TITLE: "Scientific" Polling and the Rhetorical Use of Statistical Sampling: boundary- and conflation-work.

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PREFACE

My talk this afternoon is going to be about the rhetorical **practices of public opinion polling** practitioners in the 1930's and 40's in America.

INTRODUCTION

Public opinion polls are the most well-known of the data collection methods used in the social sciences. They are with us and after us incessantly. But this phenomenon of what George Gallup called the "continuous poll" is a relatively recent one. It came about in America in the mid-1930s, and was the brainchild of three individuals: Archibald Crossley, George Gallup, and Elmo Roper. They came to be known as the "scientific" pollsters. This research covers the period between 1935 and 1948, excluding the presidential election of '48.

Much of what the pollsters did during those years was to establish both the political and the scientific legitimacy of their enterprise. A lot has been written about the former, but very little has been said about the latter.

In this paper, I identify the rhetorical resources the pollsters relied upon to establish the **scientific legitimacy** of their undertaking. To do this I have been guided by two past research studies: the first one by Thomas Gieryn (1983) on boundary-work, which he defines as a rhetorical device to demarcate science from non-science; and the second one by Carruthers and Espeland (1991) in which they show that the theory of double-entry bookkeeping, although not used in business practice for a long time, was nevertheless relied upon to establish the "legitimacy of commerce in general and (...) the integrity of the business enterprise in particular". I have called this practice "conflation-work".

BACKGROUND

In October 1935, Gallup reported the results of a poll in his first syndicated column entitled "America Speaks!" At the time, about 30 newspapers subscribed to his services. Gallup had a Ph.D. in psychology and a background in advertising. Since 1932 he was a research director at the prestigious advertising firm of Young and Rubicam. Between 1933 and 1935, he also conducted a number of experimental polls for the purpose of perfecting his methodology. The results of these polls were not published but were used to attract potential subscribers.

Public **political** opinion polls have been around since the 1820s. In those days and until the appearance of the scientific pollsters they were mostly the preserve of newspapers. As such the history and practice of polling during that era is tied to that of newspapers. As the press slowly transitioned from strident partisanship to "impartiality" and "objectivity", so did the **straw** polls, as they were called. The flagship of independent straw poll journalism was *The Literary Digest*. The weekly magazine started its polling career in 1916, and by the 1930s had become a household name. Up to 1932, it predicted without fail the winner of every presidential contest.

Sampling theory is the branch of statistics most relevant to polls. The idea that one need not reach the entire population of interest, but only a subset, to find out how some characteristic is distributed within that population came to maturation at the **turn** of the 20th century. The central problem was how to make the sample "representative" of the population. There were two competing approaches: one was called "purposive" or *quota sampling*, where the sample is selected such that its composition was proportional to that of the population on key demographic variables such as age, income, sex, etc.; the other was **probability sampling** in which each element in the population has a known probability, greater than zero, of being selected into the sample. In 1934, a Polish mathematician by the name of Jerzy Neyman wrote a paper that demonstrated that probability or random sampling was superior to the purposive approach.

Although the scientific pollsters knew about probability sampling, they did not use this methodology for their polls but instead relied on quotas to build their samples.

BOUNDARY-WORK

In November 1936, the scientific pollsters registered their first success: all three correctly predicted a Roosevelt win. In contrast, the prestigious *Digest* poll failed miserably: its results showed that FDR would lose heavily. These contradictory outcomes, although they vindicated the new pollsters, could be bad for the polling business. Indeed, there was the danger that, in

the public mind, the only difference between the two types of polls was merely a bit of luck. Therefore, it became imperative to dispel this potential confusion and show that the **scientific** poll was altogether different from the **straw** poll. The pollsters went on the offensive: they initiated a relentless public relations campaign to show that what differentiated them from the straw polls was their sampling methodology.

Their demonstration had three facets. First, they explained **that** their success in the 1936 presidential election was a direct result of what they called scientific sampling. Specifically, because their samples reflected the correct proportions on five critical demographic variables, which they called "controls", they were able to obtain a miniature electorate representative of the actual one. In Gallup's words: "When you do that, you are operating a scientific poll; when you do not do it, you are conducting a straw poll." These "controls" were: (1) voting population by state; (2) place of residence (urban or rural); (3) income levels; (4) age; (5) voters for each party in the previous election. Later, sex was added as the sixth control.

