

An Analysis of Political Views on Blogs

November 10, 2008 Update

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1 Introduction

In this update we examine the effects of the national conventions on Obama and McCain's FeelScores. We also examine the effects of the three presidential debates and the vice presidential debate, and explain anomalies in Biden and Palin's FeelScore curves. Our event analyses are centered around new authors created by each event as well as changing opinions due to each event.

2 National Conventions

We begin with a brief recap of Obama and McCain's FeelScores during and after each of their national conventions. Figure 2a shows Obama's FeelScore over time around the Democratic National Convention. Clearly, we see the effect often noted in the media: the candidate receives a boost of positive opinions from the convention and the public's average opinion slowly tapers off to a normal level afterwards. McCain's FeelScore curve in Figure 2b does not exhibit this convention boost.

Despite this trend seeming reasonable, questions still remain about how Obama's FeelScore exhibits the trend. As a reminder, each FeelScore over time includes authors' opinions stated previously in the year with an equal weight to authors expressing an opinion on the date that the FeelScore is for. Thus if an author expresses an opinion about Obama in April, we assume that the author's opinion remains the same until the author again mentions Obama in a blog post (or lists an interest or joins a community related to Obama). For the calculation of say, August 29's FeelScore,

this author's opinion, which was stated in April, is given equal weight to a new author that stated his/her first opinion on August 29.

Figure 2a: Obama's FeelScore During DNC

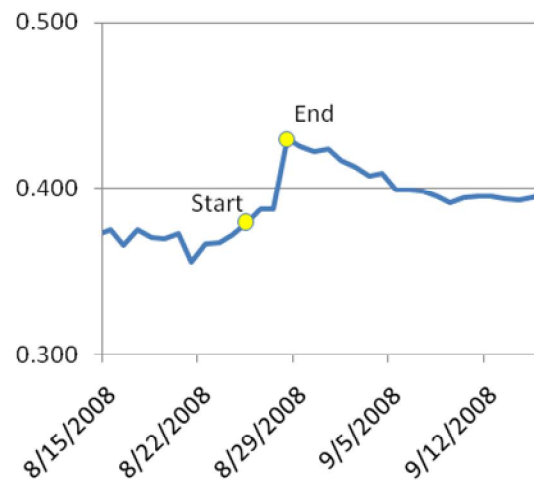
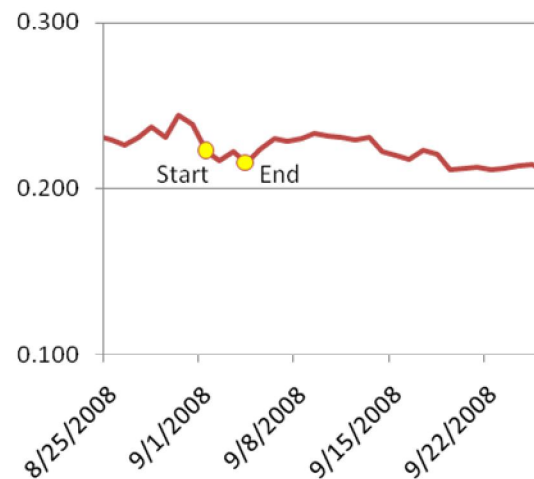


Figure 2b: McCain's FeelScore During RNC



This raises questions as to how Obama's FeelScore exhibits this rise and then gradual fall back to a more normal level. Is the DNC causing authors to change their opinion about Obama, with these authors slowly lowering their opinion back to a normal level after the excitement of the event has worn off? Are mostly new positive Obama authors joining in on the discussion for the first time during the DNC, with a pile of less positive Obama authors joining in later to level out the overall opinion? Did the DNC cause a mass of Obama supporters to join while the RNC caused a mass of anti-Obama authors to join? If so, since the RNC happened after the DNC, did this cause Obama's curve to behave the way that it does, and does this also explain why McCain's curve is relatively flat? McCain's curve does not drop during the DNC, so why would Obama's curve gradually fall due to the RNC?

2.1 New Authors

We begin to tackle these questions by examining the opinions of new authors during the convention period. Figure 2.1a shows the number of new authors expressing opinions about Obama and McCain during each day from August 15 to September 15. The DNC and RNC are marked on the figure with yellow dots showing the beginning and ending of each convention.

We see that the DNC causes more new authors to state opinions about both candidates. Obama's new author curve rises sharply during the convention with a peak of 188 new authors one day after the convention. His curve then sharply drops off as the RNC nears. McCain's new author curve remains fairly unchanged during the DNC, but spikes sharply near the end and on the day after the DNC. McCain actually receives more new authors and a higher FeelScore from new authors during this period than he receives from the RNC.

