration, it is clear that there have been divergent actions on the issue of immigration policy, with Germany unable to significantly change its policies and France swiftly cracking down on immigration. One limitation for Germany is the coalition government, which has weakened the ability of the government to take action on a variety of issues, especially on highly contentious

issues like immigration. In the case of the Grand Coalition[1] led by Angela Merkel[2] from 2005 to 2009, the issue of immigration was deliberated at length. While the previous coalition of left-leaning parties sought to reform German immigration law entirely, Merkel focused on reframing the issue around integration of minorities (Clemens 2010, 20). However, this called for a change in the position of the coalition partner, the leftist SPD, which had a different view on how to deal with immigration (Clemens 2010, 5). After much deliberation, a compromise was reached that allowed targeted or "utility driven" immigration as agreed to by the SPD, although conservatives hoped to address the current issues of integrating migrants and train Germans to deal with the long-term shortage of skilled workers for the future (Clemens 2010, 20). With these different points of view about how to address these issues "it is no accident that Germany's ruling coalition was all but paralyzed last fall as it tried to address the issue" (Jacoby 2011, 7). It is clear that the divergent policy positions among coalition partners can further add to the complexity of passing any legislation on the issue of immigration.

With the immigration debate being highly politicized, and to some extent polarized, it is unclear when and how Germany will be able to take action to address the concerns of the German public. It is clear why it has been difficult to take action, but how long the nation can withstand the problems of the current situation is unclear. Can Germany successfully integrate foreigners and increase its attractiveness to skilled workers? And how long can its citizens wait for these processes to take effect? It is possible that shifting the blame for inaction between parties has delayed discontent with the current immigration situation. However, it is unclear how long rhetoric can continue without substantial action.

Government Structure: France

Unlike the indecisive actions seen in Germany, Sarkozy came down hard on immigration and continues to crack down on the issue. Due to the powerful position of the president in the French system, Sarkozy has been able to take swift action almost unilaterally. The BBC claims that hundreds of Roma have been sent back to Romania and Bulgaria and more than 100 illegal camps dismantled in a "controversial crackdown on Roma (gypsies)" in France ("Sarkozy Vows" 2010). However, after having gained support by addressing immigration, it is no wonder that Sarkozy seems baffled that his support has plummeted since his crackdown on illegal immigrants. While facing possible consequences for overstepping EU law and human rights obligation, Sarkozy also faces "record low approval ratings" (Bennhold and Castle 2010).

While Sarkozy clearly was able to take swift action on the issue, it seems that his choice to radicalize his position to gain the support of the far-right was a political misstep. Sarkozy's inability to address the issues of the majority and his extreme crackdown methods showed a misuse of his power and resulted in public discontent. While Germany was split on which side of public opinion to follow, it seems that France was able to follow one strand of public opinion but alienated the majority in the process.

Case Comparison

While Germany has been slow in addressing its immigration issues, France has recently been able to make quick advancements on illegal immigration. However, neither policy choice has been successful in addressing the public concerns of either country. Both countries have large numbers of ethnic minorities and asylum-seeking immigrants, both have a great need for skilled migrants, and both have highly politicized debates over these issues. However, Germany and France have recently taken divergent paths on the issue of immigration. Neither nation has successfully addressed the concerns of its citizens as a result of public opinion.

In Germany, the immigration problems call for rapid action. However, public opinion is split on which actions to take. This manifests itself in the formation of coalition governments unable to take much, if any, action to address the problems surrounding this contentious issue. While some want to address the need for skilled workers, others are wary of the cultural impacts. Actions have been taken to address the issue of integrating migrants, but there is still room for improvement on all issues surrounding immigration concerns. Chancellor Merkel has recently attempted to shore up support with anti-immigration rhetoric, but the coalition has still made limited progress in addressing the real immigration concerns of the country.

On the other hand, France has been able to take quick action, but to no avail. Although Sarkozy gained public support after a few tough campaigns on immigration, recent crack downs on the Roma population have created some controversy. Public opinion that previously benefited the president has now become strong disapproval. A crackdown against illegal immigrants was not what the public had in mind, and it has seen through Sarkozy's attempts to divert attention away from difficult economic times by this distraction.

In both the case of Germany and of France, the actions of the government are harshly constrained by the politics of public opinion. Because immigration is a salient issue in these two countries, public opinion must be taken into account. However, when public opinion is as polarized as it is in Germany or as misleading as it is in France, it is hard to tell what will please the public.

