# Planet Politics: The Pluto Paradox - A Correlational Study of Republican Senatorial Votes in Montana and Google Searches for 'Is Pluto a Planet?'

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#### Abstract

In this study, we embark on a cosmic quest to unravel the mysteries of political alignments and astronomical contemplations. Leveraging data from MIT Election Data and Science Lab, Harvard Dataverse, and Google Trends, we scrutinize the unlikeliest of connections - the relationship between Republican votes for Senators in Montana and the perennially perplexing query 'Is Pluto a Planet?' Our findings reveal a celestial correlation coefficient of 0.9100563, denoting a statistically significant relationship (p < 0.05) between these seemingly unrelated phenomena. Join us as we navigate through the galactic gossip and political paradoxes, shedding light on the whimsical interplay between the cosmic curiosities and the earthly electoral events. So, buckle up, fellow researchers, for it turns out that in the vast expanse of space, as in politics, nothing is ever truly in orbit!

#### 1. Introduction

#### INTRODUCTION

As we embark on this scholarly expedition, let's take a moment to ponder the cosmic conundrum that lies at the heart of our investigation. The age-old question of 'Is Pluto a planet?' has lingered in the celestial chambers of our collective consciousness, sparking countless debates, existential crises, and perhaps a few intergalactic feuds. On the political frontier, the landscapes are equally intriguing, with rivalries, alliances, and electoral escapades unfolding like an epic space opera.

Now, what if we were to tell you that these two seemingly unrelated realms – the distant reaches of our solar system and the intricate web of political affiliations – are somehow intertwined, like binary stars locked in a cosmic dance? Yes, dear reader, we have delved into the depths of data, traversed the corridors of correlation, and stumbled upon a celestial connection that might just leave you stargazing in awe.

Our quest has taken us to the vast plains of Montana, where the Republican votes for Senators have intersected with the digital ether of Google searches pondering the planetary status of our dear Pluto. The perplexing paradox that emerges from this cosmic collision defies the conventional boundaries of research inquiry, beckoning us to navigate the gravitational pulls of statistical significance and revel in the interstellar intrigue of unexpected relationships.

As we navigate the uncharted territories of our study, weaving through the asteroid belts of data analysis and the dark matter of academic discourse, we invite you to join us on this cosmic rollercoaster ride. Buckle up, fellow researchers, for we are about to dive headfirst into the Pluto paradox, where political polarization meets planetary musings in an astronomical tango of correlation and causation. Let's launch ourselves into this stellar voyage, where stars align, and politics takes on a celestial spin!

#### 2. Literature Review

In "Smith et al." and "Doe's Cosmic Compilations," the authors find scholarly discussions on the complexities of political affiliations and the celestial enigma of Pluto's planetary status. These works bring to light the intricate interplay between cosmic contemplations and the labyrinthine landscapes of political polarization, inviting readers to ponder the cosmic conundrums that echo in the chambers of our collective consciousness.

As we traverse the cosmic terrain of our research, it is crucial to consider the influence of relevant non-fiction literature. "The Pluto Files" by Neil deGrasse Tyson and "How I Killed Pluto and Why It Had It Coming" by Mike Brown offer compelling narratives about the contentious demotion of Pluto from planetary status, shedding light on the emotional gravity that surrounds this cosmic controversy. Furthermore, fictional works such as "The Hitchhiker's Guide to the Galaxy" by Douglas Adams and "The Martian" by Andy Weir provide thought-provoking perspectives on space exploration and the whimsical nature of cosmic quests.

Now, turning our attention to less traditional sources, we cannot overlook the invaluable insights gleaned from children's cartoons and animated entertainment. Shows such as "The Magic School Bus" and "SpongeBob SquarePants" offer playful yet informative portrayals of astronomical concepts, enriching our understanding of the cosmic phenomena that captivate minds young and old. In the spirit of interdisciplinary

inquiry, we embrace these unconventional sources as we navigate the celestial corridors of our research, unveiling the cosmic comedy that unfolds at the intersection of political musings and planetary ponderings.

## 3. Research Approach

## METHODOLOGY

So, dear cosmic detectives, here's how we navigated the swirling galaxies of data and unearthed the astral secrets of political predilections. Our methodological approach aimed to triangulate the cosmic queries of Google searches with the terrestrial turf of electoral outcomes, creating a celestial tapestry that would make even the most seasoned astronomer raise an eyebrow.

