Political Polling and the 2016 Election

Political polling has taken a front and center role in modern United States politics at all levels. Policies and public images are carefully crafted around weekly opinion trends by a host of different polling institutions, and miniscule sentiment shifts on hot button topics frequently become headlines in leading journals. Considering the ever-growing importance of political polls in the American political mechanism, and given the narrowness of support margins on many important issues, even small mistakes in the practice can quickly spiral and produce shockingly wrong predictions. Perhaps the best recent example of this is the 2016 election, in which near all the major polls predicted the then-Democratic party candidate for presidency, former Secretary of State, Hillary Clinton, to win the election (Katz 2016). Although it could be debated that they were correct, in that she did indeed win the majority (Krieg 2016), the numerical superiority was nowhere near the 10% victory margin predicted for Hillary Clinton by certain polls (Quinnipiac 2016).

In the immediate aftermath of the election, professional pollsters attempted to give explanations for what had just happened. One of the most frequently discussed phenomena was nonresponse bias, which takes several forms (Lavrakas 2008). The first was refusal, in which certain segments of the population refused to participate in polls. Low education appears to be one such variable driving refusal, in which individuals with higher educations are more willing to take polls than individuals with lower education levels. In an election segregated by education level, addressing type of sampling bias can be critical in more accurately predicting election results (Cohn 2016, Flood 2016). The other important type of nonresponse bias commonly discussed post-2016 was noncontacts, a phenomenon which takes place when part of the

population is inaccessible to the pollster. Thus. the poll does not give an accurate reflection of society. While this may seem to be a smaller and smaller problem given smartphones and the internet, it is important to acknowledge that much of the rural United States still did not have reliable cell service in 2016 (Wheeler 2016), and a conservative estimate of 1.7 million Americans live in a rural area with no internet service (Snider 2018).

However, even in the case of response by participants, the aftermath of the election began to have pollstersn questioning whether there was an an element of falsehood in the answers given to certain questions. Dubbed the "shy-Trump" effect, pollsters across the board suspected that certain respondents who actually were set on voting for Republican party presidential candidate Donald Trump did not truthfully reveal their intended choice candidate when asked by a poll (Cohn 2016, Mercer et al. 2016). Some suspected deep mistrust of established institutions led to concealing true political views, while others suspected that supporting Trump was socially toxic. Essentially, voters for unpopular candidates choose to lie in polls to save face.

Descriptions of this phenomenon first came to prominence following the 1982 California gubernatorial race in which African American mayor Tom Bradley of Los Angeles overperformed in polls, yet lost at the ballot box . Dubbed "The Bradley Effect," the assumption is that certain white voters stated false support for the black candidate, or falsely claimed to be undecided in order not to be judged a racist for voting against the black candidate (Mercer et al 2016, Langer 1989, Zernike 2008, Cohn 2016, and many others). The explanation has gained traction following election trends for both Bradley and a slew of other African American candidates across the United States in the past 40 years (Zernike 2008). However, it is unclear whether these white voters falsely claim support for the black candidate only when responding to

a live interviewer. Likewise, the literature raises few questions as to whether the discrepancy in support is a conscious or subconscious decision, calling into question whether this behavior can properly be called "lying" or "falsifying answers" (Langer 1989, Cohn 2016 respectively).

The Bradley Effect typically results in a statistically unlikely supermajority of "undecided" voters turning out for the less socially popular candidate, as was the case for white Virginia Republican gubernatorial candidate J. Marshall Coleman winning over black Virginia Democratic candidate L. Douglas Wilder in 1989, despite polling behind. The near loss of black Democratic mayoral candidate David Dinkins despite polling a supermajority in New York City prior to the election was attributed to the same factors (Langer 1989). However, the Bradley Effect is typically defined along racial lines to explain a very specific voter phenomenon in the United States in which black politicians typically overperform in polls among white voters. The 2016 presidential election lacked a black candidate, but there is an unmistakable connection between the Bradley Effect and the "shy-Trump effect."

This more general effect dubbed "social bias" effects--that socially unpopular candidates tend to poll worse than their actual support level--links together the "shy-Trump" effect with the Bradley Effect. Social bias effects tend to arise when there is an element of shame in one of the responses, often in self-reporting behavior, beliefs, and past actions. A startlingly clear example of this is rampant over reporting in voter turnout rate following elections which does not line up with the turnout numbers at the ballot box, because respondents would rather lie than admit they did not vote (Morin-Chasse et al. 2016).

This broader application of the social bias effect was much discussed prior to the election, and even received public attention from candidate Donald Trump himself who stated the following:

> In other words, people say, 'I'm not going to say who I'm voting for,' And then they get [the results], and I do much better. It's like an amazing effect. (Shepard 2016)

His campaign manager, Kellyanne Conway, likewise theorized that:

> Donald Trump performs consistently better in online polling where a human being is not talking to another human being about what he or she may do in the elections. It's become socially desirable, especially if you're a college-educated person in the U.S., to say that you're against Donald Trump. (Shepard 2016)

This explanation had previously been unpopular among professional pollsters and pundits and remained so throughout the election process (Zernike 2008, Kim 2008, Mercer et al. 2016, Cohn 2016, Shepard 2016). However, Conway's theory of online polling did raise questions when live phone interviews at the time had candidate Hillary Clinton polling about 4% ahead of candidate Donald Trump, while online polls had her polling about 2.6% ahead, not far from the final 2.1% lead in ballot box. Some political pundits noticed this trend early on as well, and theorized months before the 2016 election that perhaps the reason the LA Times was polling Trump's support considerably higher than other polls of the time could have been caused by its exclusive online mode as opposed to employing live callers as was the norm (Flood 2016). The article also remarked that Trump's lead at the time in TargetPoint, Gravis Marketing, Public Policy Polling, Rasmussen Reports and SurveyUSA shared the common thread of being robopolls conducted by machines.

Prior to the 2016 election, Morning Consult researcher Kyle Dropp carried out an experiment to explicitly test whether live phone calls skewed answers in polls (2016). The experiment tested the difference in responses on online polls versus polls conducted on the phone with a live operator. The study found that there was no overall significant social bias effect for the whole population, but that wealthy and more-educated voters did have a social bias effect, where phone interview results were skewed by some sort of 'shy-Trump' effect for this subset of voters specifically. Dropp explicitly concludes that "Yes, there are shy-Trump voters. No they won't swing the election." The theory behind this statement was that both Clinton and Trump were socially stigmatized candidates so they both would have this factor at play. However, it is worth questioning this assumption, as both candidates were stigmatized in very different ways. Throughout the election cycle, both Donald Trump and his supporters were frequently called racist by mainstream media outlets with few comparable examples criticizing the Clinton supporters in this way (Milbrank 2016, Benen 2016, and many others). Whether the 2016 election was, indeed, swung by these shy-Trump voters or some other factor is difficult to say, but the confidence placed in Clinton's victory may have been misplaced.

Another more thorough experiment in early 2017 again attempted to test whether the mode of a survey (online or phone call) affected policy opinions (Kennedy et al. 2017). The effects were on average fairly small, around 1.8%, however with important trends. First, Republicans appear to have far more conservative platforms on a web poll than in a phone call. This was elicited especially well when the web poll revealed over 10% more agreement with controversial statements such as "Immigrants are a burden to our country" or "There should be a national law enforcement effort to deport all immigrants living in the U.S. illegally." That is to

say, the questions with arguably the highest social stakes had very significant differences based on whether respondents were confronted with a live person. Conversely, questions with socially neutral connotations either way, such as "free trade agreements have been a bad thing for the US," fared almost exactly the same in both modes.

This leads questions as to whether the mode of the survey is really the variable at play that is causing different answers. With robopolling showing similar trends to online polling (Flood 2016), perhaps it is *some aspect* of a live phone survey that triggers a face-saving effect on only specific socially unacceptable answers to a specific subset of the population. The true anonymity of an online survey or a robot caller may not suffice to trigger rules of social conduct and interaction. Instead, interaction with a human, not the phone polls as a mode, may be the true prerequisite for initiating a different answer based on social bias effects. That is to say, live contact with another human, whether through an in-person survey or a phone call, triggers a face-saving mechanism only in situations deemed necessary, and unequally across different questions varying in social risk.

