

## ジェンダーと種を超えてー

マーク・トウェイン晩年作「馬の話」における母性的ヴィジョン

### Beyond Gender and Species:

Mark Twain's Maternal Vision in the Late Work "A Horse's Tale"

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#### 要旨

娘や妻に先立たれるなど多くの不幸に見舞われたトウェインの晩年期は、そうした不幸を反映するかのよう  
に暗くペシミスティックな短編や未完の草稿が多い。近年、トウェインの晩年を支えた女性たちに関する伝記  
研究が進み、新しい時代を生きる彼女たちの多様な生き方が照射されるとともに、晩年期のトムボーイ物語群  
(伝統的なジェンダー規範から逸脱する少女を主人公とした物語)の存在が注目されている。トウェインの晩  
年期およびトムボーイ物語の再評価に与すべく、本稿では中編「馬の話」(1906年)を取り上げる。本作品は、  
アメリカ西部を舞台に、男性兵士たちの庇護と教育を受けつつ成長していく少女の物語であるが、感傷的とし  
て長らく閑却され、近年の批評家たちからも、当時流行したトムボーイ物語の伝統におさまると見なされがち  
である。しかし、これまで看過されてきた男性兵士たちの表象に着目してみれば、男性たちが父権的な権威と  
してよりも母性的なケアと献身に貫かれる存在として描かれており、ジェンダーや種を超えて、母性的情動が  
共同体全体を包んでいることが分かる。本稿では本作品を、母性的なヴィジョンに基づくオルタナティブな発  
達物語として読み直し、母と娘、あるいは女性に限定されないケアと絆に根差した母性的情動の可能性を明ら  
かにすることによって、トウェインが晩年に提示した物語的想像力の新しさを浮き彫りにする。

#### Abstract

In the final stage of his life, Mark Twain suffered a series of personal losses—including the deaths of his wife and daughters—which found reflection in his increasingly dark and pessimistic writings. Recent biographical studies have shed new light on the women who supported him in this period, illuminating their diverse ways of living as modern women. At the same time, renewed attention has been drawn to Twain's late "tomboy tales," stories featuring girls who resist conventional gender norms. Contributing to this reassessment of Twain's late career, this paper focuses on "A Horse's Tale" (1906), a novella set in the American West that follows a girl raised under the protection and instruction of male soldiers. Although long dismissed as sentimental and often categorized simply within the tradition of the tomboy tale, the story reveals, upon closer examination, a striking representation of the soldiers as not patriarchal authorities but as figures characterized by maternal care and devotion. Through this portrayal, Twain envisions a community sustained by maternal affect that transcends

boundaries of both gender and species. This paper reinterprets “A Horse’s Tale” as an alternative Bildungsroman grounded in a maternal vision, uncovering the possibilities of care and emotional connectedness not limited to mothers or women, and highlighting the innovative moral and imaginative dimensions of Twain’s late fiction.

Keywords: Mark Twain, A Horse’s Tale, gender crossing, tomboy, maternal vision

## Introduction

It has long been regarded that Mark Twain’s creativity had dried up toward the end of his career when he was unable to complete most of his work. Naturally, critics have tried to figure out “what went ‘wrong’ with Mark Twain” (Cox 233) and featured the tragedies suffered by Twain during his last two decades. The adversities from his final years are numerous to mention, but major misfortunes include financial failures, such as the collapse of the Paige typewriter, in which Twain invested over two-hundred thousand dollars, and the insolvency of the Webster Publishing Company (Twain was its senior partner) in 1894 (Sattelmeyer 560–61). The deaths of his family members gave him a blow additional to his shame over the financial failures. Twain’s favorite daughter, Susy, passed away from meningitis in 1896, while Twain and his wife were absent from home for the world lecture tour that was intended to pay off their enormous debts—in anguish, they even tried to communicate with Susy through various mediums (Gillman 153). Further deaths and misfortunes befell Twain without interruption: he lost his elder brother Orion Clemens in 1897; his beloved wife Olivia, his sister Pamela Moffett, and his sister-in-law Mollie Clemens in the hardest year 1904; and his third daughter Jean, who passed away from an epileptic seizure on the morning of Christmas Eve, 1909 (Rasmussen xxii-xxiv, Goto 330).

Speculating that his gloom and unbearable sense of guilt had originated from financial failures and the deaths of his family members, Bernard DeVoto sees his act of writing in these troubled years as a kind of exorcism, through which Twain symbolically represented his despair (85). Justin Kaplan observes that “by turning his dream life into a literary problem—into work—he saved himself from madness” (343). While DeVoto and Kaplan try to find some meaning in his writings, i.e., artistic expressions of his sorrow, Laura Skandera-Trombley, in *Mark Twain in the Company of Women*, pronounces the “death” of the author, Mark Twain: “shortly afterward the ‘circle’ of his female family was broken, and Clemens’ great period of novel-writing began its decline around the time of Susy’s death on August 18, 1896. With the death of Olivia,” she continues, “Clemens’s ability to complete long narratives would disappear entirely. Clemens never recovered from his losses and, significantly, neither did the author Mark Twain” (165).

While he was unable to complete a novel, Twain never stopped writing to the end, as we can see his unflagging vigor in producing a series of short stories and a massive deal of unfinished manuscripts. Some of these writings were profoundly shaped by his personal grief and unresolved conflicts surrounding his daughters—having once intervened in Susy’s romantic relationship with her girlfriend in college, Louise Brownell, and later tormented by Susy’s early death, Twain’s later years were marked by both regret and longing. He sought the company of schoolgirls he named “Angelfish” as if to relive his daughters’ childhoods, often expressing the wish that

they would never grow up. It is in this fraught emotional landscape that Twain composed stories of tomboys. Biographers of the twenty-first century, such as John Cooley and Karen Lystra, have featured “Angelfish” as well as “New Women” who surrounded him during his final years instead of his late wife and absent daughters, in order to reveal how their diverse lives, selfhood, and sexuality could have affected his writing during his final years when he wrote stories about transgressive girls. Skandera-Trombley, in *Mark Twain’s Other Woman*, also shows Twain’s dependence on and conflict with his secretary and daughters, all of whom were called “New Women.”

It should be noted that Twain’s final years corresponded to the turn of the century that saw changes in sexology and a rise of girl’s culture in accordance with social changes.<sup>1)</sup> Many girls were allowed to have “some period of transition between ‘child at home’ and the assumption of wholly adult responsibility” (Mitchell 3), and as a result, a “new girl’s” culture, including stories of tomboys flourished, in which “new ways of being, new modes of behavior, and new attitudes that were not yet acceptable for adult women” (3) prospered in England. Similarly, in America, the years from the end of the Civil War to the middle of the Depression Era are defined as the golden era of literary tomboyism (Abate xv).

While Twain was keen on dealing with transgressive young women as well as gender and feminism issues in his stories of tomboys, he often stumbled at describing female sexuality and showed reluctance to have his transgressive heroines initiated into female adulthood.

Shedding light on his late works in terms of perspectives such as gender, feminism, and sexuality will lead us to reinterpret his supposedly dark, declining, and unproductive years. Among his tomboy stories written in his final years, this paper will examine “A Horse Tale”<sup>2)</sup> (1906) in order to explore how the work builds an alternative maternal narrative. Here, maternal love and devotion are not confined to mothers or women but circulate among male soldiers, Buffalo Bill, the tomboy girl, and even her horse. Through these unexpected ties of care and sacrifice, the story reimagines the frontier world as a place where gender and species boundaries are crossed in the name of maternal attachment.

## **1 American Literary Tomboyism and Twain’s Tomboyish Heroine**

An obvious difference between Twain’s story of a tomboyish heroine and that of a hero lies in the tragic ending. Unlike Twain’s stories of heroes, most of his stories about female transgressive protagonists tend to end tragically. For example, he manipulates one of his transvestite heroines into an unhappy marriage with an unfaithful woman who claims to have been impregnated by him/her (“How Nancy Jackson Married Kate Wilson” and “A Medieval Romance”). He depicts a transvestite war heroine who faces a tragic death (*Personal Recollections of Joan of Arc*). He also describes the anguish of a gender-bending heroine who is eventually forced to conform to the role of a respectable woman, an identity she scarcely recognizes as her own (“Hellfire Hotchkiss”).

This peculiar tendency can be compared with what is called “tomboy taming” (Abate xix) in contemporary tomboy stories, in which a tomboy’s transgressive behavior and characteristics are expected to be tamed at puberty because of “pressure to get married and become a mother” (Abate xix), like Jo March in *Little Women*—the tomboy phase tolerated as a temporary stage of childhood freedom is to be contained by a narrative of

heterosexual maturation and domestic femininity. Does this suggest that Twain, too, wrote a tomboy story in accordance with the conventional pattern of the nineteenth century tomboy tales?

Stories of adolescent boys often incorporate plot elements similar to those of the Bildungsroman, in which “the hero rejects the constraints of home, sets out on a journey through the world, obtains guides who represent different world view, including a philosophy of darkness, and meets with many setbacks before choosing the proper philosophy, mate, and vocation” (White 3). The literary heroine of the Victorian period is, like the hero, typically an orphan, “attempting to cut herself off from a constraining past, to invent a new story, her own story, and eager to avoid the typically devastating fate of her mother” (Hirsch 46).

In “A Horse’s Tale,” the one-time western humorist writes a story of the Wild West that centers on a nine-year-old transgressive girl, Cathy Alison, and her interactions with the frontier hero, Buffalo Bill<sup>3)</sup> and male soldiers on the frontier. Cathy seems to be a stock character of American literary tomboyism, in which tomboys became “fixtures in adventure novels about the ‘Wild West’ that were geared for boys” (Abate xv). Cathy, too, is a “poor orphan child” (“A Horse’s Tale” 133), who comes from the Old World to the New World after the deaths of her beautiful Spanish mother and her determined American father. She is raised by male soldiers on the American frontier to be an excellent horse rider and military leader.