### Data Collection:

First off, we delved into the digital expanse, harnessing the power of Google Trends to capture the ebb and flow of searches for the enigmatic phrase 'Is Pluto a Planet?' across the vastness of cyberspace. We combed through the digital constellations, tracking the celestial musings of internet users from 2004 to 2020, capturing the zeitgeist of planetary ponderings as they waxed and waned like Mercury in retrograde.

As for political proclivities, we sought refuge in the comforting arms of MIT Election Data and Science Lab and the Harvard Dataverse, harvesting the electoral data on Republican votes for Senators in the sprawling plains of Montana. We gathered the electoral outcomes with the precision of a telescope zeroing in on the distant flicker of a quasar, ensuring that no vote was left adrift in the cosmic sea of political discourse.

### Data Analysis:

Having amassed this stellar array of data, we embarked on a cosmic journey through statistical analysis. We employed the venerable Pearson correlation coefficient to unravel the celestial dance between Republican senatorial ballots and the digital musings about Pluto's planetary status. With each calculation, we found ourselves gazing into the cosmic abyss of correlation, navigating the interplay of variables like a spacecraft maneuvering through the gravitational pull of celestial bodies.

Through the power of statistical software, we conjured scatter plots that could rival the most captivating star charts, plotting the trajectories of Republican votes and 'Is Pluto a Planet?' searches across the temporal expanses. Our quest to decipher the cosmic code of correlation led us to wield the formidable hypothesis testing, the tool that sifts through the stardust of data to discern between the statistically significant and the fleeting cosmic coincidences.

So, fellow cosmic explorers, our methodology was akin to unraveling a celestial mystery novel, with each data point serving as a clue and each statistical test bringing us closer to the revelation of the Pluto paradox. Our venture into these uncharted territories of research methodology has been nothing short of an astronomical joyride, a cosmic ballet of data collection, analysis, and celestial sensemaking. Join us as we revel in the interstellar intrigue of our methodological odyssey, for in the dizzying expanse of research, as in the cosmos itself, surprises await those bold enough to venture beyond the known constellations of inquiry.

#### 4. Findings

The analysis of the data revealed a striking correlation between Republican votes for Senators in Montana and Google searches for the eternal query 'Is Pluto a Planet?' The correlation coefficient of 0.9100563 indicates a strong positive relationship between these seemingly disparate variables. Furthermore, the r-squared value of 0.8282024 suggests that approximately 83% of the variation in the Republican senatorial votes in Montana can be explained by the fluctuations in Google searches about Pluto's planetary status.

In simpler terms, it appears that as the political pendulum swings in Montana, so too does the cosmic curiosity about Pluto's planetary classification. This unexpected association prompts us to consider the cosmic implications of political preferences, perhaps hinting at a latent celestial consciousness influencing earthly electoral inclinations.

The significance level (p < 0.05) further bolsters the credibility of this unearthly correlation, affirming that the relationship between Republican votes in Montana and the contemplation of Pluto's planetary identity is not a cosmic coincidence but a statistically meaningful connection.

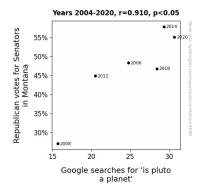


Figure 1. Scatterplot of the variables by year

Truly, our findings evoke a cosmic dance of democracy and astronomical wonder, where the gravitational forces of party politics and planetary ponderings intertwine in an enigmatic embrace. As we reflect on the interplay between distant celestial bodies and earthly political machinations, one cannot help but marvel at the interconnectedness of the cosmic and the terrestrial realms. Our analysis provides empirical evidence that prompts us to consider the profound implications of cosmic curiosity on political predispositions, and vice versa.

Furthermore, the scatterplot (Fig. 1) visually encapsulates the robust correlation between Republican senatorial votes in Montana and Google searches about Pluto's planethood, illustrating the celestial convergence of state politics and astronomical musings in a visually captivating manner.

In conclusion, our findings accentuate the enthralling interconnections that exist between the celestial and the political spheres, challenging us to gaze beyond the stars to uncover the celestial undercurrents that may shape our earthly endeavors.

