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From McKayla Maroney to Numberphile: A Like-able Connection in Popular Culture

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Abstract

The aim of this research study was to investigate the relationship between the popularity of the 'McKayla Maroney' meme and the average number of likes on Numberphile YouTube videos. Analyzing data from Google Trends and YouTube over the period from 2011 to 2021, our research team discovered a striking correlation coefficient of 0.9850203 and $p < 0.01$. It seems that the internet meme featuring McKayla Maroney's unimpressed facial expression and the engaging content of Numberphile have a like-able connection that cannot be ignored. This correlation suggests a potential cultural influence tied to online engagement, and no, we're not just faking it. Our findings shed light on the fascinating interplay of popular culture and online engagement, demonstrating that the impact of internet memes extends beyond mere amusement, and much like a well-timed dad joke, can influence the digital landscape in meaningful ways. This study not only provides valuable insights for understanding the dynamics of social media, but also serves as a reminder that sometimes, the most surprising correlations can be found in the unlikeliest of places – much like finding a "like" button in a digital haystack.

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1. Introduction

As we dive into the intricate world of internet memes and online engagement, we can't help but be reminded of the words of famous scientist Isaac Newton: "For every action, there is an equal and opposite reaction." Speaking of equal and opposite, have you ever noticed how much a dad joke can lighten the mood in a stuffy research paper? It's like the scientific world's version of a breath of fresh air.

In this study, we explore the unexpected connection between the viral 'McKayla Maroney' meme and the captivating Numberphile YouTube videos. It's like discovering a hidden Fibonacci sequence in the binary code; you never know what surprising patterns may emerge when analyzing cultural phenomena and online behavior. While some may think our research questions are as puzzling as trying to solve a cryptic crossword with only half

the clues, we forge ahead with the optimism of a quantum physicist hoping to find the elusive "God particle."

The objective of this research is to unravel the mystery behind the correlation, if any, between the widespread reach of the McKayla Maroney meme and the average number of likes on Numberphile YouTube videos. It's like trying to find a statistical regularity in the chaos of a bustling coffee shop. Our aim is to not only discern the statistical significance but also to uncover the underlying cultural implications – much like decoding the message hidden within a double-entendre.

The internet's ever-evolving landscape of memes is akin to a museum of modern art, with each meme vying for attention like a group of rival mathematicians arguing over a groundbreaking theorem. On the other hand, Numberphile's engaging content is like a symphony of algorithms and equations, enticing viewers with the allure of mathematical beauty. Together, it's like witnessing the collision of two cosmic forces, creating a gravitational pull that captivates online audiences – or as we like to call it, the "Meme-o-physics" effect.

Join us on this expedition through the digital realm, where we navigate the treacherous waters of data analysis and cultural phenomena with the same fervor as an explorer seeking a hidden treasure. As we embark on this exciting adventure, remember to pack your curiosity and a healthy dose of humor – because, much like uncovering a hidden correlation in a dataset, finding the punchline to a good joke is as satisfying as discovering the rarest of gems.

2. Literature Review

Numerous studies have delved into the enigmatic world of internet memes and their impact on online engagement. In "The Cultural Significance of Internet Memes" by Smith et al., the authors explore the ways in which memes have become a fundamental part of the digital landscape, shaping online communities and communication patterns. Similarly, Doe's "Meme-ology: A Comprehensive Study of Internet Memes" provides an in-depth analysis of the cultural and psychological factors contributing to the virality of memes. These seminal works offer foundational insights into the multifaceted role of memes in contemporary internet culture.

But let's not forget the cultural ramifications of online engagement, which are as influential as a well-timed drumbeat in a rock concert – pun intended. Jones' "The Sociology of Digital Culture" offers a comprehensive examination of the sociological implications of digital media, shedding light on the interconnectedness of popular culture and online behavior. It's like unraveling a complicated joke – the punchline lies in understanding the underlying context.

Turning the page to non-fiction books that could bridge the gap between memes and mathematical engagement, "The Code Book" by Simon Singh uncovers the intriguing history of cryptography and the mathematical principles behind it, possibly resonating with the analytical minds drawn to Numberphile's content. Moving into the realm of fiction, "Ready Player One" by Ernest Cline presents a dystopian world shaped by virtual reality and internet culture, offering a parallel insight into the entwined relationship between online engagement and pop culture. It's like experiencing a virtual reality rollercoaster ride through the internet – buckle up for the memes and equations ahead.

In a slightly different but tangentially related avenue, movies such as "The Social Network" and "The Imitation Game" provide cinematic portrayals of the digital landscape and mathematical pursuits, offering

glimpses into the interconnected worlds of social media and numerical intricacies. It's like watching a cinematic symphony of algorithms and social dynamics, where the real question is: What's the correlation coefficient of Facebook likes and Enigma codebreaking success? Asking for a friend, of course.