Within the larger context of the European Union, actions taken at the national level are further complicated by EU law. As is the case in France, by attempting to address France's immigration issues, Sarkozy overstepped EU law and human rights obligations. This further complicates Sarkozy's actions as the public seems to side with supranational law. On the other

hand, the pressure for Sarkozy to act might have been relieved if the EU were able to gain greater control over immigration in the first place. This could possibly allow the EU to pass policies favorable to the ideal of Europeanization. However, since immigration is such a salient issue, policy-making at the supranational level is also likely to be constrained by divergent public opinion. However, if the EU were able to take swift action on the issue with limited checks on accountability, some of the major issues could be addressed in a manner not possible at the national level.

Conclusions

With increased debate over immigration as a result of politicizing the issue, the ability of governments to act on immigration has been especially limited. Both German Chancellor Angela Merkel and French President Nicolas Sarkozy attempted to address the issue of immigration as a means of gaining political support. However, public opinion has restricted both nations in effectively acting to address the real immigration problems in these countries. In the case of Germany, divergent opinions about how to address immigration have resulted in inaction by a split coalition government. In France, the radicalization of the president's policy position in an attempt to gain support from anti-immigrant groups has resulted in an unpopular crackdown on France's weak Roma population. Neither of these countries has effectively addressed the issues at the center of the debate, such as integrating immigrants and attracting skilled workers. However, both leaders continue to fight pressure for action on immigration because of its importance.

Additionally, both nations are constrained by the inability of action on immigration at the supranational level. This is largely a result of strong opposition by citizens to cede areas of high-

politics, like immigration, to the EU. However, few directives have been passed that outline some standards on immigration. Whether the EU would be better suited to deal with the immigration issue if given the chance, and whether this shift could happen in the near future due to public opinion is still unclear.

Through the example of immigration policy debates in Germany and France, it is clear that public opinion can have serious impacts on the legislative processes at both the national and supranational level. This also illustrates how an increase in public interest in EU policies can have serious implications. With the call for increased democratic accountability in the EU, there would also need to be increased public involvement in the issues. For contentious issues it is clear that divergent public opinion, coalition governments, and EU law can all impact the legislative process. It is in this context that it becomes unclear whether an increase in public influence is favorable due to its ability to slow action, especially in contentious areas that seem to need immediate attention. Although the ability of politicians and Eurocrats to effectively legislate in the public interest is questionable, one must also understand the impact of increased public involvement on the efficiency on European legislative processes. As Sarkozy and Merkel have seen, public opinion can be difficult to maneuver.

This study attempted to draw from previous research to understand why certain issues become politicized and analyzed two cases to uncover the implication of the resulting force of public opinion on the legislative process. While not an exhaustive study of the debates in Germany and France, this research helps illustrate the implication of public opinion on immigration policy legislation in these two cases. Future research should expand the cases of study past the Franco-German comparison. Expansion past the scope of immigration policy is also needed to further generalize about the implications of public opinion on the politics of the

national and supranational policy-making processes. This research is likely to uncover further

complications resulting from an increase in public involvement that will shed light on the

implications of a more democratic supranational body.

Notes

1. The Grad Coalition was comprised of the CDU/CSU Christian Democrats (conservatives) and the SPD, Social Democrats (liberals).
2. Merkel is a CDU/CSU conservative.

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Oshkosh Scholar Submission – Volume VI – 2011

Post-Event Urban Flood Mapping by Amateur Aerial Photography and Assessment of Potential Damage: Case of Fond du Lac, Wisconsin

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Abstract

Several communities are so focused on the positive benefits of a rising economy that they ignore the negative effects of the urbanization process, such as the exacerbation of flooding by increasing impermeable surfaces. Even when a flooding disaster occurs, the communities' fear of another strike decreases over time along with its preparedness. For instance, on June 12, 2008, the city of Fond du Lac, Wisconsin, was blindsided by a major flood because many never knew that their residence was located in a flood-prone area. Most city roads were reported to be underwater and in some places bridges were even submerged by the Fond du Lac River. A lot of the damage was so severe that the Federal Emergency Management Agency (FEMA) awarded Fond du Lac more than $1.2 million to assist with repairs of homes and the city. As with the case of Fond du Lac, mapping flood prone areas can prepare potential victims and enforce local floodplain management policies. To accomplish this, FEMA launched the Map Modernization

project, which aims to update the nation's flood maps. However, the agency is not able to do this alone and has decided to partner with local agencies to produce more accurate flood maps. Therefore, this project investigated the possibility of mapping urban flood areas from amateur aerial photographs and compared the resulting flood map to the most recent FEMA maps of the study area. On a broader level, the study updates the FEMA flood maps of Fond du Lac, Wisconsin, and the methodologies developed in this study can help similar cities across the nation adjust their flood maps.