The RNC causes significantly less new authors to join the discussion, presumably be-

cause of the scaling back of the RNC as discussed in our previous update (Hurricane Gustav). McCain barely beats Obama in the new author count during the RNC period.

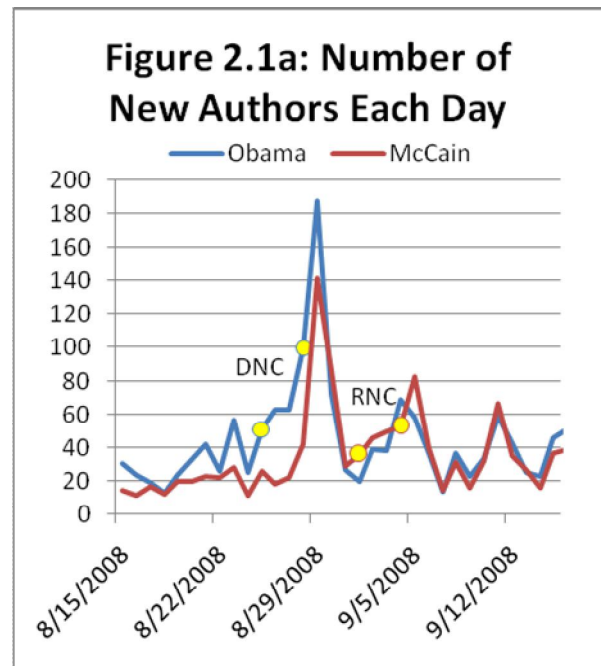
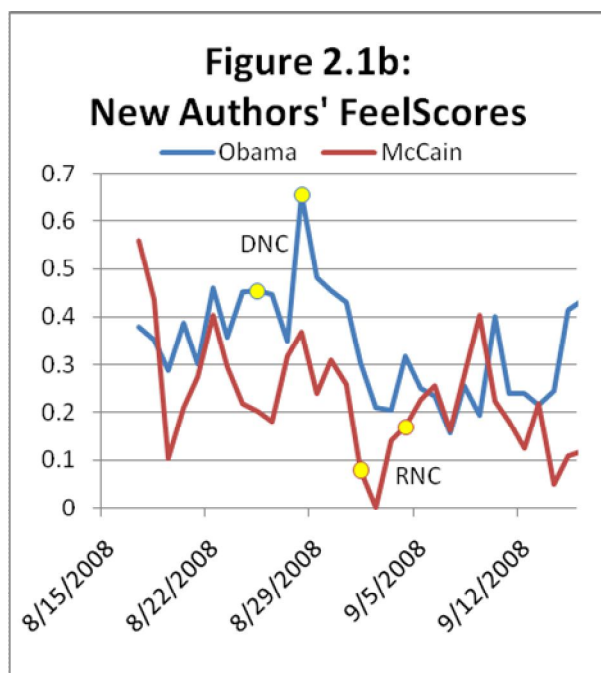


Figure 2.1b shows the average FeelScores of each candidate for these new authors. The FeelScore curves are a 3 day exponentially decreasing average with the previous day receiving a weight of 0.5 and the previous previous day receiving a weight of 0.25. An important note to remember is that Obama's overall FeelScore during this period is hovering around 0.4 (Figure 2a) while McCain's is just above 0.2 (Figure 2b).

Keeping this in mind, we see that the majority of new authors from the DNC period are rating Obama significantly higher (0.81 on the last day of the DNC) than his overall FeelScore of 0.4. Once the RNC begins, most new authors are rating Obama up to 0.2 below his overall FeelScore. This lower-rating trend starts on the opening day of the RNC (September 1) and continues through September 14 with the exception of one day. The data clearly shows that the DNC had a strong effect of bringing new authors into the blogosphere discussion that are supportive of

Obama. The RNC cut Obama's positive rating spree short. Obama's more negative new authors during and after the RNC are in much smaller numbers than the positive new authors during the DNC period, which explains the sharp rise in Obama's overall FeelScore with a gradual drop afterwards to a more normal level.

McCain's new author FeelScore curve is quite erratic. He actually receives boosts and drops in most places that Obama receives the same positive or negative change. His new author rating is not negatively affected by the DNC, and is actually higher than normal during the run up to the RNC. The RNC does not seem to impress many, as McCain's rating is actually at its lowest point one day into the convention. The RNC seems to be more successful at decreasing Obama's rating rather than increasing McCain's.