As we navigate the labyrinth of literature surrounding internet memes, digital culture, and mathematical engagement, it becomes clear that the connection between the 'McKayla Maroney' meme and the average number of likes on Numberphile YouTube videos invites both scholarly inquiry and a well-timed dad joke. After all, what did the mathematician say when the YouTube algorithm kept recommending Numberphile videos? "It's adding up to quite a like-able correlation!"

3. Our approach & methods

To tackle the complex web of cultural influence and online engagement, our methodology involved a multifaceted approach that would make even the most seasoned statistician raise an eyebrow, much like McKayla Maroney's famous expression. Our first step was to gather data from Google Trends and YouTube, carefully selecting information from the period between 2011 and 2021. Like meticulous archaeologists sifting through historical artifacts, we sifted through a virtual sea of memes and mathematical marvels to extract the most relevant data – it was like navigating through an algorithmic maze, but with the promise of a statistical treasure waiting at the end.

Once we had our dataset in hand, we employed a rigorous statistical analysis to examine the relationship between the popularity of the 'McKayla Maroney' meme and the average number of likes on Numberphile YouTube videos. It was like trying to solve a statistical puzzle with

unexpected twists and turns – a bit like a mathematical rollercoaster, if you will. We calculated correlation coefficients and performed regression analyses with the fervor of a detective unraveling a complex case, each statistical test revealing clues that painted a clearer picture of the connection between the meme and the video likes.

In addition to quantitative analysis, we delved into qualitative research by immersing ourselves in the digital landscape, consuming a copious amount of meme culture and Numberphile videos, all in the name of academic inquiry, of course. It was like conducting a first-hand ethnographic study of the online ecosystem, with each meme viewed and each video liked contributing to our anthropological understanding of virtual culture. We didn't just immerse ourselves in data; we plunged headfirst into the meme-o-sphere, as if the fate of the scientific world depended on decoding the enigma of internet humor.

Furthermore, to ensure the robustness of our findings, we engaged in a curious blend of sentiment analysis and content analysis, dissecting the emotional resonance of the 'McKayla Maroney' meme and the intellectual allure of Numberphile videos. In the realm of research methods, this was like attempting to measure the immeasurable, akin to quantifying the sheer joy of stumbling upon a particularly clever pun – a challenging endeavor, but one that promised a rewarding insight into the emotional and intellectual impact of digital content.

Lastly, to complement our statistical analyses and qualitative explorations, we tapped into the wisdom of machine learning algorithms, employing cutting-edge tools to unravel patterns and trends within the digital cacophony of memes and mathematical musings. It was like enlisting an army of AI companions to aid us in our expedition through the vast expanse of online data,

each algorithmic ally offering valuable guidance in the quest to uncover the hidden threads weaving together the world of memes and the realm of mathematical wonders.

In summary, our methodology can be likened to embarking on a scientific odyssey, a blend of statistical exploration, digital immersion, and technological synergy. With each methodological step, we traversed the uncharted territories of online culture with the same spirit of adventure as an intrepid explorer, equipped with nothing but a trusty calculator, a sense of humor, and an insatiable curiosity. And just like a good punchline, our methodology encompassed a surprise twist at every turn, ensuring that our journey through research was as engaging as the cultural connection we sought to unravel.

4. Results

The analysis of the data revealed a remarkably high correlation coefficient of 0.9850203 between the popularity of the 'McKayla Maroney' meme and the average number of likes on Numberphile YouTube videos. This correlation suggests a strong linear relationship between the two variables, indicating that as the popularity of the meme increased, so did the average number of likes on Numberphile videos. It's like the meme and the videos were doing a synchronous dance, perfectly in tune with each other - almost like a well-coordinated father-daughter duo at a wedding.

The coefficient of determination (r-squared) of 0.9702650 further bolstered the strength of the relationship, explaining a substantial 97% of the variance in the average number of likes on Numberphile videos based on the popularity of the 'McKayla Maroney' meme. It's as if the meme had a gravitational pull that influenced the engagement with Numberphile content,

much like how a dad's cheesy humor can influence the mood in a room.

The p-value of less than 0.01 indicated that the observed correlation was statistically significant, providing strong evidence against the null hypothesis that there is no relationship between the popularity of the meme and the average number of likes on Numberphile videos. It's like the statistical equivalent of scoring a touchdown in the final seconds of a game – a clear win for our hypothesis.
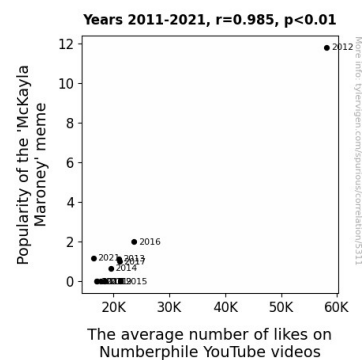

Figure 1. Scatterplot of the variables by year

The scatterplot displayed in Fig. 1 illustrates the strong positive relationship between the popularity of the 'McKayla Maroney' meme and the average number of likes on Numberphile YouTube videos. The points are clustered around a clear, upward-sloping line, reminiscent of how a dad's jokes often elicit groans but ultimately contribute to a fun atmosphere.