Priming

Statistically significant results in Dropp (2016) show that some aspect of direct interaction with another human substantially distinguishes a live phone call from modes of indirect contact like online polling and robopolls. A phone interview may be carefully scripted, the interviewer trained, and the dialed number truly random, but the human element seems to trigger a social bias effect unlike non-human methods. That is to say, the mere effect of having another human "present" in the interview may constitute an overlooked *priming* factor.

Priming is a psychological effect which occurs naturally as sensation turns to perception, and large amounts of information are analyzed, categorized, reduced, and given meaning prior to conscious awareness, which then subconsciously affects our judgments in some way (Bargh 2014). That is to say, elements of the environment in space or time subconsciously affect human behavior, usually without conscious awareness. Although the field of psychology has long grappled with many aspects of priming, such as duration and strength of effect, types of priming, and experiment methodology, the base premise of priming as a concept appears to be relatively uncontroversial (Bargh 2014). Most early studies revolved around word list memorization and recollection, where semantic information related to a word was demonstrated to be stored alongside the physical word itself because synonyms were frequently being "recalled" by participants (Storms 1958, Segal and Cofer 1960, Grand & Segal 1966, Koriat & Feuerstein 1976).

However, this phenomenon has been extended far beyond simple semantic priming experiments. Zillman (1978) conducted an experiment showing that horror films can cause excitement and arousal which then affects treatment of a significant other in a subsequent context. Ambady et al. (2001) revealed that the nature of the stereotype in a children's illustration on a math quiz, whether focusing on Asian or female identity, affected Asian female students' performances on a math quiz for better and worse, respectively. Papies et al. (2013) demonstrated that handing out flyers for a diet recipe versus a control recipe prior to entering a store caused overweight customers to buy 75% fewer snacks, even when the customer had entirely forgotten that they had been handed a flyer.

Priming methodology has gradually been brought into political science as well. Berger, Meredith, and Wheeler (2008) shows that the context of the polling location affects support for relevant policy: school locations increased support for school funding initiatives, and the phenomenon occurs outside of conscious awareness. This raises important questions about the role of the environment both in voting locations but also in interview locations, and demonstrates the possibility that someone walking in a schoolyard could be significantly influenced to answer more positively about education funding, merely from their current location alone. Chong and Druckman (2010) carried out two experiments from a different angle, examining the impact of different briefings prior to a poll question. In two surveys, they prefaced the questions with varying background descriptions, and expected some change in voting behavior based on the information given immediately prior to asking the question. For example, when asking respondents about support for the Patriot Act, different briefings emphasized either the threat of terrorism or the right to privacy. They found highly significant priming effects from this type of priming both at that moment and over time in follow up study, and stated that citing terrorism statistics prior to asking about the Patriot Act increased support for the law.

One general trend in this flourishing field is that "the main natural prime is the behavior of other people, including nonverbal emotional expressions and body posture" (Bargh 2014, referencing Chartrand and Bargh 1999). This remark alone could provide theoretical underpinnings to the political polling trends in which human interaction triggers a behavioral shift in respondents and causes them to answer differently from an unprimed situation such as an online poll. However, recently psychologists have even taken these findings a step further, and found that behavioral priming not only occurs from observed behavior in another person, but

also can be triggered from *anticipated behavior*. Smith and Mackie (2014) produced a review of current literature to posit this novel type of behavioral priming, and the situational example chosen in the introduction is worth quoting verbatim:

> Imagine someone who sees a hated politician making distasteful comments on a news show. If this perceiver knows that her father regularly watches this news show and admires this politician, she may mentally simulate his favorable reactions to the politician's comments. As with any instance of priming, that activated material (favorable evaluations) may influence the perceiver's own response, perhaps making it less unfavorable. Such an effect would represent a novel type of priming, and indeed social influence, that occurs without any direct observation of, or communication from, the other person.

This behavioral priming effect from anticipated beliefs intersects nicely with stereotype theory, in which respondents are found to routinely construct anticipated belief systems for an individual based on which group identities they belong to. Diekman et al. (2002) found, for example, that respondents made sharp differences in anticipated support for women's rights issues by sex, and systematically underestimated men's predicted support for women's interests and female-stereotypic positions. Imhoff et al. (2016) found that age (among many other variables) primed preconceived notions of a person's political beliefs substantially in the United States, where young individuals were perceived to be more socially progressive than older individuals. Brandt (2017) employed similar stereotype methodology to Imhoff et al. (2016) and found that black and Latino individuals were predicted to be much more socially liberal than white individuals. LGBT identities are overwhelmingly predicted to be much more socially liberal than cisgender, heterosexual identities (Imhoff et al. 2016, Brandt 2017).

These findings imply that many axes of a person's physical identity may subconsciously prime anticipated political views of the individual in other people, which is intuitive. Certain behavioral psychology studies have additionally argued that anticipated political views are enough to prime changes in individual behavior, especially when concerning discussion of politics (Chartrand and Bargh 1999). This is extended even further in psychological literature, which has a long history of analyzing socially desirable answers in participant studies (Weber and Cook 1972). Thus, I argue that perceived identity of a political pollster may indirectly prime behavior in respondents' answers through ideological stereotyping. While this effect may be predicted to be strongest in person, such as in door-to-door interviews, sociolinguistic research in recent decades has shown that acoustics of the human voice itself, like a physical appearance, subconsciously reveal much more of an individual's identity than many realize.

A Summary of Linguistic Axes of Variation

Most salient aspects of identity, both chosen and unchosen, are reflected in spoken speech. These are quantifiable variations at all levels of language, from the physical waves of speech sounds to vocabulary choice, from intonation to body language. Many of these traits rely on stereotyping both within and outside a speech community, meaning that not all individuals from a certain identity will speak with the linguistic traits expected from that community, and not all users of a specific trait will necessarily belong to the community that linguistic trait is attributed to. There is an understood intracommunity variation in speech styles that is expected for any sociolinguistic paradigm, and discussion of a specific group's dialect traits is meant to capture two main points: a dialect feature's usage rate is significant in that group compared to the

general population, and its use is understood to be part of that group's identity either at the conscious or subconscious level.

Regional origin and dialect is salient to most every language community in the world and dialect studies make up a substantial part of many early grammars[1]. However, accuracy of dialect perception is another matter completely: although individuals are skilled at determining difference from their own speech variety, they often struggle to tell other varieties apart. In the United States, for example, there are far more linguistic dialect areas than an average speaker would recognize, and most Americans can only distinguish between the Northeast, the South, and the Midwest/West, and even then without much reliability (Clopper and Pisoni 2004). However, this category is slightly different from the following ones because the variation is outside the normal day-to-day speech community.

Age, for example, is a fairly universal axis of judgment. On a day-to-day level, it is quite easy to elicit an estimation of age from a stranger on a phone call, despite having never met them in person. Decades of sociolinguistic work have demonstrated not only that age estimations based on voice exist, but that they are usually fairly accurate (Ptacek and Sandler 1966, Shipp and Hollien 1969, Ryan and Burk 1974, and many others). In fact, our intuition for age is so deeply ingrained that individuals can provide fairly accurate age estimates of people speaking other languages, although not quite as accurately as the intuition of a native speaker of that language (Nagao and de Jong 2006).

Gender and sex perception, too, are strongly distinguishable in speech, as proven through decades of work (Trudgill 1972, Coates 1986, Strand 1999). Women can be distinguished in

[1]Most Tamil and Sanskrit grammars explicitly address regional variation, dating back to the fifth century BCE (Zvelebil 1973).

American English partially through higher pitch of voice and other contours of smaller voice tracts, but also through sociolinguistic variation, such as fronting the vowel in GOOSE[2] and performing "vocal fry"[3] in very specific contexts of an utterance (McAlpine 2018, Shaw and Crocker 2015). Fairly recent changes in society have been reflected in the field, with calls for breakthrough in gender theory to be matched in step with sociolinguistic method (Bucholtz 2002). These calls were by and large heeded, and a renaissance in gender sociolinguistics has come with new and detailed studies on trans and non-binary voices (Zimman 2017, Shar 2018, Jørgensen 2016, and others). It is worth noting that although notions of gender and sex have, indeed, become more complex on the whole, from a perceptual standpoint all that matters for priming is that some judgment about gender has been made, whether correct or not.