2.2 Changing Opinions

Aside from causing new authors to join the discussion, the conventions might also cause bloggers to change their opinions about the candidates. Figure 2.2a shows the number of authors that are changing their opinions about each candidate. A change of opinion does not

mean a complete reversal of opinion (change in sign of the FeelScore).

First, we see that far less authors change their opinion in comparison to new authors stating their opinion at any point in time. Far more authors are changing their opinion about Obama. The number of authors changing their opinion about Obama is largely influenced by the DNC and RNC (hence the giant mound). McCain's curve is much more constant and does not seem to be affected by either convention.

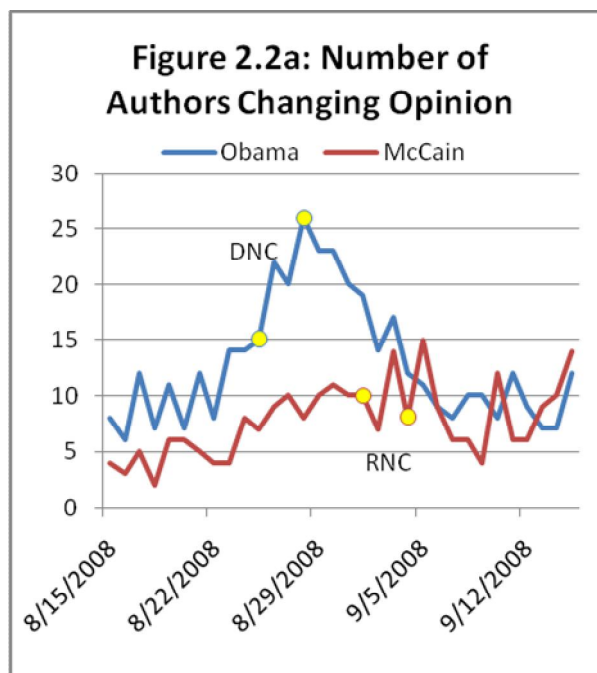
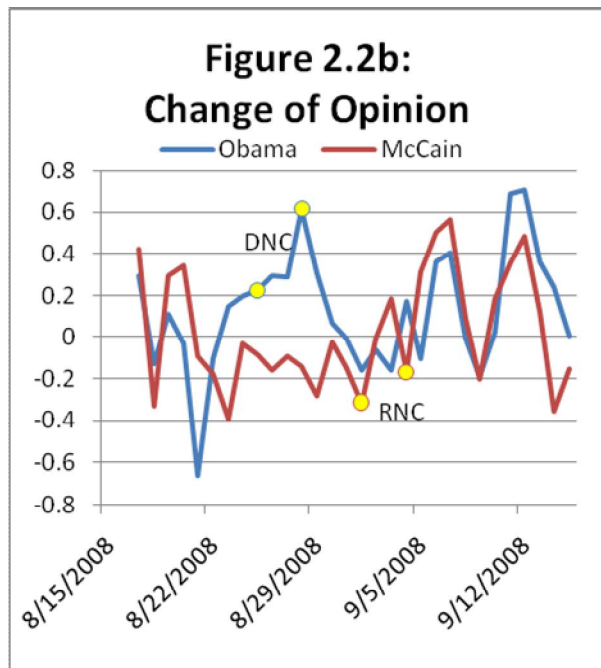


Figure 2.2b shows the average change of opinion as a 3 day exponential average with the same weights as in the previous section. Thus a value on the y-axis of 0.2 indicates that, on average, the authors during that day that changed their opinion increased their opinion of the given candidate by 0.2. We see that the DNC had a strong effect on Obama's FeelScore with the majority of changed opinions during the period becoming more positive. This reaches a peak on the last day of the DNC. The RNC causes a small decrease in Obama's FeelScore amongst changed-opinion authors, but is not nearly as effective at changing opinion as the DNC.

The DNC and RNC seem to have only a small effect on McCain's FeelScore. The change of opinion is slightly negative from August 21 through the DNC. The RNC gives McCain a slight boost into a positive change of opinion. All peaks and valleys afterwards are unlikely to be due to the conventions since Obama and McCain's curves both follow the same pattern.