Statement of the Research Purpose

Urban natural disasters are worsening because, among other reasons, an increasing portion of the world's population lives in large cities. Thus, urban hazards, such as flooding, pose serious challenges for the future. Exposure and vulnerability are the components of hazard that are changing fastest and have the gravest implications for urban populations (Mitchell, 1999).

Flooding is the most common environmental hazard due to the established attraction of humans to river valleys and coastal areas and because these natural features are widely distributed (NC Division of Emergency Management 2004). Flash flooding in urban areas often takes residents by surprise. According to Gruntfest and Handmer (2001), the high potential for loss of life and disruption from flash flooding requires identification of the location of flooding, properties, and the people at risk. Therefore, investment should not only be applied to identifying high-risk flood areas, such as the ones near rivers and oceans, but also to the mapping of other potential urbanized flood-hazard areas. I propose to study the possibility of using a relatively simple, fast, effective and economical way of mapping flood hazards in an urban setting, which could benefit other small cities.

As evident in Chan's (1997) study, flood events that took place as a consequence of rapid development and environmental degradation are quickly forgotten because people choose to see only the positive benefits of a rising economy while ignoring negative side effects. Flood maps could be used as a constant reminder of hazards. Flood risk management should be a part of community development and residents could play a role in managing flood risks without relying on external entities (Osti et al. 2008). The procedure and results of the proposed flood hazard mapping tasks will encourage community-based flood management and improved local use of

flood maps. I plan to accomplish that goal by using the spatial analysis tools of Geographic

Information Systems (GIS). That spatial technology is capable of assessing and estimating

regions of hazard by creating thematic maps and overlapping them to produce a final hazard map

(Mansor et al. 2004). Therefore, this study will use GIS to integrate spatial data and produce a

flood risk map that is accessible and easily understood. I also plan to develop a post-flood

mapping guideline to be implemented during and immediately after flood events as well as adjust

existing FEMA maps and provides an assessment of potential damage.

It's important to have accurate flood maps because the National Flood Insurance Program

(NFIP), directed by FEMA, requires local governments to enact floodplain management

guidelines. If these guidelines are followed, private developments in designated flood-prone

areas are eligible for federally subsidized flood insurance (Dzurik 2003). FEMA has already

created more than 80,000 flood insurance rate maps for roughly 20,000 communities and

provides flood insurance rate map data to be used with commonly available desktop GIS and

mapping programs (Whitney 1997). To bring both the information and the technology up to date,

FEMA launched a Flood Map Modernization program called the Map Modernization Project. It

aims to make the nation's flood maps more accurate and to convert them to a GIS format. FEMA

cannot do this sizable task alone, and has therefore utilized community programs and partnered

with local agencies (Quarles et al. 2002; Engelhard 2004).

The site selected for this project is the city of Fond du Lac, Wisconsin (fig. 1). On June

12, 2008, Fond du Lac was devastated by a major flooding event (fig. 2). Since then, the city has

been in the process of updating floodplain maps and regulations that haven't changed since 1988.

Updating the floodplain maps is part of a FEMA effort that uses digital technology to make the

maps easier to interpret (Veremis 2008). According to Fond du Lac Community Development