It seems that Cathy’s character and appearance are traits from her parents: on one hand, the beautiful girl is “just as much a Spaniard as if she’d always lived there,” because “her mother laid deep the foundations of her love for Spain (145-146); on the other, “Cathy is George [her father] over again so many ways” (142). Accordingly, Cathy embraces both her masculine and feminine traits by nature, as Doras explains:

Look at her; she loves dolls, and girl-plays, and everything a girl loves, and she’s gentle and sweet, and ain’t cruel to dumb brutes—now that’s the girl-twin, but she loves boy-plays, and drums and fifes and soldiering, and rough-riding, and ain’t afford of anybody or anything—and that’s the boy-twin; ’deed you needn’t tell *me* she’s only *one* child; no sir, she’s twins, and one of them got shet up out of sight. Out of sight, but that don’t make any difference, that boy is in there, and you can see him look out of her eyes when her temper is up. (143)

Twain employs the motif of twins—which he frequently used in other works such as *Puddhead Wilson*, and more explicitly the conjoined twins in *Those Extraordinary Twins*—to represent the gender-bending figure of Cathy. Rather than canceling out either her feminine or masculine traits, he depicts both as distinctly embodied, as if they each possessed their own personality. The frontier community, too, acknowledges and accepts that Cathy is defined precisely by the coexistence of both sides, without denial or rejection.

The larger part of the story takes place on the American frontier, where Cathy Alison adapts herself quite well to frontier life at the fort, while the officers and soldiers stationed there accept her talent and personality. The narrative is filled with playful humor, love, and happiness in the Wild West. However, after her uncle, General Alison, takes Cathy to Spain, the land of her mother, the story suddenly turns tragic: Cathy and her beloved horse, Soldier Boy, are gored to death at the moment of their reunion in a bullfighting arena. The humorous story

becomes sentimental, and the change is so radical that Linda Morris claims that the problematic ending in Spain is “not well incorporated into the story as a whole” (128), though she does not attribute this to Twain’s decline in his late years.

Regarding gender and sexuality, there is controversy over whether the text has a sexual connotation. John Cooley, who maintains that this story includes a scene of “unusually suggestive eroticism for Twain” (“Mark Twain, Rebellious Girls, and Daring Young Woman” 247), reads the bullring episode as “Twain’s symbolic representation of rape” (247): the bull’s horn, a phallic symbol, violently penetrates and sexualizes the girl’s body, collapsing her tomboyish fluidity into a feminized victimhood.

Within this framework, the narrative appears to participate in a familiar nineteenth-century pattern, in which tomboy figures—initially permitted a degree of masculine freedom—are ultimately disciplined to be redirected toward heterosexual femininity.

On the other hand, disagreeing with Cooley, Linda Morris asserts that “the gender transgressions in ‘A Horse’s Tale’ are very modest” and there is “nothing radical or really transgressive about” the “classic tomboy” (130, 127). Although “she is spunk and energetic,” and she “enjoys a remarkable degree of physical freedom on the western frontier,” Morris continues, “there is little to suggest that she steps outside the bounds of acceptable behavior for a young girl, especially as her athletic abilities as horsewoman are offset by her charming and winning ways with the older males portrayed in the story” (130–131).

In both cases, however, the narrative is subsumed within conventional patterns. Neither critic pays attention to the maternal dimension as it is mediated through male characters; nor do Shelly Fisher Fishkin, who, in her afterword to the 2020 edition of *A Horse’s Tale*, touches on Cathy’s gender representation and concurs with Morris in characterizing her as a classic tomboy with only a modest degree of transgression. However, it must be emphasized that the western cavalry fort, ostensibly the domain of masculine discipline and military rigor, is repeatedly represented as a maternal male community. Soldiers and Buffalo Bill are attentive caregivers, who guide her with patience, cradle the girl when she falls, weep openly for her, and treat her not as a recruit to be hardened but as a child to be cherished. Within this environment, the tomboy heroine flourishes as a hybrid being—part boy, part girl, and perpetually a beloved child. The narrative thus detaches maternal care from biological motherhood, presenting it instead as a transferable ethic available to male soldiers.

## **2 Maternal Male Bonds and Self-sacrificial Love**

Let us examine how Twain highlights the maternal qualities of male soldiers on the Western frontier. Twain depicts the frontier men as the tomboy’s “mothers” (140), whose teaching is aberrant from the traditional gender norms as represented by her aunt (substitute mother) in France. Twain describes the peculiar maternity of the supposedly macho men of the frontier in the monologue of Cathy’s uncle, General Alison:

You see, the Seventh Cavalry has never had a child of its very own before, and neither has the Ninth Dragoons; and so they are like all new mothers, they think there is no other child like theirs, no other child so wonderful, none that is so worthy to be faithfully and tenderly looked after and protected.

These bronzed veterans of mine are very good mothers, I think, and wiser than some other mothers.  
(140)

The male “mothers” are proud of and faithful to their “child,” and care for her just as much as,—or even more than—ordinary mothers would. General Alison explains that Cathy is “in a nursery”: “she’s got more than eighteen hundred nurses” in the American West (140).

With the warm support of the male mothers, Cathy becomes the best horse-rider and archer among the boys at the fort. She is adopted by the Ninth Dragoons, in which she is granted a high and honorable position. She acquires a sense of power and position that allows her to enjoy the many opportunities open to men, but it should be noted that these are all rewards given by parental figures for her being their favorite child. Thus, Twain’s tomboy is actually a good child who never rebels against her male “mothers” and their society.

The frontier hero, Buffalo Bill, is also described as a man who is blessed with mother-like compassion as well as masculine attractiveness. Buffalo Bill is gentle and caring, and from the very first encounter with Cathy, he immediately wins her trust, captivates her, and becomes a pleasant companion in conversation. The parental qualities he displays are like those of an idealistic mother who approves of her child wholeheartedly. His candid expressions of affection and his patient attention to the little girl contrast with the behavior of Twain’s white male adults, who are typically cold and do not show any love or attention to their children, like Pap Finn in *Adventures of Huckleberry Finn*; Tom Canty’s father, John Canty, in *The Prince and the Pauper*; and Oscar’s father in “Hellfire Hotchkiss.”

Buffalo Bill teaches her how to ride, not as a lady but as a man; she is not taught “anything about side-saddles,” which General Allison thinks would “distress” her Aunt Mercedes in France (142). Buffalo Bill allows Cathy to ride on his favorite horse, Soldier Boy, when she improves her horse-riding skills, and Cathy finds pleasure in identifying with Buffalo Bill and the beautiful horse: horse-riding gives her “the last agony of pleasure” (139), a feeling of the utmost happiness. We can see that her pleasure comes not only from the honor of being allowed to ride Buffalo Bill’s beautiful horse, but also from her momentary identification with Buffalo Bill.

Despite her extraordinary horse-riding skills, Cathy’s love for and faith in Buffalo Bill eventually turns her into a self-sacrificing and therefore vulnerable girl. In other words, the tomboy becomes absolutely faithful to the man she adores—or her “beeby” (141) (Cathy calls Buffalo Bill “BB”)—, and she sacrifices herself for him.

For instance, Cathy serves as Buffalo Bill’s honor guard when he goes to Fort Clayton. After she accomplishes her honorable duty of escorting him, Buffalo Bill is shot in an ambush, and she immediately rides back, trying to rescue him in vain, and falling from the saddle out of exhaustion. Not being able to move because of her injury from the fall, she would have died were it not for Soldier Boy, who protects her against hungry wolves throughout the night:

“When they got to us, and Buffalo Bill saw the child lying there so white, he said, ‘My God!’ and the sound of his voice brought her to herself, and she gave a little cry of pleasure and struggled to get up, but couldn’t, and the soldiers gathered her up like the tenderest women, and their eyes were wet and

they were not ashamed, when they saw her arm dangling; and so were Buffalo Bill's, and when they laid her in his arms he said, 'My darling, how does this come?'... 'You came to save me you dear little rat? It was too lovely of you!'" (159–160)

At this moment, the narrative becomes overtly melodramatic. The strong tomboy and military heroine becomes a vulnerable child protected by the horse and the male soldiers who, like the "tenderest women," take care of her; she finally becomes like a little princess who is held safely in his arms. Her loyalty and her willingness to sacrifice herself are fully acknowledged by Buffalo Bill, who rewards her by giving Cathy his horse, Soldier Boy, hoping that his faithful horse will always protect her from dangers.

### 3 Beyond Gender and Species: The Novelty of Twain's Maternal Vision

Cathy is separated from Buffalo Bill by the Atlantic, followed by another separation from her stolen horse, Soldier Boy. At a bullfighting arena in Spain, Cathy sees her Soldier Boy gored and eviscerated by an excited bull. She rushes to him, trying to rescue the horse:

*"It is I, Soldier—come!"* . . . ; but his strength failed, and he fell at her feet, she lavishing kisses upon him and sobbing, the horse rising with one impulse, and white with horror! Before help could reach her the bull was back again—

She was never conscious again in life. We bore her home, all mangled and drenched in blood, and knelt by her and listened to her broken and wandering words, and prayed for her passing spirit, there was no comfort—nor ever will be I think. But she was happy, for she was far away under another sky, and comrades again with her Rangers, and her animal friends, and the soldiers. (178–179)

The bullring episode in Spain does not signify the heroine's forced feminization, but rather her assumption of the maternal position within the chain of care that has structured her life. Having once been the object of maternal devotion, she now becomes its subject: she leaps into the arena to shield her beloved horse, embraces him, and sheds tears in a gesture that mirrors the soldiers' earlier weeping over her. This repetition and reversal demonstrate the circulation of maternal affect. Care is no longer something she merely receives; it is something she enacts, even at the cost of her own life. Far from reducing her to passive victimhood, the bullring scene elevates her to the role of maternal protector, extending to her horse the same devotion once extended to her.