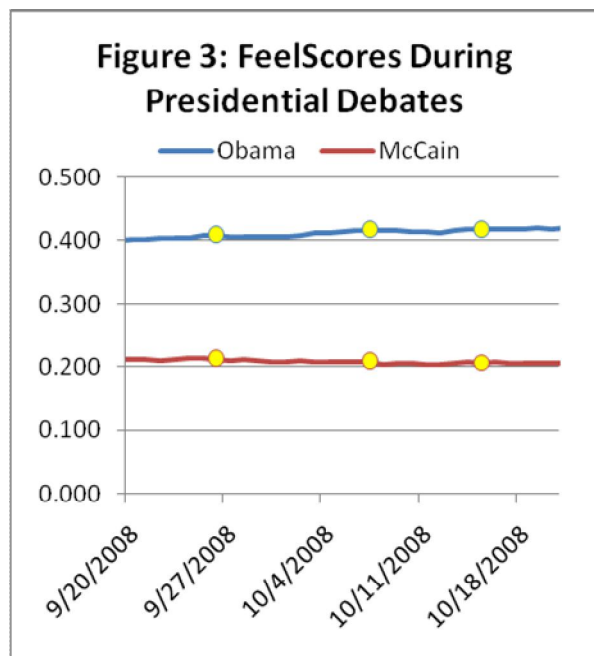
2.3 Overall Convention Effects

We saw from Section 2.2 that the DNC convention played a significant part in changing author's opinions for the positive for Obama, but the conventions had little effect on both candidates in other regards. Both conventions clearly caused spikes in new authors expressing opinions, with the DNC having the largest effect. Obama's rise in overall FeelScore during the DNC is attributable to both a positive change in opinion of existing authors and a mass of positive new authors. His gradual decline after the DNC is mostly attributable to negative new authors joining on or after the RNC. The decline is gradual in comparison to the rise because far less new authors are joining the discussion each day during and after the RNC.

McCain's curve remains mostly constant during the convention period despite seeing spikes in new authors caused by both conventions. Both conventions had almost no impact on changing opinions towards McCain of existing authors. New authors showed a mixed bag, with higher than normal ratings during the run up to the RNC and lower than normal ratings during the RNC. This may be in part due to disappointment at the scaled back Republican Convention due to Hurricane Gustav.

3 Presidential Debates

Figure 3 shows each candidate's FeelScore during the three presidential debates on September 26, October 7, and October 15 (each marked as yellow dots). We see that overall, the debates had little effect on each candidate's FeelScore. Obama's curve has a slightly positive slope while McCain's has a slightly negative slope. Obama's score remains around 0.4 while McCain's stays just above 0.2.



3.1 New Authors

Despite not affecting the overall FeelScores of each candidate, the debates were still successful in spurring more authors to join the discussion. Figure 3.1a shows the number of new

authors expressing opinions about each candidate each day. We see that all three debates (marked again as yellow dots) form the center of mounds that are noticeably larger than other peaks in the graph. Reflecting back on Figure 2.1a, we see that the debates created far less new authors than the conventions. This is in part due to the fact that the debates happened later in the election season.

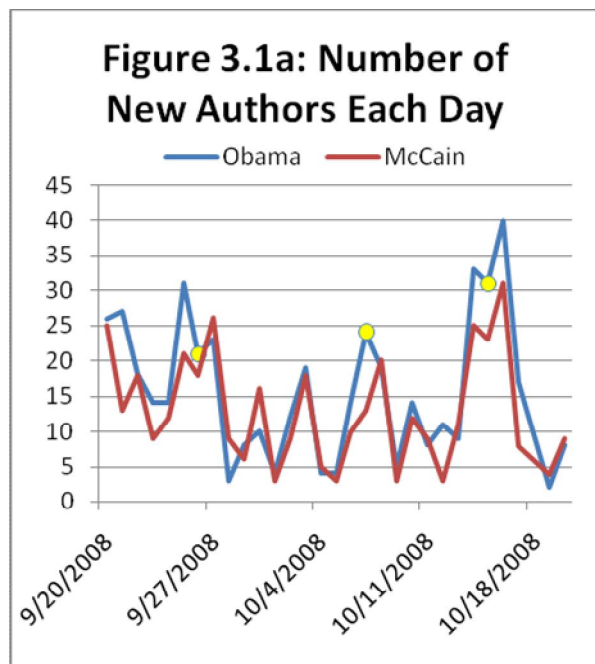
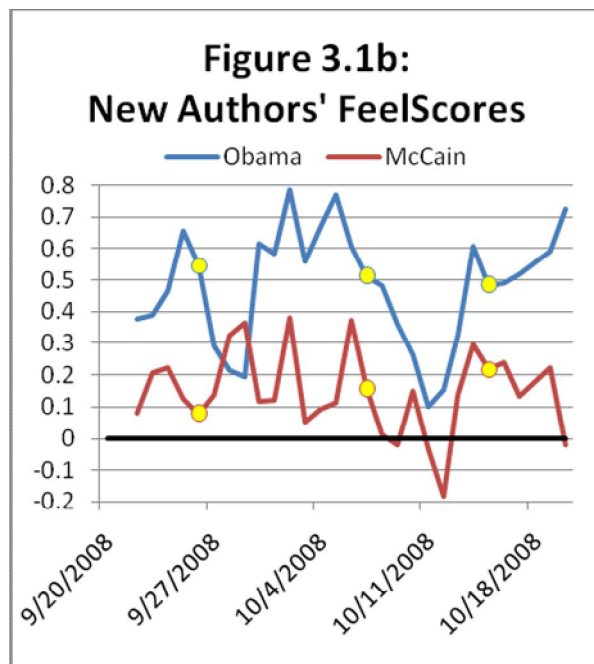