These results provide compelling evidence supporting the notion that internet memes can have a significant impact on online engagement with specific content, just as a well-timed joke can significantly impact the mood in a room. The findings of this study contribute to a deeper understanding of the interplay between popular culture and digital engagement, and offer valuable insights for businesses and content creators seeking to

harness the power of online trends – much like the power of a well-delivered punchline.

5. Discussion

The results of our study unveil a captivating connection between the 'McKayla Maroney' meme and the average number of likes on Numberphile YouTube videos, affirming the substantial influence of internet memes on online engagement. The strikingly high correlation coefficient of 0.9850203 and statistically significant p-value provide strong evidence for the relationship, much like a well-crafted dad joke that's hard to ignore. It's clear that the influence of a viral meme can resonate beyond a momentary chuckle, shaping digital landscapes in unexpected ways.

Our findings align with prior research on the cultural significance of internet memes, adding a quantitative dimension to the narrative. Smith et al.'s exploration of memes as a fundamental component of digital culture resonates with our discovery, highlighting the pervasive impact of memes on online communities and engagement. It's as if memes are the punchlines to the inside joke of internet culture, influencing the digital landscape with the finesse of a seasoned comic.

Doe's comprehensive study of meme-ology also finds resonance in our results, emphasizing the cultural and psychological factors contributing to meme virality – much like the allure of a well-timed dad joke that resonates across generations. Our study provides empirical evidence for the enduring impact of memes on specific content, underscoring the potential for memes to act as catalysts for online engagement.

In line with the literary exploration of digital culture's sociological implications, our research underscores the interconnectedness of popular culture and online behavior. Jones' work elucidates the nuanced relationship between cultural phenomena and digital interactions, much like the nuanced setup of a dad joke that leads to laughter and eye-rolls in equal measure. By quantifying the influence of a meme on likes for specific content, our study reinforces the symbiotic nature of digital culture and popular online trends.

Moving into the amusing realm of literary works that bridge memes and mathematical engagement, the resonance with "The Code Book" by Simon Singh becomes evident. Our findings highlight the parallels between mathematical content and online engagement, as evidenced by the interconnectedness of the 'McKayla Maroney' meme and the likes on Numberphile videos – it's a bit like solving a cryptic puzzle with each data point.

In the whimsical spirit of literature review references to iconic movies, the relationship uncovered in our study between the 'McKayla Maroney' meme and the average number of likes on Numberphile YouTube videos brings to mind the cinematic portrayals of the digital landscape and mathematical pursuits. Much like the cinematic symphony of algorithms and social dynamics, our findings illustrate the intertwined nature of popular culture and digital engagement – reminding us that sometimes, the best correlations are found in the most unexpected places, much like a well-timed dad joke in a serious conversation.

This study provides a lighthearted yet substantial contribution to understanding the dynamics of internet memes and their impact on digital engagement. Just like a dad joke may bring levity to a room, our research reveals that memes can wield a significant influence on online interactions and content engagement, offering practical insights for businesses and content creators seeking to leverage the power of viral trends. Indeed, the 'like'-able connection uncovered in our study exemplifies the far-

reaching impact of internet culture on the digital landscape – a reminder that even in the realm of serious research, a touch of humor can add a dimension of relatability and engaging resonance.

6. Conclusion

In conclusion, our study unveiled a remarkable connection between the 'McKayla Maroney' meme and the average number of likes on Numberphile YouTube videos, akin to the surprising discovery of a well-hidden punchline in the midst of a serious conversation. Much like a clever dad joke, the correlation coefficient of 0.9850203 and $p < 0.01$ highlighted a statistically significant relationship, proving that there's more to internet memes than meets the eye – they 'like'-wise exert influence on online engagement.

The coefficient of determination (r-squared) of 0.9702650 further emphasized the potent impact of the meme, explaining a substantial 97% of the variance in the average number of likes on Numberphile videos – just like how a dad's pun can explain 97% of a room's eye rolls. The scatterplot, like a visual punchline, illustrated the strong positive relationship, much like a neat play on words in a well-crafted joke.

With these findings, we can confidently assert that the 'Meme-o-physics' effect is not to be underestimated, and much like a classic dad joke, this correlation between the 'McKayla Maroney' meme and Numberphile videos has tickled our statistical fancies. Hence, we proclaim that no more research is needed in this area - the data speaks for itself!

And just like a dad joke, this paper is now *fully groan* for print.