The same holds true for sexuality, specifically marked sexuality such as gay or lesbian. Gay male speech, in particular, has a history of study of several decades now, and acoustic correlates in the United States include slightly different sibilant frequencies (sounds like <s> and <sh>), higher base pitch, and more dramatic pitch variation especially within a word (Levon 2007, Jacobs 1996 for a more thorough review). "Sounding gay" as such is a real set of measured features which can be produced by gay and non-gay individuals alike. Further corroboration of

[2]Capitalized tokens such as GOOSE are utilized in English dialect studies to draw focus to the underlying class of words with that vowel quality. This is because phonetic description ungrounded in word classes (i.e. /u/->[ʉ]) makes cross-dialectal comparison very difficult because dozens of dialectal chain shifts affect every vowel of English across the world, but basic lexical items tend to be fairly standard across dialectal lines. For example, discussion of a BATH-TRAP distinction is meaningless to most Americans who pronounce those two vowels identically, but the capitalized tokens imply that some dialect of English in the world produces different vowels for those two word classes.

[3]"Vocal fry" is the lay term for creaky voice or laryngealization in linguistics. This is a cross-linguistic phenomenon which produces meaning contrast in certain languages such as Mazatec (Blankenship 2002) and Modern Danish (Basbøll 2005). Vocal fry is used sociolinguistically among some American women (and increasingly young men), and is perhaps best known as being the way in which Kim Kardashian ends her sentences, for example.

this phenomenon is shown by an acoustic analysis of Puerto Rican Spanish in which the /e/ phoneme is more raised in marked gay speech than in straight speech, showing that this is a crosslinguistic phenomenon (Mack 2010). Once again, for the purposes of priming in political polling, it is the *perception* of sexuality of the caller, not the true sexuality that matters.

Education, class, and income are three variables which are far easier to tease out in econometric data than in linguistic terms. Some studies, for example, show that specific features such as increased rates of /t/ release word finally by politicians is accompanied by perception of higher intelligence (Podesva et al. 2016). Certain variables such as "walking" versus "walkin" are perceived along educational lines, and speakers who produce "walkin" variant are perceived as less educated (Campbell-Kibler 2009). However, Campbell-Kibler admits that the same variable could easily be perceived as a regional difference or a class difference, and that teasing out the difference may be complicated. In the same vein, Labov (1986) examined rates of the r-dropping in three department stores of varying class. Employees were mostly r-less at the store frequented by the lower class, but /r/ production was moderate at the middle-class store, and high in the highest-class store. In this scenario, it becomes unlikely that employees of the same rank at a higher-class store are more educated or wealthy than those at a lower-class store, so Labov posits a social prestige system more along class lines which governs stratified speech in cities such as New York and Philadelphia. This vague "social prestige" variable is malleable and is more easily measured in United States society, where education, income, and class correlate so highly that measure of one can be used as a substitute for another. The more abstract nature of a term like social prestige versus family income also allows for easier comparison with

non-Western societies where other aspects such as lineage, occupation, or natural skill may have far more bearing on social prestige than education or income.

Finally, race is linguistically salient in American society. This is fairly peculiar to the United States and should not be overgeneralized, as racial dynamics differ widely across societies. African American English and Chicano American English are to some degree the product of centuries of race relations in the United States. Communities separated by insurmountable divides, traditionally visualized as mountain ranges or oceans, will gradually drift apart in speech practices into different language varieties. However, these divides need not be physical: centuries of institutionalized segregation at all levels of society has the same effect as the Atlantic Ocean, for the purpose of dialectal studies. In the United States, centuries of racial segregation has led to racialized dialects, most notably with the emergence of a series of African American English (henceforth AAE) dialects alongside more traditionally acknowledged white Standard American English dialects (henceforth SAE). This has taken on many names over the decades in public space such as “ebonics” or “blaccent” and, is now typically referred to in academic circles by acronyms AAE (African American English) or AAVE (African American Vernacular English).

Although AAE is mutually comprehensible with most other varieties of English, many features have been found at all linguistic levels which distinguish it from the rest. As in any dialect, there are individual lexical items which originate from the communities that are not found in other dialects, such as “ashy” (dry skin), “diss” (disrespect), and so on. On a

phonological level, AAE exhibits final obstruent devoicing[4] /mad/ -> [mat], final consonant deletion [man -> mæ̃], substitution of dental fricatives [math -> maf], a pin-pen merger where [in] and [en] rhyme, cluster simplification [left -> lef], and many others. Certain elements of AAE syntax are distinctive as well, such as the two additional grammatical tenses not found in standard American English. The first is the stressed remote phrase marker, or the distant past: "We BIN knew" (We knew a long time ago) and the second is the habitual be, as in "We be writing" (We write often). Prosody, the intonation and rhythm of speech, is distinctive as well, despite being a more difficult aspect of language to measure (Zienkiewicz 2012)[5].

This merely serves to show that at all levels of language, AAE is distinct from Standard American English. These differences are socially salient as well, with most American individuals being able to accurately predict the race of a speaker just from a short voice sample (Massey and Lundy 2001). Many speakers of AAE, especially the highly educated, can diminish and augment these features situationally, moving fairly fluidly from AAE to SAE in a process known as dialectal code switching (Garner and Lubin 1986). Even then, certain acoustic cues in prosody[6] and phonetics can still subconsciously reveal the linguistic background of an AAE native speaker (Baugh 1996). However, important studies show that perception *can* be wrong in specific

[4] Phonological linguistic notation works as follows: /input/ -> [output]. We presume AAE speakers to have the underlying form /mad/, and through a word-final devoicing rule, the word becomes pronounced as [mat].

[5] This source was used for all the features in the paragraph, and lists many more features than would fit here. Many of these features are present in other non-AAE dialects as well, but the combination of these specific features is distinctively AAE. Moreover, it is fully unlikely that a single individual uses every feature of the AAE dialect, and fully likely that there exist African Americans who use none of the features listed above. However, the features listed here are more or less uncontroversially understood to be present in most mainstream language use within African American linguistic communities, which may or may not include non-African Americans.

[6] Aspects of linguistic production which involve longer strains of speech, such as stress, pauses, loudness, pitch contours, and speed. These factors are especially important for transmitting emotion, speech focus (in English), and group discourse dynamics.

situations. White fans of hip hop who employed features of AAE passed as black to non-black observers in a blind study (Cutler 2003), and a 13-year-old white girl from Camden, NJ who did not have good grasp of AAE syntax but grew up in a black neighborhood was labeled black by all 43 African-American respondents in a blind test (Hatala 1976). By and large, however, most Americans know what it means to 'sound black' and although outlier situations exist, most Americans can fairly accurately pin AAE speakers simply with a vocal recording. Again, for purposes of stereotyping, pinpointing race accurately is less important than simply having socially salient speech styles along racial lines so that a judgment is made.

Even aspects of chosen identity can be discerned from sociolinguistic variables. For example, Asian-American sorority sisters in a New Jersey university were shown to have developed their own sociolinguistic cues, such as a backed GOAT vowel and characteristics of syllable timing, despite lack of an identifiable Asian-American dialect (Bauman 2016)[7]. Political alignment, too, may be somewhat predictable by certain linguistic cues. The vowels of "Iraq" are variable in American English, with one pronunciation used more by Republicans and one used by Democrats; this phenomenon has been noted repeatedly both for this word and other country names, and is salient outside of academia (Starr 2010). Even social categories in the school yard such as "nerds" have been demonstrated to exhibit sociolinguistic signalling like any other identity (Bucholtz 1999). It is fully likely that as the field of sociolinguistics continues to

[7] The racialized paradigm of American dialectology for AAE, SAE, and Chicano dialects should imply an (East) Asian-American dialect alongside them. However, Bauman cites numerous experiments and studies showing that race identification of Asian-Americans based on speech is far less accurate than for the other groups. Bauman aligns herself theoretically alongside Wong (2015) and posits a more localized "Asian" sound in the absence of a pan-Asian-American dialect, meaning that Chinese Americans in San Diego may employ polar opposite sociolinguistic cues to Asian Americans in New Jersey to achieve the same effect of claiming Asian identity.

broaden, sociolinguistic variation will continue to be documented as a marker of an ever expanding range of identities, both fixed and chosen.