Figure 3.1b shows FeelScores of the new authors during the debate period. Again, the curves are 3 day exponential averages with the same weights as before. McCain appears to have a dip during the first debate with a seesaw between the first and second debate that is most likely due to the small number of data points. The second debate, which was a town hall style debate (McCain's "strength"), caused both candidates' FeelScores with new authors to decline sharply. The third debate does not seem to have much effect on McCain, while it appears to take Obama into an upswing.

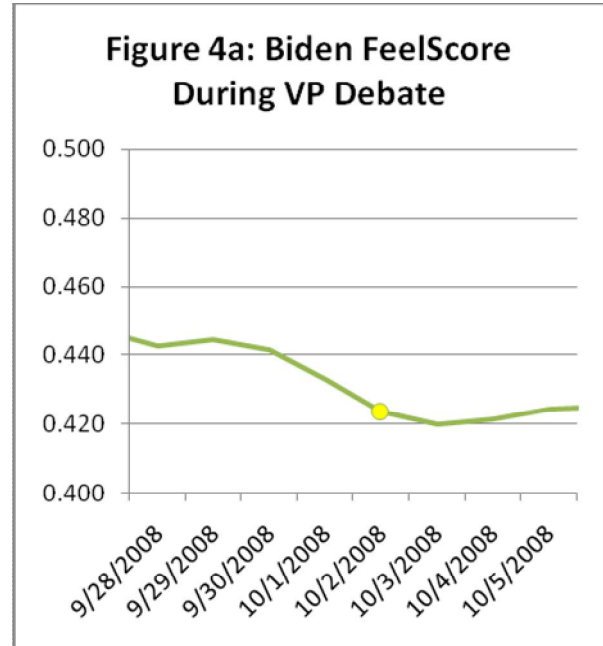
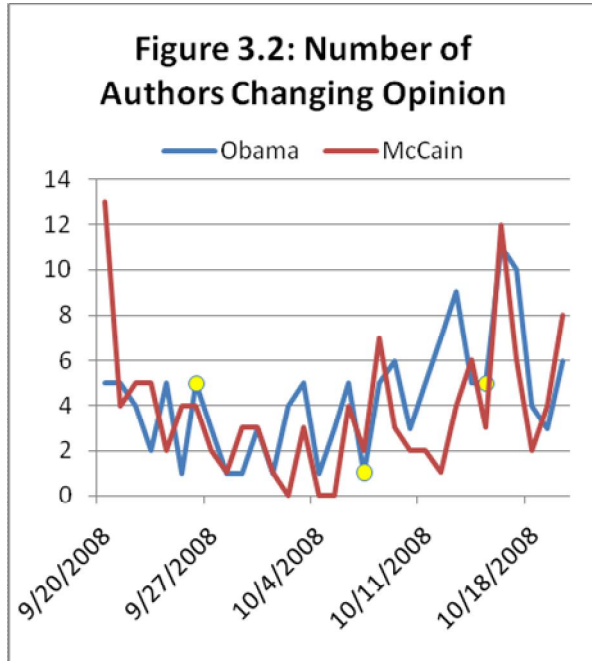
Much of the data for Figure 3.1b is too sparse to draw any definitive conclusions from. If we only look at the three day period of each debate (one day before, and one day

after), then we can at least draw some conclusions. For the first debate, all of Obama's three data points are above his normal FeelScore of 0.4 while all of McCain's are slightly below. Obama maintains the same trend for the other two debates, while McCain again slightly disappoints on the second debate. In the final debate, McCain is slightly above his normal of 0.2.