Second, they endeavored to show **that** what sank the *Digest* poll was its lack of proper sampling. To run its polls the *Digest* relied on a huge sample of 10 million extracted, mostly, from telephone books and car registration lists. The pollsters contended that because of that the *Digest* results, which were based, in 1936, on 2.4 million returns, were biased in favor of those better-off and therefore more likely to vote for the Republican candidate. The pollsters pointed out that the huge number of ballots the *Digest* sent out was wasteful because numbers would not eliminate bias. In contrast, they relied on much smaller, but carefully selected, samples. In addition, it was a mistake, they said, to rely entirely on mail-in ballots since it was known that certain groups, especially low-income folks, are much less likely to fill out their ballots than higher income individuals.

The third aspect of their PR campaign was a maneuver devised by Gallup. As a final demonstration of the superiority of their methodology, Gallup claimed that he had been able to predict that the 1936 *Digest* presidential poll was going to fail. How did he go about doing that?

In July of that year, a month after the Republican Convention, in one of his regular columns, in which he reported the results of yet another of his polls, he also discussed the announcement by the *Digest* that it would conduct a presidential poll starting in late August. In his column, he wrote, among other things: "If the *Literary Digest* were conducting its poll **at the present time** [emphasis added], following its usual procedure, Landon would be shown in the lead. The actual figure would be in the neighborhood of 44 per cent for Roosevelt, 56 per cent for Landon." Less than two weeks after the election results in November, an article appeared in News-Week about Gallup in which readers were told that he had predicted, back in July, the failure of the *Digest*. This story was then repeated a number of times, including by his fellow

scientific pollsters, so that it became effectively part of the lore of scientific polling. It also helped that the *Digest* final results were quite close to Gallup's "prediction".

I should explain that, in 1936, Gallup used two methods to reach his respondents: by mail-ballots and by in-person interviews. His mail-ballots were based on the same lists the *Digest* used. So to obtain his July estimate he looked at the results of the mail ballots. After 1936, Gallup would rely almost exclusively on in-person interviews.

CONFLATION-WORK

"Conflation-work" represents the second tier of the two-pronged strategy the new pollsters adopted to establish the *scientificity* of their endeavor. It is a rhetorical device that juxtaposes, within a discursive space (e.g. an article, a speech), two or more items that are conceptually related, one of which has high prestige but not the other, so that the latter will profit from its close association with the former and derive the benefits associated with the entity in high standing. Here, the concept that enjoyed scientific prestige is *statistical sampling* as it is informed by the science of inferential statistics whose foundation is probability theory; this was given a definitive statement in Neyman's 1934 paper; the methodology **actually** used, which the pollsters conflated with the former, was quota-sampling.

A close examination of the public utterances of the scientific pollsters shows numerous instances in which they mention or describe their methodology while, at the same time, connecting it to probability theory, thus fostering the impression that their sampling approach was informed by inferential statistics, and thereby, equivalent to probability sampling.

I list three statements by Gallup as examples of what I am talking about:

- "Statisticians have repeatedly demonstrated that a few thousand voters correctly selected will reflect faithfully the views of an electorate of millions of voters. The secret is in the cross-section – the way the voters for the sample are selected." (Gallup 1938)
- Polls "will likely be right ninety-five times in a hundred when properly used, they may be wrong the other five times." (Gallup 1940)
- "The laws of probability, first set out in 1713, give the exact range of error which can be expected with samples of any size, be they large or small." (Gallup 1941)

Because quota-sampling lacks randomization, the rules of **standard statistical theory** do not apply.

In practice, the selection of any one person into the sample was left to the whim of the interviewers. The central office would tell them what their quotas were: how many men they

needed to interview, how many women; how many in this income category, how many in the others, and so forth. Then it was up to the interviewers to roam their communities, and pick and choose those that fitted the prescribed profile. This may have the appearance of randomness, but not in the statistical sense. In fact, it became clear to practitioners that interviewers were likely to increase the bias in the sample.

CONCLUSION & DISCUSSION

In this paper I argue that it was imperative for the new pollsters to implant into the public mind that theirs was *scientific* work.

The pollsters adopted a two-pronged rhetorical strategy to achieve their goal: 1) they engaged in *boundary-work* to establish a clear demarcation between the type of polling they practiced (science) and the straw polls (non-science); the *boundary-concept* they relied on to do so was *sampling*; 2) they performed *conflation-work* to enhance the **scientific image** of the new polls by fostering the impression that probability sampling and quota sampling were equivalent.

Through these devices, they sought to establish themselves as the sole authority when it came to "public opinion". They claimed to be the only valid and reliable producers of knowledge regarding "public opinion".

Did the scientific pollsters succeed? Briefly, YES – at least until the presidential election of 1948, when their whole scientific enterprise came into question.

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