What makes Twain's tomboy narrative distinctive is that maternal affect is shown to exceed both gender and species boundaries. It is not a property of women alone, nor is it restricted to human kinship. The soldiers' motherly tenderness toward the girl and the girl's sacrificial embrace of her horse reveal that maternal bonds are ethical relations, not biological determinisms. By representing maternal devotion as trans-gender and interspecies, Twain constructs a narrative that breaks with the nineteenth-century developmental script. Rather than guiding the tomboy toward heterosexual maturity, the story sustains her within a queerly maternal space, where identities circulate through bonds of love, selflessness, and protection.

In this regard, Twain's story of a tomboy makes a clear contrast with that of Tom Sawyer, who tries to ascertain how much he is loved through causing Aunt Polly a series of troubles. Cathy becomes a woman who comes to resemble Huck, especially at the moment when he decides to "go to hell" for Jim; she also resembles Jim, who has treated the semi-orphaned Huck with tenderness—calling him "honey" — and who has always protected him with his arguably "unconditional" love in *Adventures of Huckleberry Finn*.

One should bear in mind that Twain evades having the tomboy growing into adulthood and relocates her in an innocent "fantasy" of childhood in which quasi-parent-child relationships between her and her male "mothers"; sincere relationships between her and her comrades, animal friends, and other races; and her faithful identification with Buffalo Bill and male soldiers are all enshrined on the frontier. Of course, the frontier no longer existed at the time Twain was writing. Twain must have realized that the childhood dream was a mere fantasy and that his fantasizing the tomboy back into a childhood/Wild West dream was an evasion. He must have been fully aware that the sentimental and melodramatic "fantasy" could ruin his fame as a realist author. Nevertheless, the old man, who lived his last days drawn toward innocent little girls, dared to choose the ephemeral happy union in a childhood dream rather than leave his heroine in a lacerated reality.

## **Conclusion**

Mark Twain's "A Horse's Tale" appears at first glance to belong to the familiar nineteenth-century tradition of tomboy narratives, in which girls' masculine freedoms are curtailed through marriage, domestication, or death. The climactic bullring scene, where the tomboy heroine dies while embracing her horse, can be explained as a moment of symbolic rape or punitive containment of her gender transgression. Yet such readings underestimate the text's persistent emphasis on maternal love, selfless devotion, and protective bonds of care. What distinguishes Twain's tale is that these bonds are not confined to mothers and daughters, or even to women at all, but are distributed across soldiers, Buffalo Bill, the heroine, and ultimately her horse. The story constructs what may be called an alternative maternal narrative: a mode of storytelling organized not around heterosexual maturation, but around the circulation of maternal care that transcends gender, species, and conventional family ties. In doing so, Twain envisions the American frontier not as a masculine arena of conquest, but as a queerly maternal space where unconventional forms of kinship and emotional inheritance can briefly flourish.

## Notes

- 1) For example, following Britain, the United States set the “age of consent,” the minimum age at which a woman is considered to be legally competent to consent to sexual acts, at sixteen years old by the year 1900 (Mitchell 7, Gillman 103). The law socially and legally drew the line between a girl and an adult woman at the age of sixteen, and integrated the sexually matured woman into patriarchal society, in which a woman was supposed to uphold the family as a wife and mother. By the year 1900, legitimate girlhood emerged as a result of changes in the age of consent and other social elements, such as child-labor laws and economic circumstances, and provisions of opportunities for extended academic and professional education for the middle classes (Mitchell 7, Gillman 103).
- 2) “A Horse’s Tale” was written at the request of a famous animal rights activist, Minnie Maddern Fiske, to expose the cruelty of bullfighting in Spain (Rasmussen 210). Although critics have long dismissed this work as one of his “most melodramatic and sentimental works” (Rasmussen 208), recent critics have spotlighted it as one of the animal tales he wrote to support the animal welfare movement in which many women, including his daughters, were involved as activists. They have also featured this work in light of his interest in feminism and gender and speculated the possible influence of women who surrounded the writer in his last years.
- 3) For detailed discussion in Japanese of “A Horse’s Tale” in the context of Buffalo Bill’s Wild West Show and Imperialism, see 大久保良子「Mark Twain Meets Buffalo Bill—「馬の話」におけるワイルド・ウエストの再創造」『英語表現研究第41号』2024年, 27-42. Although parts inevitably overlap, the argument is reconsidered and further developed here within a different framework.

## Works Cited

- Abate, Michelle Ann. *Tomboys: A Literary and Cultural History*. Temple UP, 2008.
- Cooley, John. “Mark Twain, Rebellious Girls, and Daring Young Woman.” *How Nancy Jackson Married Kate Wilson and Other Tales of Rebellious Girls & Daring Young Women*. Ed. John Cooley. U of Nebraska P, 2001. 229-249.
- ., ed. *Mark Twain’s Aquarium: The Samuel Clemens Angelfish Correspondence 1905-1910*. The U of Georgia P, 1991.
- Cox, James. *Mark Twain: The Fate of Humor*. Princeton UP, 1966.
- DeVoto, Bernard. *Mark Twain’s America*. Little Brown, 1933.
- Fishkin, Shelley Fisher. “Afterword.” *A Horse’s Tale: Edited and with an Introduction by Charles C. Bradshaw Afterward by Shelly Fisher Fishkin*. Ed. Charles C. Bradshaw. E-book ed., U of Nebraska P, 2020.
- Gillman, Susan. *Dark Twins: Imposture and Identity in Mark Twain’s America*. U of Chicago P, 1989.
- Hirsch, Marianne. *The Mother/Daughter Plot: Narrative, Psychoanalysis, Feminism*. Bloomington: Indiana UP, 1989.
- Kaplan, Justin. *Mr. Clemens and Mark Twain: A Biography*. Simon and Schuster, 1966.
- Lyster, Karen. *Dangerous Intimacy: The Untold Story of Mark Twain’s Final Years*. U of California P, 2004.
- Mitchell, Sally. *The New Girl: Girls’ Culture in England, 1880-1915*. Columbia UP, 1995.

- Morris, Linda A. *Gender Play in Mark Twain: Cross-Dressing and Transgression*. U of Missouri P, 2007.
- Rasmussen, Kent. *Mark Twain A to Z: The Essential Reference to His Life and Writings*. Fact On File, 1995.
- Sattelmeyer, Robert. "Paige Typesetting Machine." *The Mark Twain Encyclopedia*. Eds. LeMaster J.R. and James D. Wilson, Garland Publishing, 1993. 560-561.
- Skandera-Trombley, Laura. *Mark Twain in the Company of Women*. Pennsylvania UP, 1994.
- . *Mark Twain's Other Woman: The Hidden Story of his Final Years*. Alfred A. Knopf, 2010.
- Twain, Mark. "A Horse's Tale." *How Nancy Jackson Married Kate Wilson and Other Tales of Rebellious Girls & Daring Young Women*. Ed. John Cooley. U of Nebraska P, 2001. 125-179.
- White, Barbara A. *Growing Up Female: Adolescent Girlhood in American Fiction*. Greenwood Press, 1985.
- 大久保良子「Mark Twain Meets Buffalo Bill - 「馬の話」におけるワイルド・ウェストの再創造」『英語表現研究』第41号, 2024年, 27-42.
- 後藤和彦『迷走の果てのトム・ソーヤー 小説家マーク・トウェインの軌跡』松柏社, 2000年.

# Digital Humanities: Unveiling the Creative Spirit of Shakespeare to the Drama

## デジタル・ヒューマニティーズ：シェイクスピアの創作の心を辿って

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### 概要

本研究は、シェイクスピア 37 作品を対象に、語彙の出現頻度の異常 (Vocabulary Frequency Anomaly) を、ポアソン分布を基にした確率的手法によって明らかにし、これを劇作にあたっての意図の痕跡として解析を行う、新たな方法論に関するものである。従来の文体計量学においては、高頻度に出現する語彙や語彙分布について、特に大局的な観点から注目し研究を進めてきたものが大半であったと考えられる。これに対して本研究は、特定の劇に集中して現れる語彙に関して確率的な異常に焦点を当てて解析するものであり、このような観点からの手法研究は、世界的にみても行われたことは無く、文学研究において、全く新たな解析手法の創出にあたると考えられる。

『タイタス・アンドロニカス』、『ヘンリー五世』、『ハムレット』においては、それぞれ *survive*, *few*, *rank* は劇のテーマに直結する重要な語彙と考えられる。これらの語彙において特徴的なことは、劇の思想的核や情念の構造に深く関与していることであると同時に、その語彙の出現頻度において、統計的に有意な偏りを有することであり、これは本研究の著者によって先行研究で明らかにされてきた。