Sociolinguistics Applied to Polling

The lessons learned in sociolinguistic work carry profound implications for political science and political polling. That the mere presence of human voice immediately constructs a mental profile of the speaker's age, sex, education, origin, race, and even political leanings in the listener's mind should raise questions about the role of the interviewer's personal identity in a phone survey, a question that seems not to have yet been addressed in political science. For example, political science surveys on race have systematically overlooked these linguistic factors which are intuitive once brought to light. In Transue (2007), a live call survey asked very charged questions about race relations in modern America; a recent poll by Quinnipiac University, which uses live callers, asked the following questions in a series of polls in March of 2019:

> (2019a) "Do you think that white supremacist groups pose a threat to the United States, or not?"
>
> (2019b) "Thinking about the 2020 Democratic primary for president, if all other things are equal, would you prefer a candidate that is - white or a person of color?"

Armed with the linguistic knowledge of the social salience of AAE as delineated in the previous section, an immediate question to be asked is how the identity or perceived identity of an interviewer will affect responses to socially sensitive questions. Will a white man really tell a perceived black pollster that he doesn't think racism exists? The answer sometimes may indeed

be yes, certain white men would; however, even if just a fraction of white men holding that socially unpopular belief choose the socially safer answer, then the results of the survey will be skewed by the social bias of the interaction.

If we broaden this question away from race, we find many political polling questions which could be adversely affected by the perceived identity of the caller. Would it be the case that a woman's voice on the interviewer's side lends stronger support for tax support of domestic violence shelters? Chicano-American English dialects, strongly influenced by Spanish, have long been as distinct from the Standard American English as AAE (Wolfram 1974). These dialects are extremely socially salient as well: most Americans fairly accurately can pin when a Latinx-American is speaking simply from a voice recording (Massey and Lundy 2001). If the interviewer is perceived to be of Latin descent, would a conservative respondent be more hesitant to disclose true sentiments concerning police efforts to roundup and deport predominantly Latin migrants? A Latin-perceived interviewer on the staff of the polling agency might skew conservative Republican answers to socially charged questions in live phone calls, which could play a part in explaining Dropp (2016)'s trends in which ICE deportations were more popular in online polls than in the phone interviews. Rather than simply having one "human" priming factor, sociolinguistic research sheds light on the likelihood that voices prime varied communities differently along a number of axes.

Case Study Selection

Although many of the previous section discussed race, this was meant more as a concrete visualization of the diversity of the linguistic landscape of the United States. When referring back to the 2016 election, it was not minorities but white rural areas of the United States which

were the cause of shock in the polls versus the ballot box. It is these same communities in Appalachia, in the Rockies, and in northern New England which frequently lack phone service, internet providers, and are a great physical distance away from most researchers in all disciplines, but most relevantly, they are distant from political pollsters. As mentioned before, this means that these rural communities are more vulnerable to noncontact bias in which pollsters have a hard time contacting the community to begin with. However, even in the case of contact, it is currently unclear how linguistic priming would affect these communities due in part to scarcity of research, unlike other dialects such as African American English.

African American English is, in some respects, the best documented minority dialect of English in the United States, if not the world. It is visible not only in academic literature, but in every medium of American culture from music to film to comic books. However, it should come as no surprise that isolated communities in the far reaches of the country have developed their own dialect areas, each one measurably different on every linguistic level from more mainstream varieties. However, we also run into an issue on the logistic side: just because we *know* that there must be dialect boundaries and distinctions in rural Montana does not mean that the research has been performed yet. Language documentation is often imagined as an expedition to a faraway island or recording an indigenous elder, but much of the rural United States is very much under documented, even in areas not far from major metropolitan areas. Thus, while papers can confidently cite differences between Black New York English and White New York English over time - based on mountains of previous work - it becomes much harder to prove concrete differences between modern Boston English and the modern English of rural northern Maine beyond hearsay, simply because the research has not yet been undertaken.

This poses a problem for any analysis of linguistic priming of rural Rust Belt communities because a necessary step of such a phenomenon is an understanding of just how linguistically different the variety is from the mainstream, and whether this specific language community is in tune with hearing that outsiders speak "different" from insiders. Physical linguistic differences must be accompanied by social recognition of the differences in order for such priming to have theoretical grounding, even if the social recognition is merely subconscious. That is to say, in the absence of robust perception studies on two specific dialects, dialectal priming tests must rely on two substantially different dialects in order to ensure proper subconscious priming.

A Cross-section of Dexter, ME

In order to test the possibility that socially salient differences present in the voice of an interviewer may affect responses to sensitive questions in political polling, I carried out an experiment in Dexter, Maine. This area satisfies several important variables.

The Dexter area meets criteria for probable noncontact bias, in which local individuals are unusually difficult, if not impossible for outside pollsters to reach, both in person and by phone or internet. Dexter, ME, the town in which the survey was conducted and which was the hometown to nearly half of the respondents (19 out of 42) averages 87 inches of snow per year, with approximately 120 days of over an inch of snow cover (USA.com 2019a. The nearby town of Garland, ME, from which approximately a quarter of the respondents came (9 out of 42), averages 90 inches of snow per year and 120 days with over an inch of snow (USA.com 2019c). The third most represented town, with three respondents, was Dover-Foxcroft, ME, averages 91 inches of snow per year and 124 days of snow cover (USA.com 2019b). That is to say, the area

receives frequent blizzards from end of November until mid-April. For example, there were two blizzards back to back while I was there which dropped around 15 inches of snow total in early April. However, the following months of thawing, in which the mostly unpaved roads of the area become impassable, and most rural households remain inaccessible, is much harder to find statistics for.

Not only is the area physically difficult to traverse for six months, but cell coverage is scarce and almost exclusively found in small portions of the "downtown" areas. Once again, statistics are scarce, but first responders in the county have spoken out about the routine problems lack of cell signal has caused, especially in bad weather. A fire chief in the same county as the towns above was quoted as saying "Just about everywhere you go around here, you don't have cell phone coverage. They really don't have enough towers up here" (Sambides 2010). Home internet coverage is somewhat better, at 70.3% of households in Dexter, 72.6% in Garland and 74% in Dover-Foxcroft versus 78.3% of households with internet nationwide (U.S. Census Bureau 2017). Although there exists no data for Garland, it is far less densely populated, and the percentage of households with internet can be expected to be lower.

Moreover, the region is linguistically different from much of the United States in several substantial ways. In order to prove this, I conducted five sociolinguistic interviews of local group discourse among different individuals who were born and raised in Dexter, ME. I found several robust phonological differences. First was a strong FATHER-BOTHER distinction[8], where locals produce different vowels in the first vowel of those two words. Second, the r-less rate for

[8] /bother/ is pronounced like most anywhere else in North America; /father/ is pronounced with a fronted [a] like in Spanish.

everyone in the area nears 100%, which means that "r" is not pronounced in words like "car".[9] Third, a strong NORTH-FORCE[10] distinction was present in older speakers, in which the lowness of the NORTH vowel [ɑ] was shockingly similar to the phenomenon documented in St. Louis (Duncan 2018). Fourth, an "intrusive r" occured in 65% of expected contexts, which is when an r is inserted between a word ending with a vowel and another word beginning with one. [11] Fifth, "-ng" endings to words are pronounced "-n" at a high rate (above 70%).

Syntax is measurably different in several regards as well. As with much of rural white America, double negation "I ain't got nothing" is interchangeable with more standard negation "I ain't got anything." I also found several instances of "so don't I" construction, in phrases such as "I'm getting a haircut and so shouldn't you" (intended meaning: you should get a haircut, too). However, this construction is very low frequency, and may entail some pragmatic emotional meaning in conversation. For example, one of the women who listened to the sentence above about the haircut said, "I wouldn't say that--it's rude. I'd say, 'I'm getting a haircut. Would you like one?'" Her problems with the example sentence stemmed in no way from the grammar, whereas a non-Mainer would immediately critique the grammaticality of the "so don't I" construction.