director, Wayne Rollin, "there are no big changes in terms of floodplain boundaries, but a big change in the usability and quality of the map." However, many residents say that the June 2008 flood was unexpected because they never knew that they resided in a flood-prone area, thus they were not prepared to take action. For this reason, the city of Fond du Lac is an ideal site to conduct a study on ways to delineate the extent of past flood events for mapping purposes. Thus, I proposed to map the 2008 Fond du Lac flood areas using oblique amateur aerial photographs and to assess the recent FEMA floodplain map of the site. The study proposed and assessed a relatively cheap way to create, adjust or update FEMA flood maps of Fond du Lac and the methodology and lessons learned can help similar small cities across the nation adjust their flood maps.
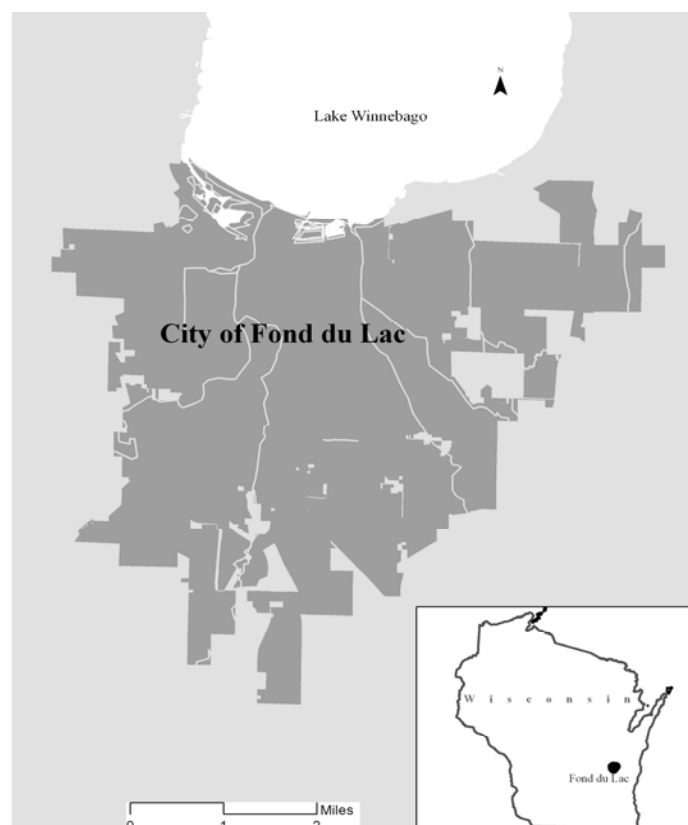
Figure 1. Location of Fond du Lac in Wisconsin including Lake Winnebago and river networks.
Photo created using ArcMap 9.3.

Figure 2. Oblique Aerial photograph showing severity of damages to the city of Fond du Lac the morning after the event. *Photo courtesy of Adam Dorn, Fond du Lac Sheriff's Department, and Fond du Lac Reporter.*

Proposed Methodology

The use of GIS and remote sensing for mapping the flooded areas and an overlay analysis (spatial comparison) to assess the local FEMA flood map were the two major components of this project. To begin mapping the flooded area I needed to make a selection from several aerial photographs that were taken after the event. These were received courtesy of Adam Dorn, a GIS specialist serving at the Fond du Lac City/County building. Specific photographs with an optimal aerial view (covering a wide area) and an oblique vantage point were chosen. However, since the photographs were not geographically referenced to a specific location within Fond du Lac, I worked with Fond du Lac representatives to discover their locations.

After finding the photographs' locations, I fitted them to the other spatial data (map) by matching their features with corresponding features on other layers (i.e., roads) that are in a

known coordinate system. This matching process is referred to as *georeferencing*, the task of aligning geographic data to a known coordinate system. I then reduced their distortions with a process called *rectification*, the process of applying a mathematical transformation to an image so that the result is a *planimetric* (having no indications of relief) image. This is done because raw digital images, such as the oblique photographs used for this project, are not aligned with any conventional geographic coordinate systems, and they commonly contain internal geometric distortions that occur during the image acquisition process (California Institute of Technology 2007). During a georeferencing task, control points must be accurately located, sufficient in number for the transformation model selected, and distributed uniformly across the image (MacroImages Inc. 2009). With the newly georeferenced/rectified aerial photographs, flooded areas can be traced/digitized and interpolated between photos. To do this, I delineated the contour of the affected areas of the June 2008 Fond du Lac flood event and created a new layer with the ArcMap software.

For the second aspect of the study, the most recent layer of FEMA flood maps of the area (a polygon layer) was compared to the layer of flood polygons resulting from the completion of the first part of the project. The two (assumed dissimilar) polygon layers were subject to a spatial overlay analysis technique, which provided coincident (common/overlapping) areas as well as non-coincident (non-overlapping) areas of each input polygon. The use of this technique is supported because we often need to overlay layers that have completely different underlying geographies in order to combine attributes from the two input layers into a third output layer (Fullerton: California State University 2009). *Union*, *intersect*, *symmetrical difference* and *identity* are the four types of overlays one could use to compare the two flood maps. However, I only wanted to produce the coincident and non-coincident sections of both maps. Therefore, I

used only the intersect and the symmetrical difference overlay methods. Intersect preserves features that fall within the area extent common to the inputs while symmetrical difference preserves features that fall within the area extent that is common to only one of the inputs (Chang 2009).