3.2 Changing Opinions

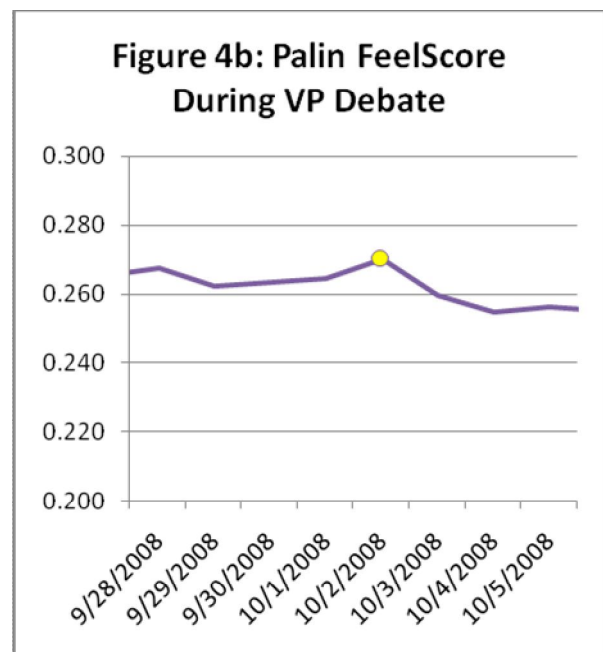
Figure 3.2 shows that almost none of the authors changed their opinions during the debates. The trend of both curves shows no significant effect from any of the debates, and even if it did, we are talking about a maximum of 13 authors changing their opinion about a given candidate. By October 4, Obama had 2,767 authors expressing an opinion while McCain had 2,023 authors. In light of this, we can conclude that the debates had almost no influence on existing authors' opinions.



4 Vice Presidential Debate

We now turn our attention to the vice presidential debate. The effects of the debate are quite small. Figure 4a and 4b show Biden and Palin's FeelScores with the debate on September 2 marked as a yellow dot. We see that Biden's FeelScore has a drop of 0.02 over the few days before the debate. This is most likely due to the general public's pessimistic opinion that Biden would have a difficult time during the debate due to Palin's inexperience and the fact that Biden could easily look like a bully.

Palin's FeelScore sees a slight bump on the day of the debate with a drop of around 0.01 on the day after the debate. While both vice presidential candidates' FeelScores seem to be affected by the debate, the effect was minimal. Neither candidate's FeelScore changes more than 0.01 between successive days. The VP debate had an even smaller impact on the presidential candidates' FeelScores.

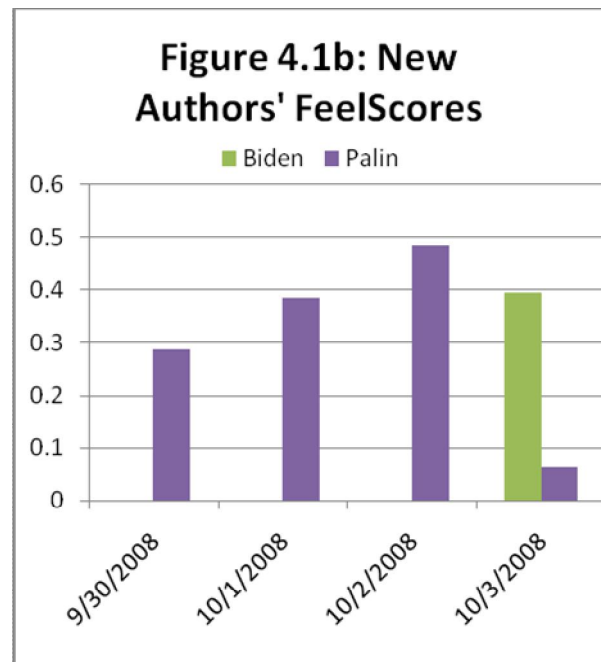
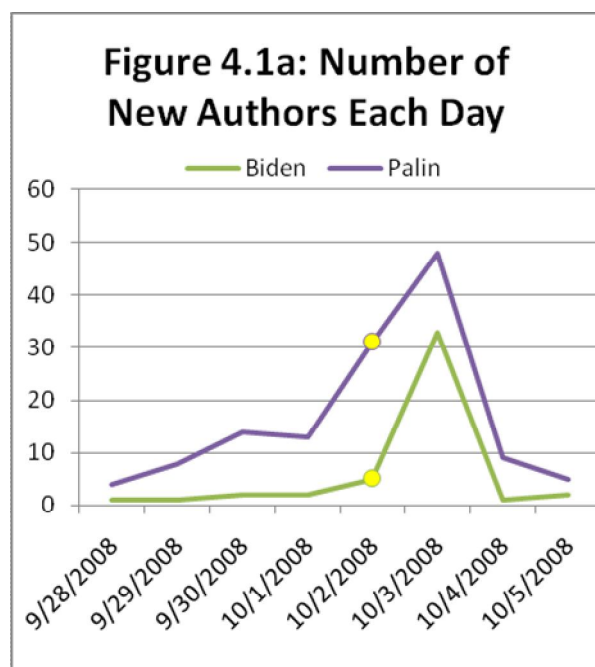


4.1 New Authors

Figure 4.1a shows the number of new authors expressing opinions about Biden and Palin around the vice presidential debate. Biden has a peak of new authors one day after the debate while every other day on the figure has less than 6 new authors. Palin's curve also peaks on the day after the debate, but she also has a sizable mass of new authors on the two days before the debate and on the debate day.

