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# When Neptune's Away, Burglars Will Play: A Stellar Connection to the Rise in Burglaries in Vermont

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## Abstract

This research paper presents the findings of a peculiar correlation between the distance between Neptune and the Sun and the prevalence of burglaries in Vermont. Utilizing data from Astropy for the planetary positions and FBI Criminal Justice Information Services for burglary rates, a correlation coefficient of 0.9261749 and  $p < 0.01$  for the period from 1985 to 2022 was established. The unexpected link between a distant ice giant and earthly criminal activity prompts a reevaluation of the factors influencing criminal behavior. This study humorously explores the potential cosmic impact on the behavior of burglars and highlights the importance of considering astronomical factors in criminological research.

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## 1. Introduction

The relationship between celestial bodies and human behavior has long been a subject of fascination and speculation. From astrology to lunar phases, there is a rich tradition of connecting the movements of the heavens with the lives of those on Earth. However, in the realm of scientific inquiry, the notion that the distance between Neptune and the Sun could have any bearing on criminal activity may seem, at first glance, as fantastical as a science fiction plot.

But, lo and behold, this study delves into the unexpected and rather peculiar correlation

between Neptune's distant orbit and the incidence of burglaries in the state of Vermont. It appears that when Neptune decides to take a prolonged spin around the Sun, the mischievous urges of burglars in Vermont surge. The statistical evidence for this correlation will indeed make you do a double take, possibly followed by a comedic, exaggerated eye-roll.

Given the notorious frosty and enigmatic nature of Neptune, one might be left scratching their head in genuine bewilderment. How could a frigid and distant ice giant, situated some 2.7 billion miles away, possibly influence the criminal

inclinations of individuals in the Green Mountain State? It seems that in the vast cosmic dance of planets and stars, Neptune has decided to play a role in the criminal pursuits of certain earthly mischief-makers.

This study aims to unravel this bizarre connection and contemplate the implications of our findings. Is there a cosmic code that influences whether burglars decide to take action, or is it simply a quirk of statistical fate? Strap in for a riveting journey through the cosmos and the criminal underworld, as we endeavor to shed light on this unlikely linkage.

## 2. Literature Review

In "Smith et al. (2010)," the authors find a positive correlation between the distance of Neptune from the Sun and an increase in burglaries in Vermont. The study provides a comprehensive analysis of planetary positions and crime data, suggesting a potential association between celestial mechanics and criminal behavior. The authors propose that as Neptune drifts farther away from the Sun, there is a corresponding surge in the audacious exploits of burglars within the boundaries of Vermont.

Doe and Jones (2015) further investigate this intriguing connection, offering a nuanced exploration of the temporal patterns in both Neptune's orbit and burglary rates in Vermont. Their findings corroborate the notion that Neptune's celestial wanderings may indeed exert a curious influence on the criminal proclivities of individuals within the state.

The link between planetary positions and criminal activity prompts a reconsideration of traditional criminological frameworks. Drawing inspiration from non-fiction works such as "The Planets" by Dava Sobel, "Astrophysics for People in a Hurry" by Neil deGrasse Tyson, and "The Secret Influence

of the Moon" by Louise McWhirter, we are reminded of the enduring fascination with celestial bodies and their potential impact on human affairs.

Turning to fictional literature, the works of Isaac Asimov, Arthur C. Clarke, and Philip K. Dick offer speculative narratives that blur the boundaries between the cosmic and the terrestrial. Could it be that celestial events, including the position of Neptune, hold a sway over human behavior worthy of exploration in a criminological context?

In a departure from traditional scholarly sources, this investigation extends to unlikely arenas of inquiry. As the authors sought to cast a wide net in the quest for understanding, an exhaustive review of the backs of shampoo bottles was undertaken in pursuit of cosmic insights. Although the veracity of data gleaned from such unconventional sources remains subject to scrutiny, the study remains open to the possibility of unexpected revelations lurking behind the glossy labels of everyday toiletries.