All of these phonetic and grammatical differences work together to create a dialect perceptibly different from other regions. Local individuals claim to be able to immediately detect outsiders on speech alone, which may not be untrue. Based on discussions of linguistic perceptions with dozens of Mainers from that county, the one dialect region within Maine that is

[9] This is unusual for North America, but is the norm in prestige variants of British English.
[10] Local pronunciation for /north/ would rhyme with "goth" for most Americans. Maine pronunciation of /force/ would be similar to most Americans, except that the r would not be pronounced.
[11] A common feature of r-less dialects of British English. (i.e. "the lasagna-r-is ready")

immediately recognizable is the "Downeaster" accent from Machias along the coast to the Canadian border, but other areas of Maine are perceived to be more or less the same to most locals. For the purposes of a priming study, this is a perfect linguistically isolated population whose dialect is probably substantially different from the dialect of any pollster.

The final point worth mentioning about the Dexter area is that it is a perfect example of the switch to Trump. In Maine, electoral votes in presidential elections are delegated by majority within a congressional district instead of a state, meaning that electoral votes can be split. Obama had carried every congressional district, yet Trump flipped most all rural counties of Maine including Penobscot county in which Dexter lies. This flip of Penobscot county single-handedly brought an electoral vote to Trump which Romney and McCain had failed to capture (Gee 2016).

Design

With Dexter, ME as a case study fulfilling the linguistic, physical, and political criteria, I carried out an experiment in order to test the effect of interviewer dialect on political responses. I chose to go with a pseudo-matched guise test employed commonly in sociolinguistic study. A true matched-guise test was pioneered by Canadian researchers in Quebec determining the bias people's attitudes towards French and English speakers. The same individual spoke in French and English, and respondents gave assessments about personality traits of the individual (Agheyisi and Fishman 1970). However, in the Maine linguistic paradigm problems arise because locals are incapable of consciously switching between the local dialect and the standard. Instead, I chose to hold constant the script, but utilized two separate speakers reflecting the desired linguistic traits, which does have theoretical pitfalls but has worked in many experiments (Cutler 2003 for a review).

Based on sociolinguistic literature, I expect certain key aspects of the interviewer's identity to be easily obtainable from speech: age, race, gender, education, and region of origin (whether the speaker is a local or not). I chose the profile of the younger woman based on Quinnipiac demographics. Quinnipiac University uses its own undergraduates for political calling (Quinnipiac 2017), and Quinnipiac's undergraduate student population is predominantly white women from New York, Connecticut, and Massachusetts aged 18-21 (Media Factual). I thus picked interviewer H. accordingly. For the other interviewer, L., gender and race were held constant, but the location, education, and age were not.[12] The education and location factors were intentional, as location is the premise of the experiment, and education level because Dexter, Garland, and Dover-Foxcroft are far below average in education achievement past high school (US Census Bureau 2017). Because political affiliation has not been proven to be salient in voice samples beyond a few token words, I purposely skewed age of the interviewer as a substitute for perceived conservativeness, as older age is perceived to be more conservative (Imhoff and al. 2016). By having one of the interviewers likely to be rated as more conservative due to her age, I hoped to exacerbate social bias effects with local conservatives by further removing social cost to answering honestly when asked questions carrying social risk. To some degree, any findings are difficult to attribute singularly to age, political affiliation perception, and localness. However, the scenario that a conservative old Dexter local is called by a young liberal non-Mainer is hardly a stretch, and thus may reflect reality better in a small-scale study than choosing between age or locality differentiation. Thus, the profiles of the two interview voices are given in the table below:

[12] The original intended interviewer from Dexter had to be replaced following her inability to read many of the words utilized by Quinnipiac's poll questions.

Name	Age	Race	Gender	Education	Local
H.	Early 20s	White	Woman	Undergraduate	No (Massachusetts)
L.	Early 60s	White	Woman	No college	yes

These two women were recorded asking a list of twenty questions taken verbatim from Quinnipiac's polls March 26, 27, and 28[13] and compensated $20 for their time. As the political polling literature in the first section revealed, not all questions are subject to the same social biases: a factor of social risk must be at play. The question which satisfied this social risk was the one previously cited,

> (2019b) "Thinking about the 2020 Democratic primary for president, if all other things are equal, would you prefer a candidate that is - white or a person of color?"

This question arguably has the highest social risk with the answer "White person," somewhat less risk with "Person of Color," and the least risk with the option "Doesn't matter".[14] If a respondent answers "White person," they risk being judged a racist which is typically undesirable. The answer "Person of Color" perhaps could be judged the same way, however it is highly likely that the effect is far less than for the first option. The third answer allows a respondent to sidestep the problem completely, much like "undecided" voters are accused of doing in the Bradley effect, in which white respondents to pre-election polls may falsely choose to respond as undecided instead of publicly supporting a white candidate facing a black candidate.

[13] See Appendix A for the full list.
[14] See Appendix B for a copy of the survey.

In order to draw a contrast, I chose a question with very little social risk either way. As political polling literature demonstrated, highly theoretical questions about overarching values and platitudes show very little skew between online polling and live calling (Kennedy et al. 2017). A good fit for this was the following:

> (Quinnipiac 2019c) 19. If you had to choose, which is more important in a presidential candidate: a candidate who you think would be a great leader, or a candidate who you think has great policy ideas?

In this question, both answers may be universally accepted as good options, and it is arguably difficult to imagine negative consequences for answering either way. Additionally, Quinnipiac reports fairly even support for "great leader" at around 50-60% for the vast majority of categories along educational, gender, race, and party lines (Quinnipiac 2019c). This relative homogeneity of answers may substantiate intuition about the relative lack of risk in the questions, or at least that one answer is not severely penalized by social risk. Thus, the hypothesis scenario is as follows:

H_0: differences in the interviewers' voices (age, education, region) do not affect any responses
H_1: differences in the voices did affect responses, but only to socially sensitive questions
H_2: differences in the voices affect all responses regardless of social risk.
H_3: differences in the voices affect all responses, but affect socially sensitive questions more strongly.

The null hypothesis is that the interviewer's voice has no effect on the results of a political poll. A more probable hypothesis after reviewing the results from political polling literature, however, is that the interviewer's voice will affect responses only to socially risky questions, in which respondents may be viewed badly for answering one way. Another possible outcome is that the difference in voice will affect all responses in the same way, regardless of

social risk, and thus would constitute a more universal priming factor. A natural possibility arising from H_1 and H_2 is the possibility that all answers are affected, but that socially sensitive questions are affected more strongly. Going into the study, I personally suspected that H_3 would be the correct one, but would have been unsurprised if H_1 ended up correct.

With the other questions as control, I set out to perform the poll. Respondents were paid $5 in cash for their time, and were recruited outside the single local supermarket throughout the day on Saturday, April 20th, 2019. This date was chosen more out of necessity than choice, because every other day I was in the area there were blizzards. Respondents were screened through adulthood and being from Maine, and filled out a short survey of basic information including birth year, zip code, gender, race, education, and whether or not they had lived elsewhere at some point. They were also given several contact options to reach me if they wanted to revoke authorization for the use of their data: of the 42 respondents, one chose to do so.

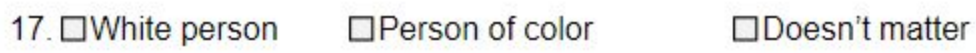
While they filled out their screening information, I used a random number generator on my phone to determine which set of questions to use: a “1” led to using the younger interviewer’s recordings while a “0” led to using the older interviewer’s recordings. This was then marked on the survey form after it was returned. The survey was then immediately sealed into a manilla folder and the results were not viewed until return to the department.

Results

After tabulating preliminary results, there were several important points which came to light. The most obvious one was the lack of non-white participants, largely due to the lack of non-white locals; only two respondents were not white. The diversity in education level was also not promising: although 32 respondents had attended high school, only two of the sample had attended some graduate school, and only seven had some undergraduate schooling. The ratio of women to men was 23 to 18, and age range was surprisingly well-represented, with dates of birth spread fairly evenly from 2002[15] to 1929. The ratio of respondents listening to the local track versus the outsider track was 20 to 22. The geographic distribution of the respondents included 20 respondents from Dexter, ME, where the survey was taken, 10 respondents from Garland, ME, which is a small village outside Dexter, another 10 respondents from towns in the surrounding area, and a single respondent from farther south. These however were less important than the question which asked regarding whether the respondent had ever lived outside Maine - which was the case for 7 of the respondents. The party ratio was 17 Republicans to 23 Democrats, and 2 nonpartisan.