These new Palin authors from October 1 through October 3 appear to be blogging in anticipation of a strong performance by Palin that would redeem her from her recent missteps such as her Katie Couric interview on September 24. Figure 4.1b shows the average author FeelScores (1 day average) for days where the candidate has at least 10 new authors. We see the new authors each day giving Palin a higher average FeelScore that peaks at 0.48 on the day of the debate. The day after the debate, which is also the day with the largest number of new Palin authors, her day's new author FeelScore drops to 0.063! This explains the slight peak in Figure 4b as her overall FeelScore hovers around 0.26.

Biden on the other hand only has more than 10 new authors on the day after the debate, where his average FeelScore is 0.39. This average is slightly below his overall average of around 0.425, which indicates a minor overall opinion of underperforming at the debate. His performance appears to have been better than Palin's though, since her day after FeelScore was 0.2 below her normal.



4.2 Changing Opinions

The vice presidential debate period caused no existing author to change their opinion about Biden, while 5 or less existing authors changed their opinion about Palin. Thus the slight changes in overall FeelScore due to the debates is almost entirely due to the new authors joining the discussion on the day after the debate.

5 The Biden Bump

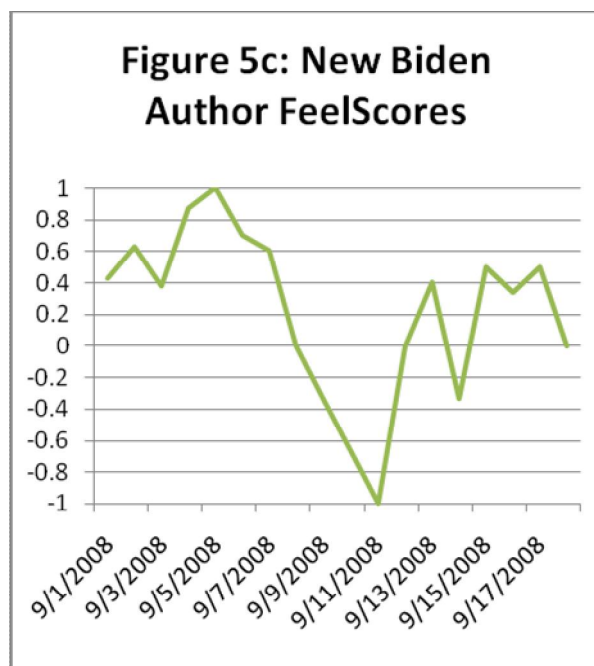
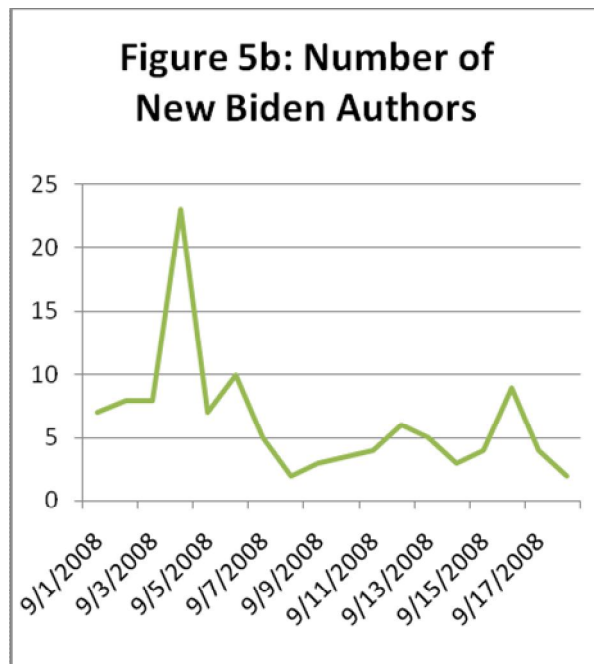
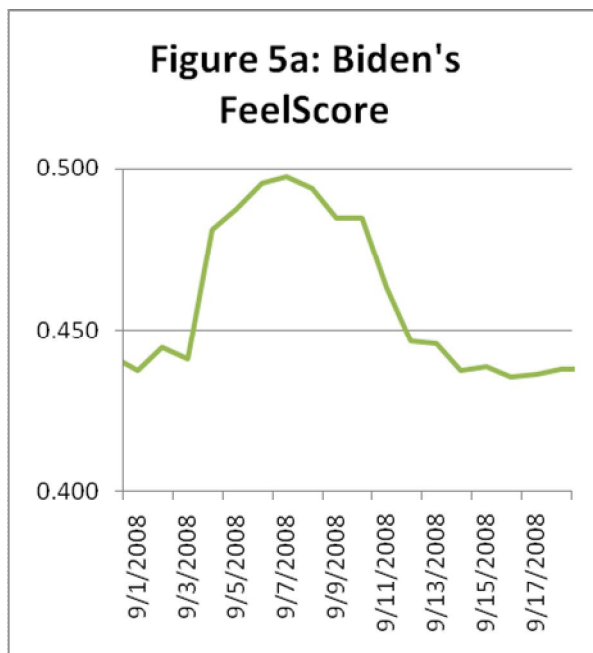
In our previous update we ended with a comment about odd behavior in Biden's FeelScore curve, which we are now calling the Biden Bump. The Biden Bump is shown in Figure 5a. His score abruptly jumps by 0.05, stays high for several days, and then drops by the same amount, remaining there for much of the future. We found no news reports that coincided with the abrupt rise around September 4 and abrupt drop around September 11.