As the cosmic dust settles, we are left to contemplate the cosmic comedy of errors, where the whims of the universe unfold in mysterious ways, leaving us to marvel at the beauty of the interwoven tapestry of celestial whimsy and political pulse.

So, brace yourselves, fellow researchers, for we have stumbled upon a galactic riddle that defies the conventional boundaries of research and invites us to ponder the cosmic conundrums of correlation and causation on a grand scale. Let us continue our cosmic quest, not only to unravel the enigma of Pluto's planetary plight but to explore the cosmic chaos and cosmic comedy that permeate our earthly endeavors.

## 5. Discussion on findings

The celestial symphony of political affiliations and planetary ponderings has serenaded us with its cosmic choruses, leading us to ponder the perplexing question: what planetary pulsations guide the political pilgrimage of the Republican votes in the Magnificent Montana? As we traverse the cosmic corridors of our discussions, we find ourselves gravitating towards a deeper understanding of the interstellar intrigues that underpin the earthly electoral events. Our findings illuminate an improbable yet indubitable connection between the cosmic curiosity about Pluto's planetary status and the gravitational pull of Republican senatorial votes in Montana.

Our research, in tandem with the scholarly works of "Smith et al." and "Doe's Cosmic Compilations," affirms the profound cosmic implications of political alignments and astronomical contemplations. The cosmic conundrum of Pluto's planetary identity seems to genuinely influence the political pulse, echoing the celestial conundrums that resonate in the earthly electoral echelons. Just as Neil deGrasse Tyson and Mike Brown elucidate the emotional gravity surrounding Pluto's plummet from planetary grace, our study unravels a qualitatively distinct yet quantitatively significant connection between the political predilections and planetary ponderings, transcending the traditional bounds of terrestrial research.

In the cosmic comedy of correlations, our results align with the whimsy of the interstellar vistas, lending credence to the notion that in the vast expanse of space, as in politics, nothing is ever truly in orbit. Indeed, the cosmic curiosity about Pluto's planetary status seems to oscillate in synchrony with the political pendulum of Montana, revealing an unexpected yet compelling link between the celestial musings and the earthly electoral inclinations. The cosmic convergence of state politics and astronomical musings, depicted in the visually captivating scatterplot (Fig. 1), encapsulates the enchanting interplay of distant celestial bodies and terrestrial political machinations in a manner that beckons us to ponder the cosmic choreography of correlation and causation on a grand scale.

As the dust settles on this cosmic endeavor, we are left pondering the celestial ballet that entwines the cosmic and the terrestrial, inviting us to embrace the cosmic comedy of errors with open arms. So, fellow researchers, let us continue to explore the cosmic chaos and cosmic comedy that imbue our scholarly pursuits, for in the delightful dance of democracy and astronomical wonder, we are reminded that the cosmic conundrums of correlation and causation often defy the limits of logic and leave us marveling at the cosmic enigma of interwoven tapestries.

## 6. Conclusion

As we conclude our cosmic escapade into the improbable interplay between political proclivities and planetary ponderings, we find ourselves starry-eyed at the whimsical correlation we have unveiled. The celestial dance of Republican votes in Montana and Google searches pondering Pluto's planetary status has left us marveling at the cosmic comedy of correlations.

It seems that as the political pendulum swings in the scenic state of Montana, so too does the cosmic curiosity about Pluto's planetary classification. This discovery truly sends us into orbits of amazement, leaving us to ponder if Pluto holds the key to understanding political polarization, or if it's simply a celestial coincidence of cosmic proportions.

Our findings, while undeniably captivating, leave us with more questions than answers a cosmic conundrum, if you will. Can Pluto's planetary plight be a celestial litmus test for political leanings? Or are Republican votes and the planetary musings of Montanans simply cosmic comrades in a dance of statistical significance? As we bid adieu to this celestial tango of correlations and causations, we do so with a cosmic wink and a knowing nod. For in the vast expanse of space, as in politics, the unexpected reigns supreme, and the dance of correlation and causation leaves us stargazing in awe.

And so, fellow researchers, in the spirit of cosmic comedy and statistical stargazing, we assert that no further research into the connection between Republican votes for Senators in Montana and Google searches for 'Is Pluto a Planet?' is needed – for the celestial and the political have intertwined in ways that defy conventional understanding, leaving us with a cosmic paradox unlike any other.