I began with coding the dependent variable, which was the answer to the question with social risk. The dependent variable at stake is Q17risk, involving respondents' answers to the question carrying social risk, reproduced below alongside answer options for convenience:

> "Thinking about the 2020 Democratic primary for president, if all other things are equal, would you prefer a candidate that is - white or a person of color?" (Quinnipiac 2019b)



[15] The respondent stated that they had just turned 18.

Because Q17risk revolves around shifts around the answer with risk, 1 is the answer "white person" and 0 is any other answer. The most important theoretical regressor is variable LocalInterviewer, in which 1 codes for use of the track of the local speaker, while 0 codes for use of the track of the outsider, the young woman from Massachusetts. The next important variable is cAge (centered Age), which skews age as a variable around the mean in order to streamline the data; younger respondents are coded as negative, and older respondents are therefore positive. For education, the relatively small number of graduate students (two) led to a more general College dummy variable, in which 1 entailed some college, and 0 entailed none. Likewise, the variable Women is equally straightforward, where 1 signifies a woman, and 0 signifies non-women. The LivedOutside variable is structured similarly, where 1 signifies that a respondent has lived out of state for more than a month at some point in their lives, and a 0 signifies that they have not. The last important variable is political affiliation, Republican, where a value of 1 signifies that the respondent tends to vote Republican, while a 0 signifies that the respondent tends to vote Democrat.

Before proceeding, it is important to disclose that of the six respondents who chose "white person," five heard the local track. While this presents perhaps the ideal scenario for strong statistical significance in regards to this paper, such a small sample does need to be kept in mind when reading the following section. Of particular note is that one of the two non-white respondents answered "white person" which is extremely unexpected: this young individual identified as a Democrat and had lived out of state. However, a possible explanation does arise, when they answered another question with preference for electability over shared views with a

candidate. This likely skews the racial data strongly, and so I have opted to omit that category from the regression on account for this fact.

A preliminary regression (Figure 1) is given below, in which the primary variable Q17risk is regressed against LocalInterviewer, cAge, College, Women, LivedOutside, and Republican.

```
. reg Q17risk LocalInterviewer cAge College Women LivedOutside Republican

      Source |       SS       df       MS      Number of obs   =        40
-------------+------------------------------   F(6, 33)        =      3.67
       Model |  2.03986068     6  .33997678    Prob > F        =    0.0067
    Residual |  3.06013932    33  .092731495   R-squared       =    0.4000
-------------+------------------------------   Adj R-squared   =    0.2909
       Total |       5.1      39  .130769231   Root MSE        =    .30452

------------------------------------------------------------------------------
      Q17risk |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
LocalInterv~r |   .2598038   .1054401     2.46   0.019     .0452843    .4743233
         cAge |    .018765   .0054876     3.42   0.002     .0076004    .0299296
      College |  -.0488301   .1579044    -0.31   0.759    -.3700889    .2724287
        Women |  -.0406642    .103447    -0.39   0.697    -.2511287    .1698003
  LivedOutside |   .0544421   .1616457     0.34   0.738    -.2744286    .3833128
    Republican |  -.1566151   .1102899    -1.42   0.165    -.3810016    .0677713
         _cons |   .0940841   .1197555     0.79   0.438    -.1495603    .3377285
------------------------------------------------------------------------------
```

Figure 1

The joint probability F test for this regression bodes well, as these variables combined are highly significant. Much of this is likely due to the strong statistical significance of two specific variables LocalInterviewer and cAge. LocalInterviewer was expected to be significant simply based on the fact that five out of six respondents who chose "white" heard the local track. Age is also found to be significant, with each year older resulting in a 1.88% increase in likelihood of answering the riskier option at at 99.7% confidence. However, none of the other statistics seem to strongly correlate this effect. Methodologically, I am hesitant to introduce a large series of

variable interactions mainly due to the small sample, especially in a small sample of positive responses to "white candidate" and with the outlier specifically mentioned.

In a regression (Figure 2) with merely the statistically significant variables LocalInterviewer and cAge, the trends above persist, and the coefficients remain relatively unaffected, which bodes well for the findings. In both models, the effect of the local interviewer appears to increase the likelihood of receiving a "white candidate" response by 26%, at 99% significance, and age increases the likelihood of receiving "white candidate" by 1.8% for every year older, at 99.7% confidence. The adjusted R-squared in Figure 2 is .25, which is strong for two variables.

```
. reg Q17risk LocalInterviewer cAge

      Source |       SS           df       MS      Number of obs   =        39
-------------+----------------------------------   F(2, 36)        =      7.36
       Model |  1.26517434         2  .632587171   Prob > F        =    0.0021
    Residual |  3.09380002        36  .085938889   R-squared       =    0.2902
-------------+----------------------------------   Adj R-squared   =    0.2508
       Total |  4.35897436        38  .114709852   Root MSE        =    .29315

------------------------------------------------------------------------------
     Q17risk |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
LocalInterviewer |   .2698571   .0991616     2.72   0.010     .0687482    .4709661
        cAge |    .018166   .0052883     3.44   0.002     .0074409    .0288912
       _cons |  -.0115482   .0679557    -0.17   0.866    -.1493687    .1262722
------------------------------------------------------------------------------
```

Figure 2

Adding a variable interaction in Figure 3, cAge*LocalInterviewer further complicates this model by showing that a local interview voice makes a "white candidate" response 2.4% more likely for every year older, at 95% significance. This cuts into the age variable itself and renders it insignificant on its own, but now the adjusted R-squared value has increased to .34, a

large increase from Figure 2. This likewise shows proof of an anticipated relationship between age and dialect perception.

```
. reg Q17risk LocalInterviewer cAge cAge_LocalInterviewer

      Source |       SS       df       MS      Number of obs   =        39
-------------+------------------------------   F(3, 35)        =      7.53
       Model |  1.71031303     3  .570104345   Prob > F        =    0.0005
    Residual |  2.64866133    35  .075676038   R-squared       =    0.3924
-------------+------------------------------   Adj R-squared   =    0.3403
       Total |  4.35897436    38  .114709852   Root MSE        =    .27509

------------------------------------------------------------------------------
     Q17risk |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
LocalInterv~r |   .2680852   .0930553     2.88   0.007     .0791729    .4569975
        cAge |   .0072967   .0066866     1.09   0.283    -.0062779    .0208713
cAge_LocalI~r |   .0241964   .0099766     2.43   0.021     .0039428    .0444499
        _cons |   .0252782   .0655519     0.39   0.702    -.1077993    .1583556
------------------------------------------------------------------------------
```

Figure 3

Polling literature has demonstrated that conservative identity is typically integral to motivating change, and thus, in theory a Republican identity should bear some weight in this analysis. Addition of variable Republican on its own into the regression bore little result, however adding it alongside variable interactions with age and interviewer bore interesting results, as shown below in Figure 4. Although Republican identity on its own has no significance, its interactions with age and interviewer dialect are significant at a 99% confidence level. The adjusted R-squared is likewise increasing strongly, now at .547 up from .34 in Figure 3. However, here the limits of the model start to show, likely due to sample size and strong outliers. Republican identity increases likelihood of answer “white candidate” by 10%, which is subsequently undercut by both interaction variables which reduce that effect.

```
. reg Q17risk LocalInterviewer cAge cAge_LocalInterviewer Republican Republican_cAge Rep
> ublican_LocalInterviewer

      Source |       SS           df       MS      Number of obs   =        39
-------------+----------------------------------   F(6, 32)        =      8.65
       Model |  2.69628425         6  .449380709   Prob > F        =    0.0000
    Residual |  1.66269011        32  .051959066   R-squared       =    0.6186
-------------+----------------------------------   Adj R-squared   =    0.5470
       Total |  4.35897436        38  .114709852   Root MSE        =    .22795

------------------------------------------------------------------------------
     Q17risk |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
LocalInterv~r |   .5110442   .122781     4.16   0.000     .2609475    .7611409
        cAge |   .0297026   .009168     3.24   0.003      .011028    .0483772
cAge_LocalI~r |   .0108655   .0095357    1.14   0.263    -.0085581    .0302891
  Republican |   .1030703   .121508     0.85   0.403    -.1444335    .3505741
Republican_cAge |  -.0326703   .0095367   -3.43   0.002    -.0520959   -.0132447
Republican_L~r |  -.4887564   .1756475   -2.78   0.009    -.8465386   -.1309741
       _cons |  -.1022288   .1005455   -1.02   0.317    -.3070333    .1025757
------------------------------------------------------------------------------
```

Figure 4

The reasonable conclusion from this section of analysis regarding social risk is that, despite small sample size, the results point to the dialect of the interviewer, age of the respondent, and Republican identity as all holding some weight in determining whether a potential respondent chooses "white candidate" or more the more socially condonable answer of "race of candidate doesn't matter."