Overview of Resulting Methodology

The four major components of this project were the use of GIS and remote sensing for determining the flooded areas, the application of union and overlay GIS analysis to assess the flooded areas not accounted for in the FEMA flood maps, a damage assessment of the areas, and the determination of the possible cause of the flooding (riverine vs. inadequate storm drainage).

Assessment of the Flooded Area

I first used a sample location of the flooded area that I selected from several aerial photographs taken after the event. Specific photographs with an oblique aerial view (covering a wide area) were chosen to conduct the processes of georeferencing, rectification and delineation of the flooded areas. However, because the photographs of the selected area were fewer than needed and some were severely oblique, the photos I could rectify were severely disconnected (with respect to distance) and did not cover a large enough area (fig. 3). This is because only photos of flooded areas were taken (instead of the entire city). Therefore, I could not use them alone for a manual flood delineation as originally suggested. Instead I used all available photographs (including the severely oblique ones) of the site that displayed flooded areas in the following process.

After finding the photographs' locations, I represented the flooded extent (on the photo) by digitizing points over the corresponding ground features using a process called point

digitizing. Each point was assigned a flood intensity value based on a scale of 1 to 3: "1" described minimum flooding, "2" described moderate flooding and "3" described maximum flooding (fig. 4). I *interpolated* (estimation of surface values at unsampled points based on known surface values of surrounding points) the newly digitized flood points of the area using the Ordinary Kriging[1] method (a form of interpolation). From the output of the interpolation (fig. 5), I selected the cell values that were greater than two in order to distinguish areas that were moderate to severely flooded from the areas that were barely or not flooded at all (fig. 6). I then converted the grid containing severely flooded areas from raster (representation of the world using a surface divided into a regular grid of cells) to vector (representation of the world using points, lines, and polygons) to compare them to the FEMA layer (also vector) by using a union overlay analysis process.
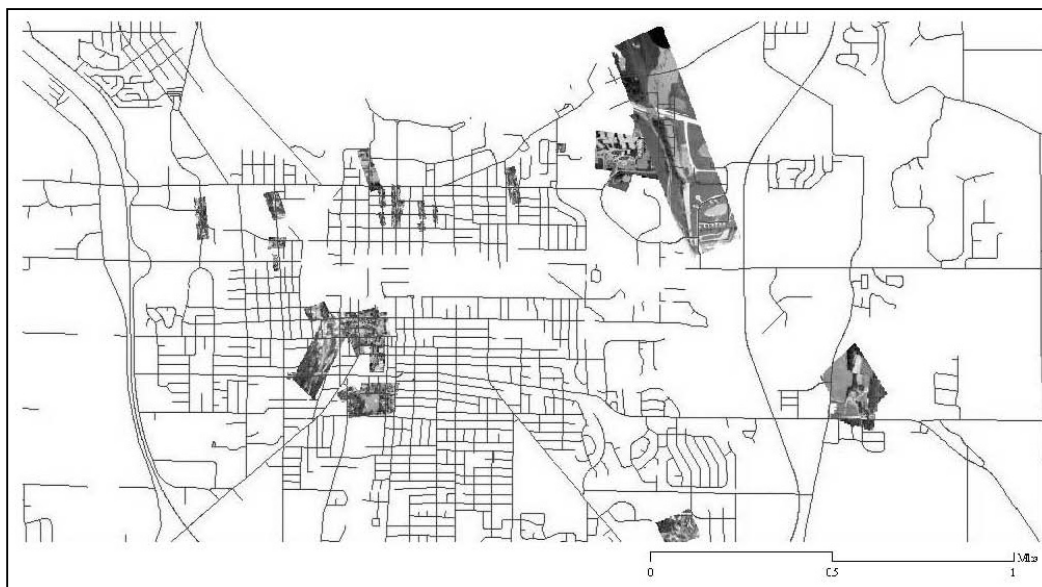
Figure 3. Some rectified oblique photos.