今回の研究では、この論理の流れを逆にして、Vocabulary Frequency Anomaly が発生していると思われる語彙群を選び出し、その出現する箇所と文脈を特定し、文学的見地からの解析を試みる。つまり、確率的にみて明らかに特異的に多く出現する語彙に注目することで、シェイクスピアが、劇作品のどのような箇所で、いかなる秘められた表現創作活動を進めたのかの解析を試みることにした。この解析によれば、例えば *dishonored* や *surprised* が『タイタス・アンドロニカス』で複数の登場人物により繰り返されることで、劇全体の要所での進行の推力となる。極めて巧みなことは、異なる登場人物が、この同一の語彙を発しつつ、己の心を異なる立場から赤裸々に語ることになる。単に、同一意味による語彙の反復を避けるのみならず、主人公とこれに対立する人物、あるいは取り巻きの人々にこの同一の語彙を発声させながら、にもかかわらず異なった含意を持たせ声高に語らせる。人々がコーラスで歌うように、ある意味〈言語的なカノン〉として、語彙を用いた多重の和声的な機能を持つことになるとも考えられる。劇の構造化の観点から、シェイクスピアの強い意図の下に行われたことを示唆するものである。同様に、*hole* の多義的かつ集中的な用法は、劇の陰惨さを増幅させるのみならず、人間社会の枠組みを超えて、運命的陥穽や悲劇的必然性を象徴する仕掛けとして精緻に組み込まれているとみられる。一見目立たない語彙を、シェイクスピアは巧妙に用いながら、主人公や登場人物にさりげなく語らせ、これらの語彙が〈蝶番ちょうつがい〉の様に繋がって行くことで、このドラマの背後には、近視眼的な人間的動機のみならず、人知を超えた何か大きな得体のしれない、目に見えない何かが働き、人々はこれに次第に絡めとられながら、誰もこの動きを止められず、遂にはクライマックスに向かい衝突してゆく。一見、普通の目

立たない語彙を劇中に忍ばせ配しながら、巧みにこの様な文学的技巧を生み出していると考えられる。

このように、Vocabulary Frequency Anomaly に基づく語彙探索は、作者が意図的に選び抜き密かに配置した語彙を、その出現の仕方の特徴を捉えることで、文学的創造の現場に迫ることを可能にする。

本研究の基本的な方法論はシェイクスピア研究にとどまらず、他の文学的あるいは哲学的作品にも広く適用可能と期待される。様々なジャンルの著作において、著者の創作の秘密や意図の解析に適用可能であり新たな切り口を与えるものと期待され、今後、深化してゆくデジタル・ヒューマニティーズの有力な一手法として、新たな展開を示すと期待される。

Keywords: Shakespeare, Digital Humanities, vocabulary frequency anomaly, Poisson distribution, *Titus Andronicus*, *Henry V*, *Hamlet*

## 1. Overview of Previous Research and Objectives of the Present Study

In our previous research, we have sought to develop methods for extracting the latent traces of thought and emotion embedded in literary works through large-scale textual analysis of Shakespeare's thirty-seven plays. Traditional literary scholarship has generally relied upon close reading of vast corpora, followed by interpretive efforts to uncover the author's intentions or philosophical concerns. While this approach has produced valuable insights, it requires immense time and effort and remains heavily dependent on the subjective perspective of the researcher. Particularly when intellectual or emotional motifs are dispersed throughout an entire oeuvre, focusing only on isolated passages risks obscuring the overarching intent of the author.

Quantitative approaches to literature have existed since the late nineteenth century, and by the twentieth century corpus-based studies and stylometric research became well established. These methods compared lexical distributions and stylistic features statistically, often for purposes such as authorship attribution or chronological classification. Yet much of this scholarship relied on the distribution of "high-frequency words," thereby offering only a broad-brush account of lexical individuality, with limited capacity to penetrate the core of an author's intellectual design or the structural essence of a work.

Against this backdrop, our study has advanced by harnessing computational power to attend not only to word frequency itself but also to anomalous fluctuations in such frequencies. By doing so, we aim to capture, with greater objectivity, the distinctive deployment of words that appear to have been deliberately positioned by the author, thereby allowing us to approach more closely the intentionality underlying the text. To supplement earlier scholarship, we have introduced a novel perspective—focusing specifically on deviations in lexical frequency. When a given word clusters in a particular work or scene beyond the bounds of randomness, such concentration may represent a trace of deliberate authorial design, an imprint of intention manifested through linguistic intensity. To our knowledge, no research anywhere in the world has previously been conducted from this perspective; thus, we consider this to be the first study of its kind on a global scale.

## 2. Establishing the Database and Methodology

As the foundational corpus for this study, we employed the thirty-seven plays of the Folger edition of Shakespeare's complete works, comprising approximately 900,000 words. From these, we comprehensively tabulated word counts, distinct vocabulary, and frequency distributions. The average play contains roughly 24,000 words, with approximately 3,500 distinct terms per play once duplications are removed. Because these texts are play scripts designed for performance, the duration of performance places a natural constraint on length, and thus the variation from the average of 24,000 words is relatively small. Consequently, the corpus of thirty-seven plays constitutes a statistically homogeneous population. Within such a homogeneous framework, when a particular word appears with striking frequency in a single play, the deviation is unlikely to be accidental; rather, it strongly suggests intentional emphasis by the author—an emphasis that is also more readily detectable under these conditions.

An analysis of word frequency distributions reveals, unsurprisingly, that rare words are enormously numerous in absolute terms; yet, to investigate them requires appropriate filtering criteria. By contrast, high-frequency words such as *the*, *and*, and *I* are so ubiquitous and semantically general that they provide little interpretive value. We therefore focused our attention on words of intermediate frequency—those that occupy a middle range in the distribution but appear with deviations far beyond statistically expected values. When such a deviation occurs, we must recall that every instance of word choice is ultimately determined by the author. Thus, the author's adoption of a given word may reflect a particular intention, an expressive investment embedded in the texture of the play. In this sense, such terms may preserve “traces of authorial craft in literary construction,” and it is precisely in these traces, concentrated and detectable, that we located the core of our analysis.

On the basis of these principles, the following case studies, drawn from the present author's prior research, may serve to illustrate the approach:

### Case Study 1: *Titus Andronicus* and the Word *survive*

Across all thirty-seven plays, the word *survive* occurs only nine times, five of which appear in *Titus Andronicus*. The probability calculated by a Poisson distribution is virtually zero, making chance an untenable explanation. Moreover, the occurrences cluster at the play's beginning and ending. At the outset, the word conveys the concrete sense of “one who remains alive,” while in the final act it acquires, for the first time, the abstract sense of “to outlive disgrace.” Thus, the word itself undergoes a semantic growth parallel to the unfolding tragedy. Remarkably, in this play Shakespeare uses *survive* for the first time in English linguistic history as a transitive verb. It may be said that through this harsh and catastrophic drama even the language itself is twisted, bearing within it the mark of rupture. Here one perceives both Shakespeare's linguistic innovation and his distilled tragic vision.

### Case Study 2: *Henry V* and the Word *few*

The word *few* appears sixty-nine times in total, fourteen of which are concentrated in *Henry V*. Most notably, it occurs three times in the “St. Crispin's Day” speech, functioning as a symbolic term that transforms numerical inferiority into the promise of triumph. Strikingly, *few* never appears again after this speech—a clear indication of

deliberate authorial design. Shakespeare here transfigures the state of “being few” from a symbol of weakness into one of unity and honor. The claustrophobic atmosphere of weary soldiers enclosed within castle walls becomes the springboard for their final surge, culminating in Henry’s famous speech before battle. Through the progressive deepening of *few*’s meaning across the play, Shakespeare orchestrates a convergence of emotion between king and soldier, reaching its highest intensity at the play’s climax.

### **Case Study 3: *Hamlet* and the Word *rank***

The word *rank* occurs seventy-four times in the corpus, with a disproportionate concentration in *Hamlet*. While its basic meanings include “row” or “order,” in this tragedy it overwhelmingly denotes “stench” or “corruption,” symbolizing the decay of the kingdom. Its frequency exceeds statistical expectation, underscoring its non-accidental deployment. The word thus operates as a cipher for moral and political decline, plausibly alluding to the corruption of Elizabethan society in the closing years of the Queen’s reign. In this way, Shakespeare embeds critical meaning in a seemingly ordinary word, skillfully encoding his political imagination.

### **Originality and Scholarly Significance of This Study**

These case studies confirm that Shakespeare deliberately inscribed the nuclei of thought and emotion into words of intermediate frequency, leaving discernible traces of intention. As previously noted, this dimension lies beyond the reach of traditional stylometric methods, which are constrained in scope. By mathematically detecting deviations in word distribution, our study demonstrates the possibility of objectively inferring the author’s creative design. This approach represents an attempt to expand literary research into “a discipline that statistically retrieves the deep-lying strata of thought within texts.” Moreover, the methodology is not confined to Shakespeare but can be extended to other philosophical and literary texts, thereby opening new pathways for the study of intellectual history.

## **3. Perspective and Methodology of the Present Study**

As outlined above, the pronounced irregularities in lexical frequency have been designated by the present author as *Vocabulary Frequency Anomaly*. Unlike earlier approaches that treated the absolute frequency of a word as the principal yardstick, our method assumes that, given the statistically homogeneous corpus of Shakespeare’s thirty-seven plays, each word should—if considered as an independent event—appear with an approximately uniform distribution across the works as the number of samples increases. Thus, the degree of deviation from this expected baseline serves as a key indicator. Such deviations may signal those passages where the author deliberately employed particular words to convey thought, logic, emotion, or aspiration—intentions consciously embedded within the fabric of the work. In this sense, the method may serve as a means of discerning those carefully wrought expressions through which an author sought to shape literary creation.

In our prior studies, at least in the case of Shakespeare, we have found that significant Vocabulary Frequency Anomalies correspond to sites of deliberate literary artistry. By inverting this logic—through a form of *reverse engineering*—we may identify these anomalous loci as points of entry into the very workshop of artistic invention,

thereby tracing the moments where Shakespeare concentrated his creative effort. The present study is dedicated to this endeavor.

### A Metric for Measuring Frequency Deviations

Our basic procedure begins by selecting a target word and examining its distribution across Shakespeare's thirty-seven plays. We identify the play in which the word appears most frequently, then assess the extent to which this maximum deviates from the expected level implied by the overall average distribution. Yet simply comparing absolute differences from the mean is inadequate, since words differ radically in their baseline frequencies. For example, *about* occurs 404 times across the corpus, *above* 146 times, and *across* only six times. A single occurrence of *above* cannot be weighted the same as a single occurrence of *across*, since their expected baselines differ markedly. Thus, a normalized and probabilistic framework is required.