The next step, then, should be analysis of respondents who answered with a preference for a non-white candidate. Based on polling, we would expect conservatives to poll far lower on this matter than liberals, and for women to poll higher than men for this answer (Quinnipiac 2019b). At 22% (9 out of 40) answering with preference for a non-white candidate, the average for this study is actually higher than the 20% national average.

However, a regression of probable causes raises more questions than answers. First, a local interviewer is found to result in 37.6% higher likelihood of answering "Person of color" at

p=0.01 level. This, to some degree, complicates the findings from before, and may challenge previous assumptions made in the paper. Should the non-white answer be considered equally as prone to social bias effects as the white one? Perhaps some (white) locals who, in fact, would prefer a non-white candidate actually feel compelled to answer with the safer option as well, that race doesn't matter, when faced with an outsider. Notions that more liberal respondents may actually feel emboldened by perceiving an older interviewer perceived as conservative are quickly shut down by the startling revelation that Republican identity actually causes a 33.8% increase in likelihood of this answer, at p=.05 level. Of the other regressors, neither women nor college education seem to have much impact on the outcome here, and age is sufficiently close that a larger sample size might render it significant.

```
. reg Q17Poc LocalInterviewer cAge Republican College Women
```

Source	SS	df	MS		
Model	2.55815872	5	.511631744	Number of obs	= 40
Residual	4.41684128	34	.129907096	F(5, 34)	= 3.94
				Prob > F	= 0.0063
Total	6.975	39	.178846154	R-squared	= 0.3668
				Adj R-squared	= 0.2736
				Root MSE	= .36043

Q17Poc	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
LocalInterviewer	.3768981	.1245615	3.03	0.005	.1237586	.6300375
cAge	.0086205	.0063816	1.35	0.186	-.0043484	.0215894
Republican	.3383803	.1302537	2.60	0.014	.0736729	.6030876
College	.1093905	.1510896	0.72	0.474	-.1976606	.4164415
Women	.0644889	.1212287	0.53	0.598	-.1818774	.3108552
_cons	-.2877582	.3422064	-0.84	0.406	-.9832052	.4076888

Figure 5

However, a cross-variable interaction between interviewer dialect and partisan identity reveals an even more striking fact: Republicans faced with a local interviewer are 55% more likely to support a non-white candidate, at p=0.05 level. The only other regressor coming close to significance is age, which may again become significant at a higher number of participants, were the experiment replicated. This finding equally reveals that Republicans may be extremely socially sensitive, and opt for the most socially safe answer when confronted with risk.

```
. reg Q17Poc LocalInterviewer cAge Republican College Women Republican_LocalInterviewer

      Source |       SS           df       MS      Number of obs   =        40
-------------+----------------------------------   F(6, 33)        =      4.74
       Model |  3.22996989         6  .538328316   Prob > F        =    0.0014
    Residual |  3.74503011        33  .113485761   R-squared       =    0.4631
-------------+----------------------------------   Adj R-squared   =    0.3655
       Total |     6.975          39  .178846154   Root MSE        =    .33688

------------------------------------------------------------------------------
       Q17Poc |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
--------------+---------------------------------------------------------------
LocalInterv~r |   .1364427   .1527132     0.89   0.378    -.1742547     .44714
         cAge |   .0103041   .0060046     1.72   0.096    -.0019124    .0225206
   Republican |   .0566459   .1680169     0.34   0.738     -.285187    .3984789
      College |   .0705164   .1421186     0.50   0.623     -.218626    .3596589
        Women |   .0321605   .1140841     0.28   0.780    -.1999454    .2642665
Republican_L~r |   .5567454   .2288251     2.43   0.021     .0911972    1.022294
        _cons |  -.0388319   .3358116    -0.12   0.909    -.7220458     .644382
------------------------------------------------------------------------------
```

Figure 6

Alongside the findings above with the preference for white candidates, this finding strongly substantiates a “shy-Trump” effect in which more conservative viewers may evaluate any social risk with great caution. Viewing a non-white candidate answer as risky when confronted with a young outsider should, however, be examined: respondents under 50 tend to poll around 30% in favor of a non-white candidate nationally, while respondents over 50 tend to poll only around 10%. Although the answers are stratified in risk and the non-white answer may be less risky than the white, there still may be fear of risk in being labeled racist for different

reasons. It is important to acknowledge that parts of rural America, especially areas nearly devoid of minorities, operate under definitions of racism which do not align with academia or more urban areas, and "racism" is synonymous with "prejudice against race". That is to say, in some communities it is possible to be labeled as racist against white people, and perhaps some more conservative locals may fear being perceived racist in this other form as well.

In tandem, it may be possible that respondents are attempting to defend their communities as well. A local may perceive another local as racist on an *individual* level, but know enough other non-racists in the area to know that this is not universal in the town. However, an outsider may only meet one local from the Dexter area on the phone, and this may, in fact, increase the stakes at hand in terms of social risk: the sociolinguistic interviews I conducted frequently turned to outsider perception of locals and protection of the community by being on best behavior. This takes the form of extreme generosity and politeness, but also may play a role in risk-reduction measures in phone interviews with outsiders. In this scenario, risk of negative perception of the whole community may exacerbate the social bias effect even on answers with only moderate risk.

The next regression concerns the socially neutral question, in which respondents choose between preferring a great leader or a great policy. This dependent variable, labeled Neutral, measures a response for "great leader" as a 0, and "great policy" as a 1. The regression using the original regressors of age, college, gender, party, interviewer dialect, and whether the individual had lived outside of the state is given below in Figure 5.

```
. reg Neutral LocalInterviewer cAge College Women LivedOutside Republican
```

Source	SS	df	MS	Number of obs	=	40
				F(6, 33)	=	1.43
Model	2.03960245	6	.339933741	Prob > F	=	0.2340
Residual	7.86039755	33	.238193865	R-squared	=	0.2060
				Adj R-squared	=	0.0617
Total	9.9	39	.253846154	Root MSE	=	.48805

Neutral	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
LocalInterviewer	-.0175758	.1693852	-0.10	0.918	-.3621926	.3270409
cAge	.0044675	.0088015	0.51	0.615	-.0134393	.0223743
College	.5605242	.2412665	2.32	0.026	.0696638	1.051385
Women	-.1200038	.1696796	-0.71	0.484	-.4652194	.2252119
LivedOutside	-.7190179	.2765795	-2.60	0.014	-1.281723	-.1563127
Republican	.125421	.1772309	0.71	0.484	-.235158	.486
_cons	.4525875	.1933326	2.34	0.025	.0592493	.8459257

Figure 7

The substantially different trends here are promising. What is most revealing is that the dialect of the local interviewer is the most insignificant of all the regressors. The statistical significance of College and LivedOutside lend credibility to their power as regressors, and credibility to the possibility that they truly do not affect the response involving social risk. The theory lines up well with the assumption of education, as those with college experience are 56% more likely to favor policy over leadership, a finding which nicely aligns with other polls (Quinnipiac 2019a). Living outside Maine appears to lead to a 71% bias towards leadership preference at a 95% confidence level, which is unexpected but could possibly be explained by the strong tradition of voting for independent candidates based on policy, as some locals claim. Further manipulation with dropping highly insignificant variables and adding interaction

variables does not seem to change these findings significantly. However, given the circumstances this research is presently outside the scope of this work.