Only five authors changed their opinion about Biden during this period. All five changed their opinion to -1, but each opinion change was at least 2 days apart. Thus, like all of our previous investigations during this up-

date, the bulk of FeelScore change must be due to new authors.

Figure 5b shows the number of new Biden authors each day while Figure 5c shows the 1 day average FeelScores for these authors. Figure 5b has an obvious spike in new authors on September 4 with 23 new authors. These 24 new authors have an average FeelScore of 0.87. Figure 5c shows that the new authors continue to have an average FeelScore that is higher than the normal 0.45 for a few days, before dropping dramatically down to -1 on September 11.

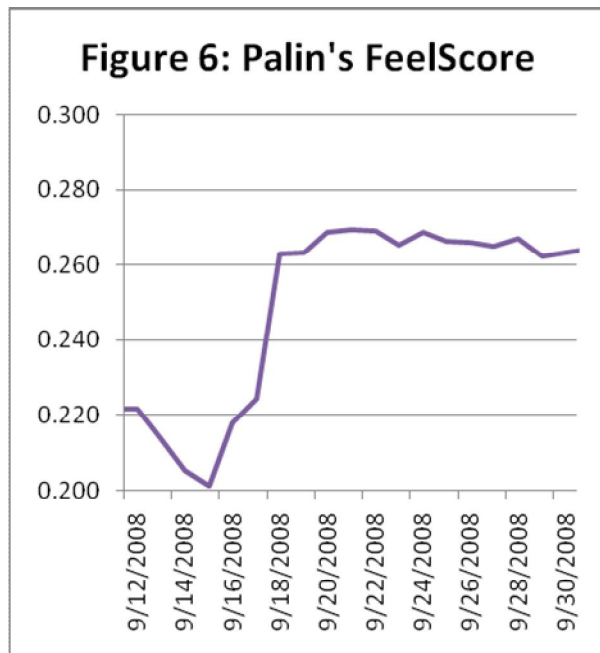
On September 1, 202 authors have expressed an opinion about Biden. This small number of authors coupled with the lack of important news stories during the period strongly suggests that the Biden Bump is nothing more than noise. The large spike in new Biden authors on September 4 is most likely due to Palin's acceptance speech at the RNC the day before, with the new authors comparing Biden to Palin. Examining the blog posts about Biden during this period show that this is the case.



6 Palin's FeelScore

Our previous update also ended with a mention of Palin's sharp increase on September 18 as shown in Figure 6. Just as with Biden's Bump, this is due to a large number of new authors expressing an opinion about the candidate. In this case, 75 new authors expressed a largely positive opinion (0.72 average) on

September 18. The number of new authors in later days in the figure is around 10, so Palin's FeelScore does not change as abruptly after the 18th.



7 Future Work

In the coming weeks we will extend our analysis through the November 4 elections. We will pair the FeelScores with the actual election results to see how well the blogosphere matches the actual election outcomes. We will also compare the FeelScore curves with poll data, and examine the positive and negative reactions to the election outcomes with respect to each candidate.