### Application of the Poisson Distribution

To evaluate these frequency patterns, we adopt the Poisson distribution, a probability model for discrete events occurring within a fixed interval of time or process, under the assumption of independence. Although in shorter units such as paragraphs or individual scenes lexical occurrences may not be wholly independent, the total corpus of approximately 900,000 words provides sufficient scale for assuming independence over the medium to long term.

Formally, the Poisson probability of observing  $m$  occurrences is given by:

$$P(m; \lambda) = \frac{\lambda^m e^{-\lambda}}{m!}$$

Here,  $m$  denotes the number of occurrences of a word within a given play, while  $\lambda$  represents the expected mean frequency estimated from the entire corpus. For instance, if the word *survive* appears nine times in the thirty-seven plays, we divide this total by the corpus size (~900,000 words) and then multiply by the length of a given play (on average ~24,000 words) to obtain  $\lambda$ . When *survive* occurs five times in *Titus Andronicus*, we compute  $P(5; \lambda)$  to evaluate the probability of such concentration under the assumption of independence.

If the resulting probability is vanishingly small, the phenomenon cannot plausibly be attributed to chance. Since the plays are literary artifacts in which every lexical choice is deliberate and calibrated for artistic effect, such significant deviations from the Poisson expectation—our *Vocabulary Frequency Anomalies*—mark potential sites where Shakespeare consciously intensified his use of language. In this way, statistical anomalies become signs of authorial intention, traces of intellectual design or emotional investment woven into the very structure of the drama.

## 4. Selection Criteria and Results

Under the principles described above, we established the following conditions for selection:

### < Selection Rule >

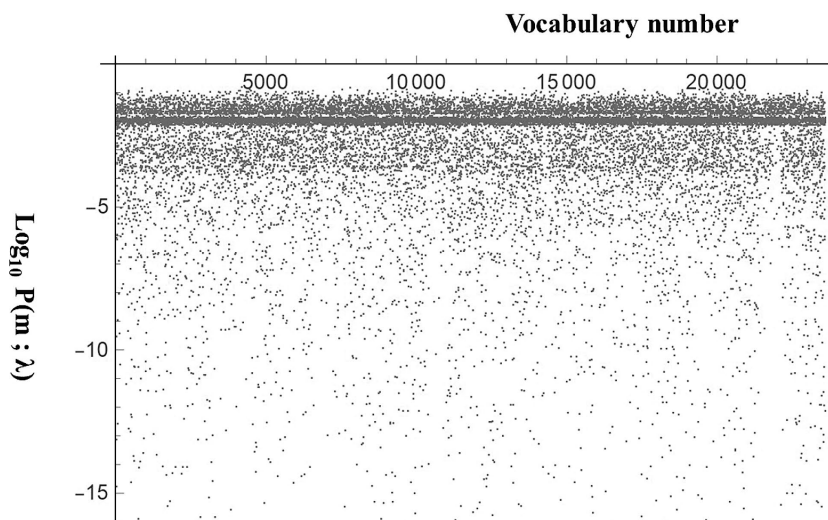
- I. **Probability derived from the Poisson distribution:** For a given word, in the play where it appears with maximum frequency  $m$ , we compute the probability  $P(m; \lambda)$  that such an occurrence would arise

under the Poisson distribution.

**II. Minimum threshold of occurrences:** A lower bound on the total number of occurrences of the word across all thirty-seven plays.

Filtering was then performed according to these criteria.

To illustrate the Selection Rule I, we calculated the probability  $P(m; \lambda)$  for each word under the Poisson model. Figure 1 presents the results as the logarithmic values,  $\log_{10}P(m; \lambda)$ , for each lexical item.



**Figure 1.** Logarithmic representation of the probabilities  $P(m; \lambda)$  derived from the Poisson distribution for words appearing across Shakespeare's thirty-seven plays.

In this figure, each point corresponds to a distinct lexical item. The database used for this study, drawn from the Folger edition of Shakespeare's thirty-seven plays, contains a total of approximately 903,000 words, comprising 23,587 unique terms. Each distinct word has been assigned an identifying index number in alphabetical order; these numbers serve as the horizontal axis of the graph, such that each of the 23,587 words is represented as an individual point.

The vertical axis represents  $\log_{10}P(m; \lambda)$ , the logarithm of the probability calculated via the Poisson distribution. Points located toward the upper region of the graph correspond to relatively high probabilities, while points lower down indicate smaller probabilities. A clear trend is visible: words with high probabilities are densely clustered in the upper region, whereas those with very low probabilities are sparse, with density decreasing as probability declines.

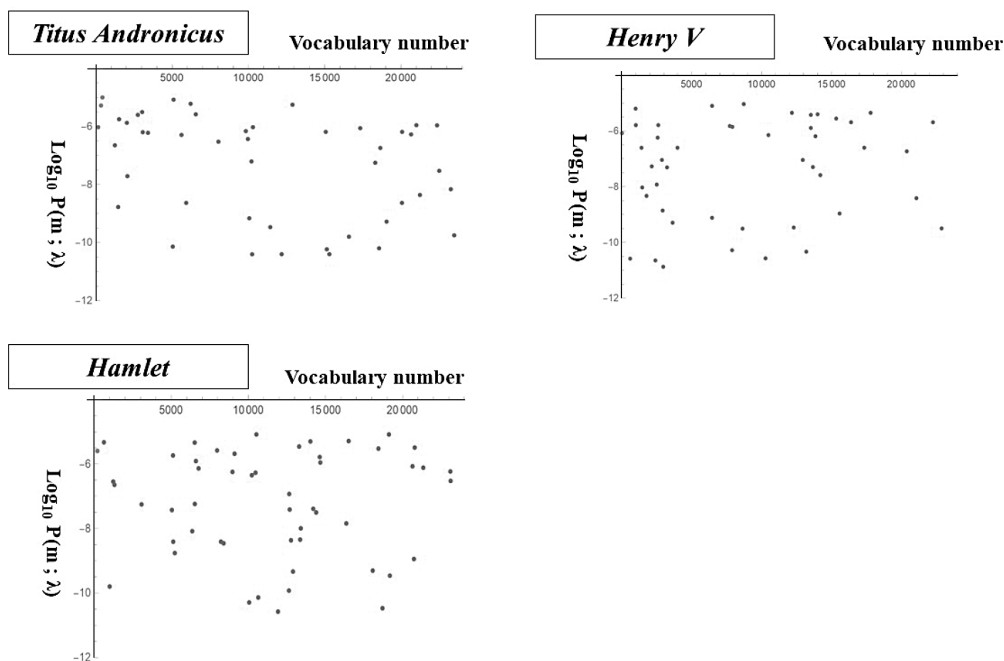
For the purposes of this study, we confined our attention to words falling within the probability range:  $10^{-5} > P(m; \lambda) > 10^{-11}$ .<sup>1</sup>

In addition, we imposed a second restriction (2): the total frequency of a word across all thirty-seven plays must be at least seven occurrences. By introducing these conditions, we sought to focus on words that appear

with sufficient frequency to allow meaningful analysis, while identifying the particular plays in which such words concentrate most strongly. Furthermore, these lexical items serve as anchors for exploring correlations among plays, thereby offering a new lens through which to interpret Shakespeare’s vocabulary and its distribution.

### Extraction of Vocabulary in *Titus Andronicus*, *Henry V*, and *Hamlet*

Applying the selection rules described above to three plays—*Titus Andronicus*, *Henry V*, and *Hamlet*—we identified 46 words in *Titus Andronicus*, 46 words in *Henry V*, and 51 words in *Hamlet*. As shown in Figure 2, these words are distributed within the probability range  $10^{-5} > P(m; \lambda) > 10^{-11}$ , the range adopted for the present analysis.



**Figure 2.** Extracted words in *Titus Andronicus*, *Henry V*, and *Hamlet*

These extracted words represent, in each play, those items that occurred with the highest frequency relative to the thirty-seven-play corpus and whose distribution, when modeled under the Poisson assumption of independent events, cannot reasonably be explained as statistical accident. In other words, they are lexical items that appear with anomalously high frequency, pointing to deliberate authorial design.

#### *Titus Andronicus*

The play contains approximately 23,000 words in total, with 3,337 distinct lexical items. Among these, 46 words were extracted according to our criteria:

*accursed, advice, aged, aunt, barbarous, basely, birds, black, burial, careful, carrying, cheeks, cut, dam, detested, dishonored, doom, ease, fits, heinous, highly, hole, hounds, hue, hunt, knife, lovely, midwife, philomel, pigeons, plead, ravished, rise, shed, signs, sirs, sorrows, surprised, survive, threat, traitorous, trumpets, vengeance, villains, witness, wrongs*

*Titus Andronicus* is a drama of vengeance, intrigue, honor, and horrific retribution, often regarded as the most violent and blood-soaked of Shakespeare's tragedies. Beginning with Tamora, Queen of the Goths, and her revenge against the Andronicus, the play unfolds through scenes of extraordinary brutality: Lavinia is raped and mutilated, her tongue and hands cut away; Titus, in a frenzy of despair, strangles his daughter; Tamora is forced to consume a pie made from her sons' flesh before being slain herself. Words such as *accursed, barbarous, basely, detested, dishonored, doom, heinous, ravished, signs, sorrows, survive, threat, traitorous, vengeance, villains, witness,* and *wrongs*—roughly one-third of the extracted vocabulary—are thematically bound to betrayal and revenge. Notably, the previously discussed *survive* also appears within this set.