Conclusion

Although the sample size was fairly small, this study highlighted some important trends worth further investigation. Political polling, in its current form, is demonstrably flawed particularly concerning phone polling with a live operator. A possible explanation for this is that human interaction constitutes some priming factor not present in robopolling or online surveys which may inadvertently trigger changes in responses. This has been noted in political science as social bias, in which socially stigmatized responses are less likely to occur when confronted with a live interviewer. However, the notion that all interviewers prime in the same way is a largely overlooked assumption in present research. Sociolinguistic literature reveals the capability of accurate recognition of nearly all major axes of identity merely from the voice. This finding meshes well with psychology stereotype literature, which provides academic underpinning for the fairly intuitive notion that others' identities construct a plethora of projected political beliefs. Because of the base assumptions of social bias, it is possible that the interviewer's projected political beliefs may consciously or subconsciously influence the responses to questions with social risk, particularly concerning race, but likely about many charged hot button issues which are regularly topics of question in political polling. In a practical scenario, if a conservative respondent perceives the interviewer to also be conservatively aligned, they may be more likely to be honest about their policy platform. Alternatively, given that a respondent has constructed a mental profile of the probable political beliefs of the interviewer, it is possible that a respondent may give answers which they predict to be most agreeable to the interviewer in order not to

cause confrontation. In this scenario, an older white woman may be perceived as preferring a white candidate, and thus the respondents in this experiment responded accordingly. This alternative ties into psychological literature on apprehensive participant roles, and how respondents will sometimes give answers which they believe are desired for the study instead of the true answers to opinion questions (Weber and Cook 1972). Although the possibility of agreeability is called into question by finding the nearly exact same phenomenon for answers in favor of non-white candidate, it could be argued instead that conservatives are likely to employ a risk minimization strategy in which even moderate risk is condemning given a a safer, alternative answer. Theoretically, a middle path is likely, in which respondents are affected by *both* these phenomena, and perhaps in unequal strength along individual personality types. The exact underlying psychological causes for the shifts in answer patterns depending on interviewer dialect cannot be completely uncovered in a small-scale study, but it remains clear that some interaction exists which substantially alters the results.

Referring back to the hypotheses, it seems that H_1 was correct, and the voice of the interviewer was demonstrated to have effects on answers to questions with social risk, while not having an effect on answers to questions without social risk. Age was important in questions with social risk - which was to be expected - and it is possible that other variables such as gender, education, and region of origin may become significant with larger samples. Moreover, in the question without social risk, other variables became more important, such as college education and, surprisingly, whether the individual had lived outside of Maine. Although this study cannot make concrete claims about regions outside of Maine, the findings of the data point to the likelihood that dialect of the interviewer matters in eliciting honest political opinions for

the Dexter area. In the absence of proof illustrating that this town is a unique case in the United States, it is likely that other towns across the country could demonstrate the same phenomenon to varying degrees. Likewise, it is possible that switching other features of the interviewer may yield results as well, especially in regards to gender and race. What is clear is that much more work needs to be carried out in this intersection between sociolinguistics and politics, these variables may constitute an integral piece of why political polling results do not always line up with the ballot box.

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Appendix A:

Disclaimer: You may stop at any time, and you may choose at any time not to have your recordings used in the experiment. You may request a copy of the audio, and may request that the audio be destroyed at any time, even after the recording session. The compensation for your time will amount to $20, and these audio files will be used next week as part of an ongoing political survey in Dexter, Maine, unless you explicitly revoke the right for their use by contacting Andre Schwab at (718) 679 7538, or at abs616@nyu.edu. Verbal consent will be recorded at the beginning of the session.

Quinnipiac questions from March 26, 27, 28 polls:

1. Do you approve or disapprove of the way Donald Trump is handling his job as president?
2. In general, would you say that you are optimistic or pessimistic about your financial future?
3. Do you think that the way that economic news is reported accurately reflects the reality of the economy for average Americans, or don't you think so?
4. In general, would you prefer to improve the current health care system in the United States, or would you prefer to replace the current health care system in the United States with something new?
5. As president, do you think Donald Trump should continue tweeting from his personal Twitter account, or not?
6. Do you think that white supremacist groups pose a threat to the United States, or not?
7. In the 2020 election, would you like to see someone else run against Donald Trump in the Republican primary for president, or wouldn't you like to see that?
8. Thinking about the 2020 Democratic primary for president, if all other things are equal, would you prefer a candidate that is - younger or older?
9. If you had to choose, which is more important in a presidential candidate: a candidate who you think would be a great leader, or a candidate who you think has great policy ideas?
10. For future presidential elections, would you support or oppose changing to a system in which the president is elected by direct popular vote, instead of by the Electoral College?
11. Do you think that Special Counsel Robert Mueller who oversaw the investigation into any links or coordination between President Trump's campaign and the Russian government conducted a fair investigation into this matter, or not?
12. Do you think that Special Counsel Robert Mueller's full report should be released to the American public, or not?
13. Thinking about the relationship between the United States and Israel, do you think the U.S. is too supportive of Israel, not supportive enough of Israel, or is the U.S. support of Israel about right?
14. Do you think the Social Security system will be able to pay you a benefit once you are eligible to receive it?
15. Is your opinion of Alexandria Ocasio-Cortez favorable, unfavorable or have you not heard enough about her?
16. Do you think that keeping the current health care system but allowing all adults the option of buying into Medicare is a good idea or a bad idea?
17. Thinking about the 2020 Democratic primary for president, if all other things are equal, would you prefer a candidate that is a white person or a person of color?
18. In the 2020 general election for president, if Donald Trump is the Republican candidate, would you definitely vote for him, consider voting for him, or would you definitely not vote for him?
19. Do you approve or disapprove of the way Susan Collins is handling her job as Maine Senator?
20. Thinking about the 2020 presidential election, if all other things are equal, would you prefer a candidate that - most shares your views on issues or a candidate that you think is the most electable?

Appendix B:

Political Poll in Dexter, ME

IRB-FY2019-2825 ; sponsored by New York University Department of Political Science

Please do not write your name on this form. The information below is for screening purposes, and for aggregate data collection. The individual forms will kept confidential, and the personal information provided below will be anonymized and impossible to retrace, as your answers and information will never be presented individually, but rather in large data analysis with many other respondents.

Screening Information:

Birth Year:_____ Current Zip Code: _____

Gender: Woman Man

Race: White Non-White

Education: High School Undergraduate Graduate

Have you ever lived outside Maine for more than a month? Yes / No

If yes, for how long? _____

Have you ever lived in another part of Maine? Yes / No

If yes, where? (include zip code, if possible)

_____

Which party do you tend to vote for? Republican / Democrat

Consent Form: You may stop at any time, and you may choose at any time not to have your answers used in this poll's results. The compensation for your ten minutes of time will amount to $5, and these responses will be used as part of an ongoing political survey in Dexter, Maine. Signing below indicates understanding the conditions above are completely voluntary, and indicates both consent in participation and consent in having answers and anonymized demographic data utilized for political research. You may explicitly revoke the right for their use by contacting Andre Schwab at (718) 679 7538, or at abs616@nyu.edu, or verbally during the poll, and demand that the survey form be destroyed.

x_____ Date: _____

Political Survey:

Please listen to the audio recording and answer accordingly. **You may choose not to answer a question if you do not know, or do not have an opinion either way.**

1. ☐Agree ☐Disagree
2. ☐Optimistic ☐Pessimistic
3. ☐Yes ☐No
4. ☐Improve ☐Replace
5. ☐Yes ☐No
6. ☐Yes ☐No
7. ☐Yes ☐No
8. ☐Younger ☐Older
9. ☐Great leader ☐Great policy
10. ☐Support ☐Oppose
11. ☐Fair ☐Unfair
12. ☐Yes ☐No
13. ☐Too supportive ☐Not supportive enough ☐About right
14. ☐Yes ☐No
15. ☐Favorable ☐Unfavorable ☐Don't know enough
16. ☐Good idea ☐Bad idea
17. ☐White person ☐Person of color ☐Doesn't matter
18. ☐Definitely ☐Maybe ☐Definitely not
19. ☐Approve ☐Disapprove
20. ☐Shares views ☐Most electable