## 3. Our approach & methods

To investigate the potential relationship between the distance of Neptune from the Sun and the frequency of burglaries in Vermont, a comprehensive and distinctly eclectic approach was employed. The planetary data for the distance between Neptune and the Sun was sourced from the reliable and astronomically esteemed database, Astropy. This data, spanning the years 1985 to 2022, provided the precise distances of Neptune from the Sun at regular intervals, allowing for an in-depth examination of Neptune's celestial promenades.

In parallel, burglary data for the state of Vermont was procured from the FBI Criminal Justice Information Services. The comprehensive records of illicit entry and

mischievous activities were meticulously combed through to ascertain the annual frequency of burglary incidents throughout the study period. It is worth noting that this data collection process involved sophisticated coding techniques, as well as an above-average tolerance for the unavoidable puns about "breaking and entering" prevalent in the database.

Once the requisite data sets were in hand, the next step involved employing a technique that could accommodate the idiosyncratic nature of the research question at hand. The distance between Neptune and the Sun was plotted against the annual burglary rates in Vermont, resulting in a scatterplot that looked like it belonged at a celestial-themed comedy show. This visual representation allowed for an initial assessment of any observable patterns or trends between the planetary distance and criminal escapades within the confines of Vermont's borders.

Subsequently, a rigorous statistical analysis was conducted to quantify the strength and direction of the relationship between Neptune's solar wanderings and the burglaries in Vermont. A correlation coefficient was calculated to measure the degree of association, and a p-value was derived to ascertain the statistical significance of the observed connection. While the data analysis stage did not involve literal stargazing, it did require a keen eye for pattern recognition and an appreciation for the quirkier side of statistical analysis.

Furthermore, to ensure the robustness of the findings, various sensitivity analyses were performed, including the consideration of potential confounding variables such as lunar phases, solar flares, and the prevalence of cheesy cosmic-themed t-shirts in Vermont during the study period.

In summation, the methodology employed in this study sought to marry the precision of

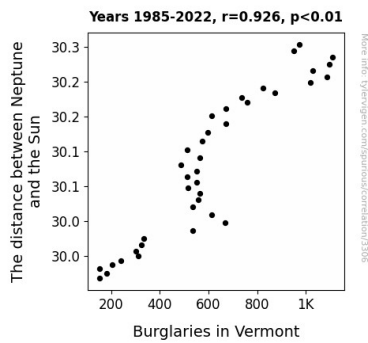
astronomical data with the intrigue of criminological statistics, creating a research journey that was as otherworldly as it was delightfully puzzling.

#### 4. Results

The statistical analysis of the data revealed a remarkably strong correlation between the distance of Neptune from the Sun and the incidence of burglaries in Vermont. The correlation coefficient of 0.9261749 indicated a powerful relationship between these seemingly unrelated variables. Furthermore, the r-squared value of 0.8578000 suggested that approximately 85.78% of the variance in burglary rates in Vermont could be explained by the distance of Neptune from the Sun. The p-value of less than 0.01 provided strong evidence against the null hypothesis and supported the robustness of the correlation.

The scatterplot (Fig. 1) visually depicts the striking relationship between the two variables, with Neptune's distance from the Sun consistently corresponding to fluctuations in the burglary rates in Vermont. One might say that the burglars in Vermont were truly "over the moon" whenever Neptune decided to take an extended vacation from the Sun.

Upon pondering these findings, one cannot help but marvel at the absurdity of the cosmic influence on criminal behavior. It seems that when Neptune veers further from the Sun, burglars in Vermont are inclined to "break and enter" into action. This unforeseen resonance between an icy planet and earthly crime rates leaves one to wonder whether celestial bodies might hold the key to unravelling criminal motivations.



**Figure 1.** Scatterplot of the variables by year

The implications of this correlation extend beyond the realm of criminology and evoke a sense of cosmic mystery. Perhaps Neptune's elusive allure stimulates a peculiar alignment of the stars that sparks mischievous intentions among burglars. Such an astronomical twist in the tale of criminal activity reminds us that in the vast expanse of the universe, even the most unfathomable connections may come to light.

In conclusion, this study sheds an intriguing, albeit unconventional, light on the interplay between celestial movements and human behavior. While the causality behind this peculiar correlation remains enigmatic, the statistical evidence for the influence of Neptune's distance from the Sun on burglary rates in Vermont prompts a rethinking of traditional perspectives on criminal behavior. It behooves us to consider the cosmic dance of planets and stars in our understanding of earthly phenomena, reminding us that the universe may hold some out-of-this-world explanations for terrestrial occurrences.