### *Henry V*

A total of 46 words were extracted:

*abate, also, armor, arrant, balls, bar, behold, blind, bourbon, breach, bridge, brittany, calais, camp, cap, ceremony, claim, comment, dukedoms, dukes, fathers, few, fields, full, gallant, hundred, imperial, lousy, ma, mines, monmouth, nation, native, nick, numbers, offer, oui, pless, pour, quit, river, scald, teach, treason, valor, wear*

In *Henry V*, the young king faces an overwhelming enemy force under conditions of hardship and near despair. Through dialogue with his soldiers, and ultimately through self-reflection, Henry unites the will of the people with royal authority, culminating in his celebrated speeches and the unlikely triumph at Agincourt. Words such as *armor, balls, breach, camp, cap, ceremony, claim, few, fields, full, gallant, hundred, imperial, lousy, mines, nation, native, numbers, offer, quit, scald, treason,* and *valor* directly resonate with the themes of military struggle, unity, and valor—constituting nearly half of the extracted set. As in our earlier case study, the significant term *few* appears again here.

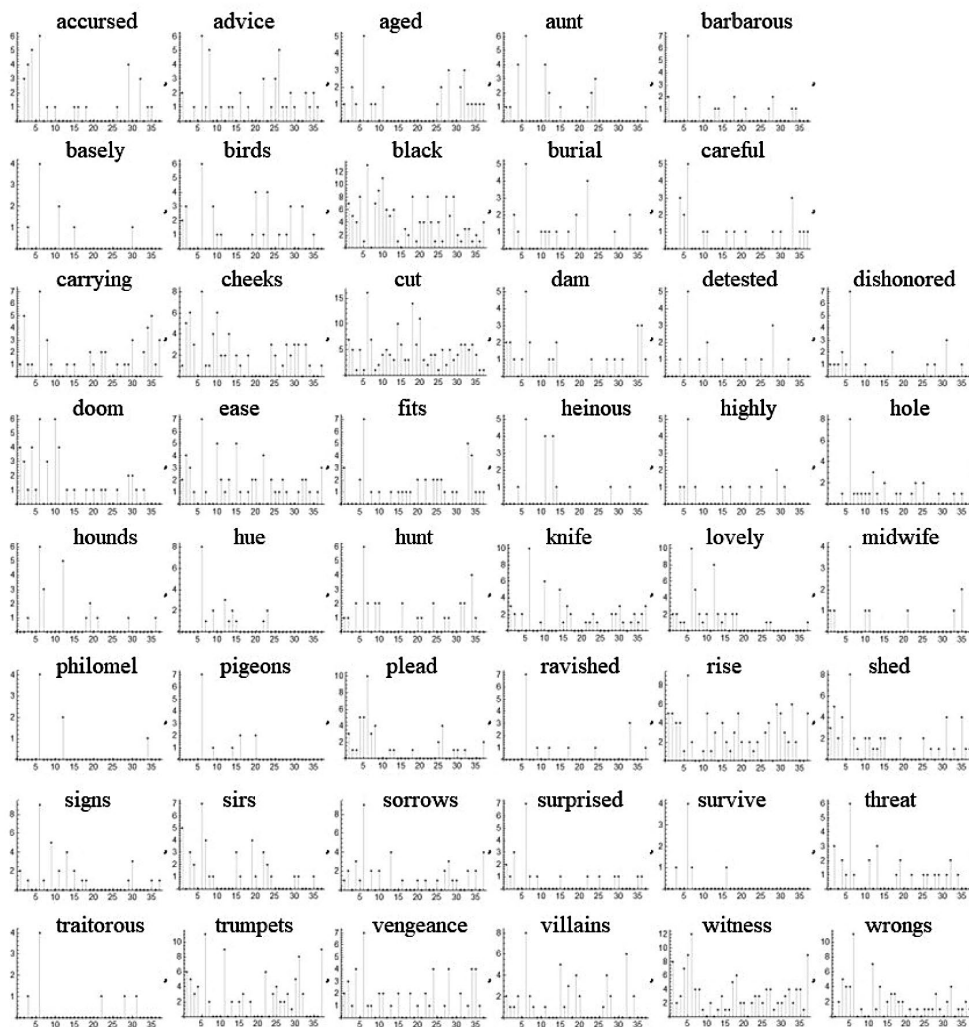
### *Hamlet*

A total of 51 words were extracted:

*act, ambassadors, arras, aught, awhile, carriages, custom, damned, dane, dear, drink, e, ear, ecstasy, en, fine, foils, form, give, goes, hold, how, impart, imports, indeed, like, matter, may, means, memory, might, motive, much, murder, oft, ourselves, own, particular, passion, question, rank, seen, show, skull, spade, speech, thoughts, thus, time, twere, wholesome, whose*

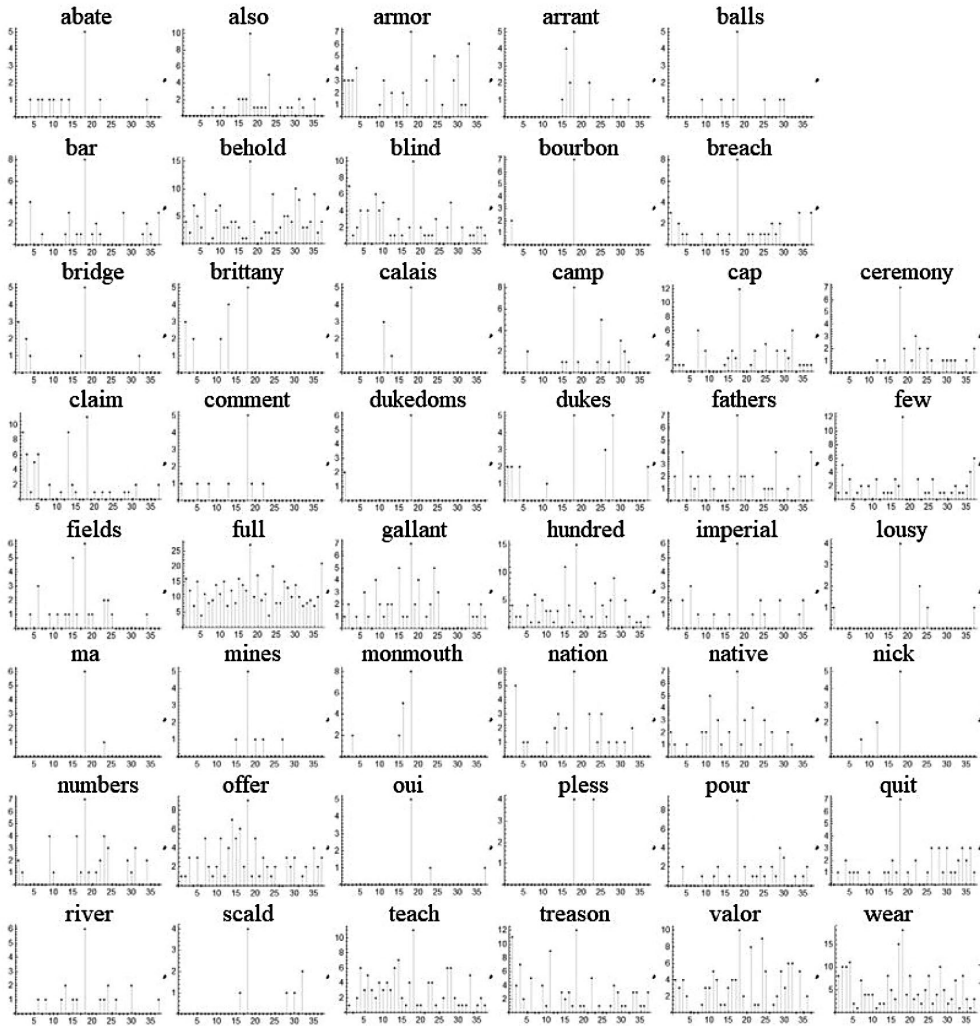
*Hamlet*, Shakespeare’s most renowned tragedy, is set in the Danish court. Inspired by earlier tales, Shakespeare reshaped the narrative of a prince confronted by the ghost of his murdered father, who demands vengeance against the usurping king. Suspicion, betrayal, madness, love, revenge, and death intertwine to consume the entire kingdom. Words such as *act*, *aught*, *darned*, *dear*, *drink*, *ear*, *ecstasy*, *impart*, *imports*, *means*, *memory*, *motive*, *murder*, *passion*, *question*, *rank*, *seen*, *show*, *skull*, *spade*, *speech*, *thoughts*, *time*, and *wholesome* closely align with these central themes. Significantly, the term *rank*—discussed in our earlier research—also appears within this set.