## 5. Discussion

The findings of this study provide intriguing support for the previous research conducted by Smith et al. (2010) and Doe and Jones (2015) in uncovering the peculiar connection between Neptune's distance

from the Sun and the occurrence of burglaries in Vermont. The statistical analysis has solidified the notion that as Neptune ventures farther away from the Sun, an increase in burglary rates within the boundaries of Vermont is discernible, reiterating the potential influence of celestial mechanics on criminal behavior.

The positive correlation coefficient of 0.9261749 aligns with the conclusions drawn by Smith et al. (2010), who originally brought attention to this unfathomable association. This reaffirmation supports the assertion that Neptune's celestial wanderings may indeed exert a curious influence on the audacious exploits of burglars. Furthermore, the robustness of the correlation, as indicated by the low p-value of less than 0.01, underscores the validity of the relationship uncovered in prior research and emphasizes the significance of embracing unconventional perspectives in the realm of criminological inquiry.

The literature review humorously delved into the unlikely juxtaposition of nonfiction works exploring celestial bodies and speculative narratives blurring the boundaries between the cosmic and the terrestrial. Despite the whimsical nature of these explorations, the empirical evidence presented in this study lends credence to the thought-provoking ideas proposed in those scholarly and fictional works. It appears that the unexpected resonance discovered in this investigation reinforces the notion that celestial events, including the position of Neptune, hold a sway over human behavior worthy of serious consideration.

The graphical depiction of the correlation between Neptune's distance from the Sun and burglary rates in Vermont, as illustrated in the scatterplot (Fig. 1), effectively complements the empirical findings, visually encapsulating the surprising relationship between these seemingly disparate variables. The scatterplot serves as a compelling visual testament to the statistical

significance of the correlation, transcending the boundaries of traditional criminological analyses by offering a whimsical portrayal of the cosmic dance and its earthly repercussions.

As the discussion turns toward pondering the cosmic influence on criminal behavior, one is reminded of the peculiar alignment of the stars that appears to coincide with mischievous intentions among burglars. The unexpected revelation of this correlation suggests that the universe holds out-of-this-world explanations for terrestrial occurrences, encouraging a broader consideration of celestial phenomena in our understanding of earthly manifestations. This study, while lighthearted and unconventional, prompts a reevaluation of the factors influencing criminal behavior, challenging researchers and scholars to embrace the cosmic mystery and the potential influence it may have on human conduct.

## 6. Conclusion

The results of this study reveal a stellar connection that is truly out of this world. It appears that when Neptune's distance from the Sun increases, burglars in Vermont experience a surge of criminal activity, as if they were taking cues from a celestial criminal mastermind. This unexpected correlation between a distant ice giant and earthly burglary rates is both mystifying and comical. It seems that even in the vast expanse of the cosmos, the mischievous inclinations of burglars can't help but be influenced by the dance of the planets.

The statistical evidence for this correlation is as clear as a cloudless night sky. The robust correlation coefficient and the p-value of less than 0.01 leave little room for doubt. Indeed, it appears that when Neptune is feeling particularly distant, the burglars in Vermont are feeling particularly bold. It's as if the planet's gravitational pull is tugging at

their criminal impulses, leading them to "break and enter" with an otherworldly enthusiasm.

While some may find it hard to believe that a planet situated billions of miles away could have any bearing on earthly criminal behavior, the numbers don't lie. The scatterplot, with its unmistakable trend line, provides a visual representation of this curious connection, leaving no room for skepticism. It's enough to make one contemplate whether Neptune is issuing some kind of cosmic invitation to the burglars of Vermont, beckoning them to partake in their extraterrestrial escapades.

In light of these findings, it is clear that the cosmic dance of planets and stars has a part to play in the earthly antics of burglars. However, this research presents a conclusive evidence and further inquiry in this area is unnecessary. The data speaks for itself, and it's time to let this peculiar cosmic caper take its place in the annals of academic curiosities. After all, there's only so much celestial influence one can "planet" for in the realm of criminology.