### *Titus Andronicus* (46 words)



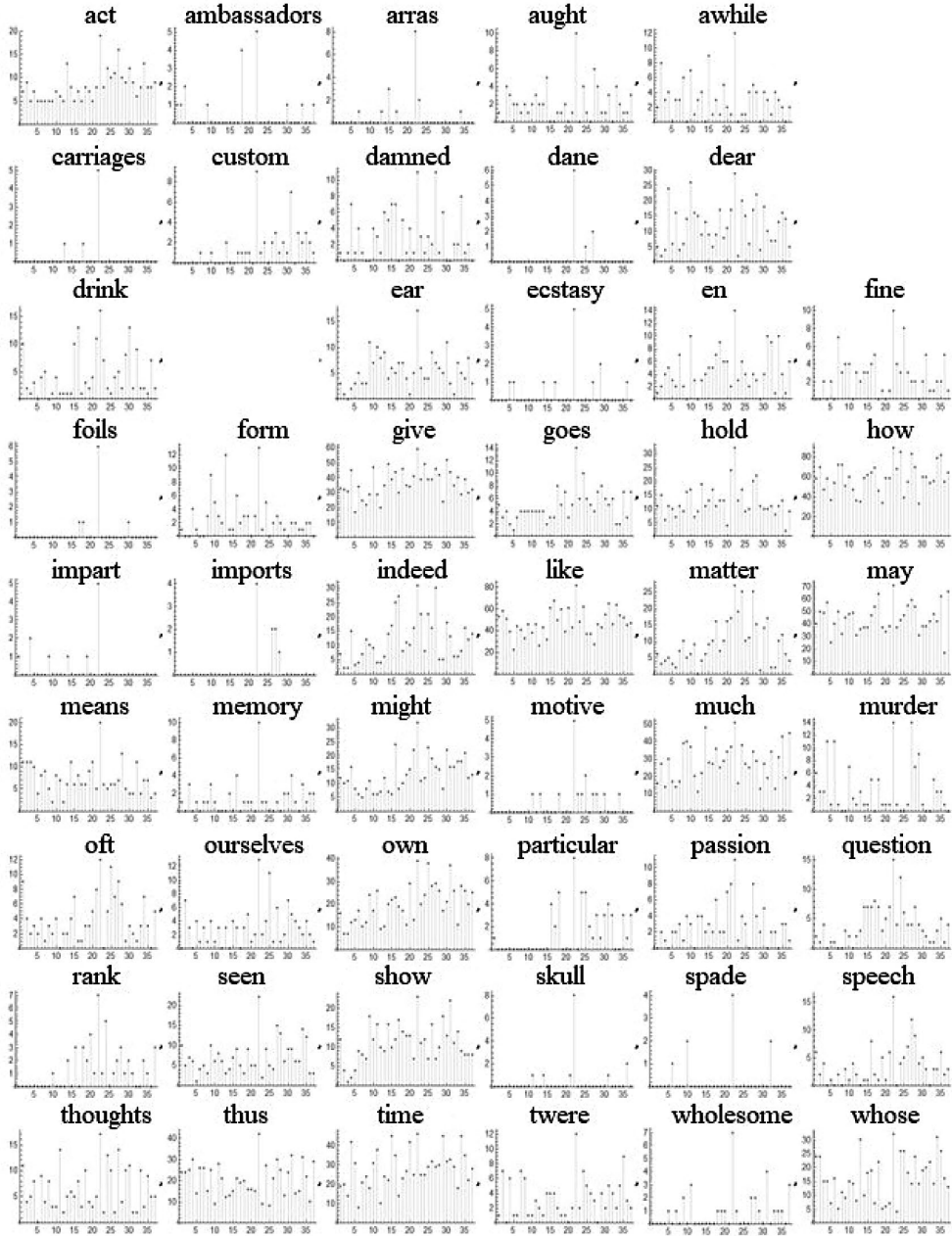
**Figures 3-1.** For *Titus Andronicus*, 46 bar graphs are presented, each corresponding to one of the extracted words. The vertical axis indicates the number of occurrences in each of the thirty-seven plays, while the horizontal axis lists the plays in sequence. Each word’s bar graph shows that its probability under the Poisson model is maximized in *Titus Andronicus*.

## Henry V (46 words)



Figures 3-2. For *Henry V*, likewise, 46 words are represented by bar graphs showing their distributions across the thirty-seven plays, each peaking in *Henry V*.

## Hamlet (51 words)



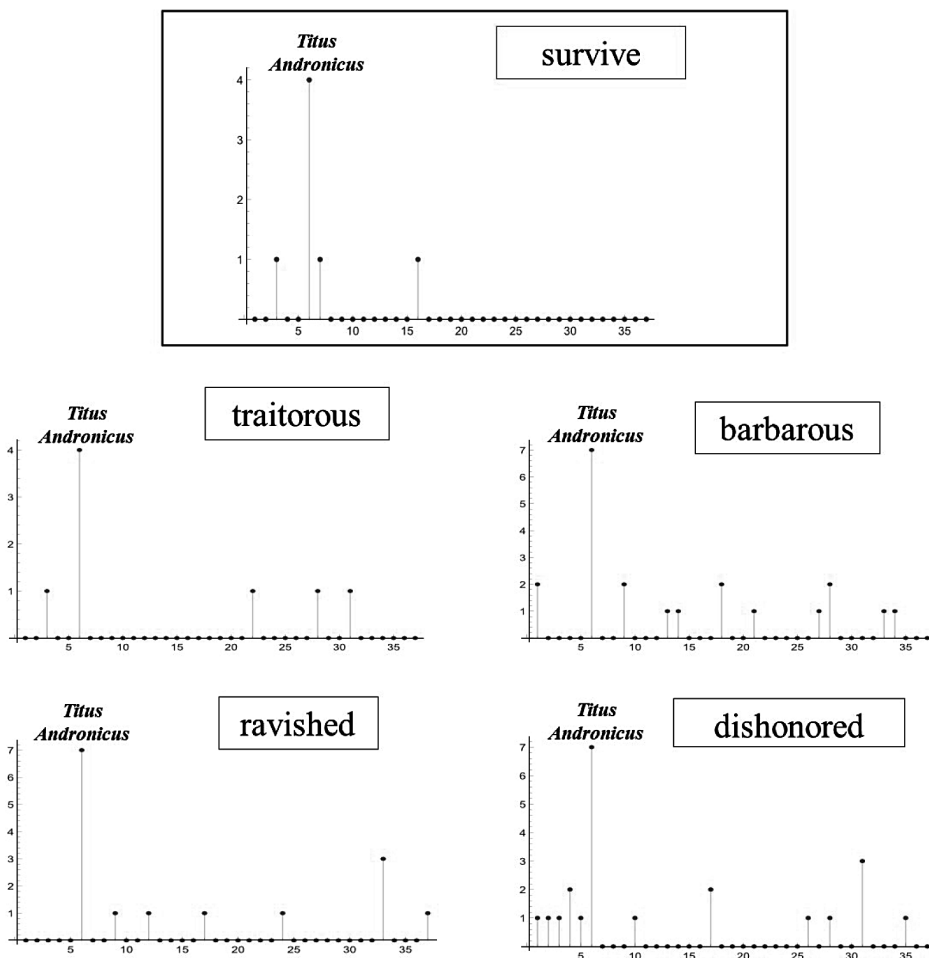
Figures 3-3. For *Hamlet*, 51 words are represented, each of which attains maximum probability in *Hamlet* according to the selection rule.

With these results established, the next chapter will turn to *Titus Andronicus* for a detailed analysis and discussion.<sup>2</sup>

## 5. Discussion

### 5.1 Tendencies in the Extracted Vocabulary

In this discussion we focus on *Titus Andronicus*.



**Figure 4.** Occurrences across the thirty-seven plays of *survive*, *traitorous*, *barbarous*, *ravished*, and *dishonored*.

As Figure 4 indicates, *survive*—previously analyzed in our earlier study—appears with clear concentration in *Titus Andronicus*. The horizontal axis lists the plays (by index), and the vertical axis gives the number of occurrences for the target word in each play. The sixth tick on the horizontal axis corresponds to *Titus Andronicus*.

Because our procedure first selects words whose Poisson probability  $P(\lambda ; m)$  is maximized in *Titus Andronicus* and then filters them by frequency and probability thresholds, it is unsurprising that in every histogram in Figure 4 the highest bar occurs for *Titus Andronicus*.

*Titus Andronicus* is structurally a revenge tragedy. Around the protagonist, antagonists and hidden plotters act as stakeholders; betrayal and intrigue multiply and entangle. It was therefore strongly anticipated, when we designed this study, that the vocabulary most likely to be selected by our Poisson-based criteria would include terms thematically tied to revenge. The fact that such terms emerge at high frequency supports—at least in a general sense—the validity of our hypothesis and the soundness of our procedure.

## 5.2 On *dishonored*

As noted, *Titus Andronicus*<sup>3</sup> is not only a revenge tragedy but also exceptionally grotesque in its extremity. It is thus unsurprising that *traitorous*, *barbarous*, *ravished*, and *dishonored* should be used intensively in this play. Taking *dishonored* as a case in point, we examine representative occurrences. In the opening act, the term is repeatedly voiced, signaling to the audience that dishonor is a governing theme:

### TITUS

Titus, when wert thou wont to walk alone,

Dishonored thus and challenged of wrongs? (1.1.346-47, underline added)

### TITUS

No, foolish tribune, no; no son of mine,

Nor thou, nor these confederates in the deed

That hath dishonored all our family.

Unworthy brother and unworthy sons! (1.1.350-53, underline added)

### TITUS

Rise, Marcus, rise.

The dismall'st day is this that e'er I saw,

To be dishonored by my sons in Rome.

Well, bury him, and bury me the next. (1.1.391-94, underline added)

[They put Mutius in the tomb.]

### TITUS

Prince Bassianus, leave to plead my deeds.

'Tis thou, and those, that have dishonored me.

Rome and the righteous heavens be my judge

How I have loved and honored Saturnine. [He kneels.] (1.1.432-35, underline added)

### SATURNINUS

What, madam, be dishonored openly,

And basely put it up without revenge? (1.1.440-41, underline added)

### AARON

Nor would your noble mother for much more

Be so dishonored in the court of Rome.

For shame, put up. (2.1.52-54, underline added)

### MARCUS

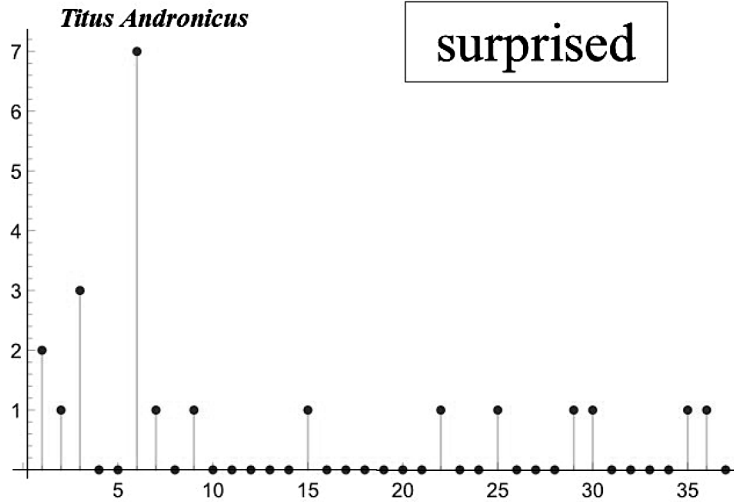
And father of that chaste dishonored dame, (4.1.91, underline added)

A striking feature is that *dishonored* is articulated by multiple speakers—Titus, the Emperor, Aaron—already in Act 1, as the action first gathers momentum. Like entries in a musical canon, the same lexical motif is sounded from differing vantage points, each character uttering the word with distinct inner urgency. This is unlikely to be accidental; rather, it suggests a deliberate dramaturgical design.

The repeated voicing of a single term becomes a hinge that links disparate subjectivities; waves of utterance overlap and amplify, accumulating affective energy until a larger, composite wave—an intensified mass of passion—drives the tragedy forward. Shakespeare is not merely coining new words or layering symbolic, polysemous meanings; he is also wedging crucial lexical keystones—here *dishonored*—into the dramatic structure so that the action will lock together and advance without misalignment. The role assigned to *dishonored* closely parallels the hidden function given to *survive* in the same play: at the outset, three speakers pronounce *survive* in a biological sense (“to remain alive”), thereby proclaiming that the drama to follow is a contest of survival. As shown in our previous paper, the final use of *survive* elevates the term from biological persistence to moral and abstract endurance; this semantic ascent is accompanied by Shakespeare’s innovative, transitive use of *survive*, enabling logical development within an expanded conceptual register.

### 5.3 On *surprised*

We next consider *surprised*. Figure 5 shows its occurrences across the thirty-seven plays: seven in *Titus Andronicus*, markedly higher than elsewhere. In *Titus*, the verb regularly appears in passive constructions as *surprised*.



**Figure 5.** Occurrences of *surprised* across the thirty-seven plays.

Selected instances illustrate the sense of “to seize,” “to capture,” or “to assail,” rather than the modern sense “to astonish”:

**TITUS**

Treason, my lord. Lavinia is surprised. (1.1.287, underline added)

**SATURNINUS**

Surprised? By whom? (1.1.288, underline added)

**TAMORA**

The wand’ring prince and Dido once enjoyed  
 When with a happy storm they were surprised,  
 And curtained with a counsel-keeping cave, (2.3.22-24, underline added)

**QUINTUS**

I am surprised with an uncouth fear.  
 A chilling sweat o’erruns my trembling joints. (2.3.212-13, underline added)

**TITUS**

Lavinia, wert thou thus surprised, sweet girl, (4.1.53, underline added)

## SECOND GOTH

With this, my weapon drawn, I rushed upon him,

Surprised him suddenly, and brought him hither

To use as you think needful of the man. (5.1.37-39, underline added)

## MARCUS

To lovesick Dido's sad-attending ear

The story of that baleful burning night

When subtle Greeks surprised King Priam's Troy. (5.3.83-85, underline added)

According to the *OED*, *surprise*<sup>4</sup> historically bears senses including:

1. "to seize or affect suddenly,"
2. "to assail or attack suddenly and without warning,"
3. "to come upon unexpectedly," etc.

Notably, the *OED* records *Titus Andronicus* as an early locus for the military sense ("to capture, seize; to take possession of by force"), with citations such as "*Treason my Lord, Lauinia is surprizde.*" (1594, *Titus Andronicus* I.i.283).

In *Titus Andronicus*, the contexts in which *surprise* appears indicate that it does not carry the modern sense of "to cause astonishment," but rather the older senses "to assail" or "to seize." What is striking is that the agent of *surprise* need not be human: non-human subjects such as *a happy storm* or *an uncouth fear* can also "surprise." In Tamora's lines— "*When with a happy storm they were surprised, / And curtained with a counsel-keeping cave,*" — *a happy storm* functions as the subject; in Quintus's speech— "*I am surprised with an uncouth fear. / A chilling sweat o'erruns my trembling joints.*" — *an uncouth fear* plays that role. In Marcus's narration— "*...When subtle Greeks surprised King Priam's Troy,*" — the *subtle Greeks* are the assailing agents. The term thus ranges widely across meteorological, psychological, and military domains; when the outcome is adverse, the stakes are grave, far beyond mere "astonishment."

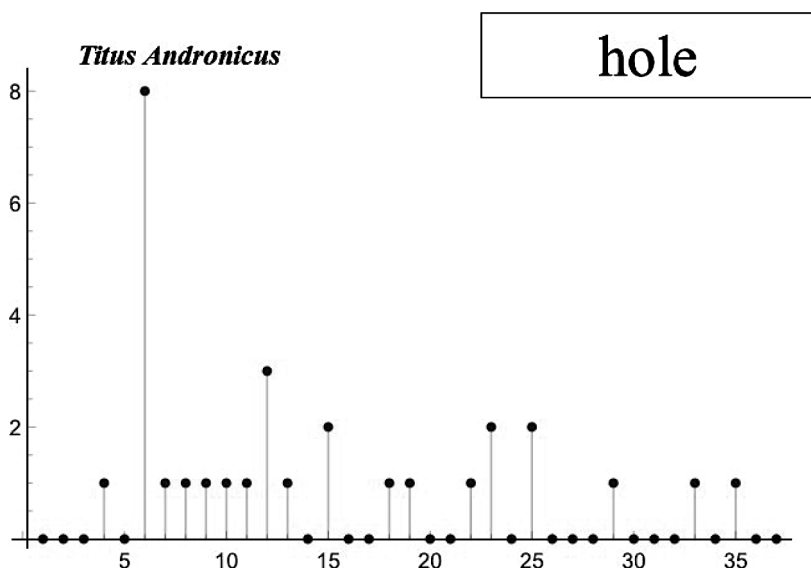
Conversely, when "*a happy storm*" *surprises*, the result is "*curtained with a counsel-keeping cave*": within Shakespeare's usage, *surprise* can include a protective or enfolding action—the reverse of assault or capture. One could even argue that this usage exceeds the bounds of standard lexicographic definitions and might merit a separate sense. In this light, Shakespeare's practice appears as an experimental extension of English in an age of emerging civic society.

Why, then, does Shakespeare generate such a variety of expressions built from the same verb *surprise*, and why deliberately compress this experimentation within a single play? Rather than a happenstance scattering, the concentration suggests an inner dramaturgical motive: by applying *surprise* to an exceptionally wide array of subjects and situations, Shakespeare may be composing a basso continuo—an underlying, continuous line—

beneath the surface events. He pointedly applies the verb to world-shaping antiquity (the fall of Troy) and, in Quintus's image—“*surprised with an uncouth fear*”—he crafts a sensation like terror erupting from a fissure in the earth and crawling up the body. A force far greater than human agency intervenes; lives are abruptly bent by an invisible, irresistible power. In this revenge tragedy, that unseen force operates impartially—fortunate or ruinous like two faces of a coin—ratcheting the gears of fate forward. *Surprise*, in this sense, becomes Shakespeare's vehicle for representing the impersonal propulsion of destiny.

#### 5.4 On *hole*

The noun *hole* occurs thirty times across Shakespeare's thirty-seven plays, eight of which are in *Titus Andronicus*.



**Figure 6.** Occurrences of *hole* across the thirty-seven plays.

Representative passages include:

#### CHIRON

Drag hence her husband to some secret hole,  
 And make his dead trunk pillow to our lust. (2.3.129-130, underline added)

#### CHIRON

Nay, then, I'll stop your mouth.—Bring thou her husband.

This is the hole where Aaron bid us hide him. (2.3.185-187, underline added)

#### QUINTUS

What, art thou fallen? What subtle hole is this,  
Whose mouth is covered with rude-growing briars (2.3.199-200, underline added)

#### MARTIUS

Why dost not comfort me and help me out  
From this unhallowed and bloodstained hole? (2.3.210-11, underline added)

#### MARTIUS

Upon his bloody finger he doth wear  
A precious ring that lightens all this hole, (2.3.227-28, underline added)

#### SATURNINUS

Along with me! I'll see what hole is here  
And what he is that now is leapt into it. (2.3.247-48, underline added)

#### TITUS

Or get some little knife between thy teeth  
And just against thy heart make thou a hole,  
That all the tears that thy poor eyes let fall  
May run into that sink and, soaking in,  
Drown the lamenting fool in sea-salt tears. (3.2.16-20, underline added)

#### AARON

Indeed, I was their tutor to instruct them. ...  
Well, let my deeds be witness of my worth.  
I trained thy brethren to that guileful hole  
Where the dead corpse of Bassianus lay. (5.1. 100, 105-107, underline added)

In *Titus Andronicus*, six of the eight occurrences cluster in Act 2, Scene 3—a sequence so appalling that, for centuries, the play was neglected or radically altered in performance. Only within roughly the past century has the original text returned more regularly to the stage, though many spectators still find the scenes nearly unwatchable.

At first glance *hole* is a plain, ostensibly colorless noun. Yet Shakespeare selects this very ordinariness and sets

the word quietly in place. Beyond that unassuming sign lies an abyss bored into the text's rootstock and connected directly to human hearts. By rhetorical sleight and a protean imagination, the poet turns a neutral token into a prism: what seems like white light flowers into a spectrum of images and affects, scattering across walls, props, faces, garments—and, above all, across the spectator's inner eye. We, with Quintus and Martius, peer into the *hole*: drawn by dread, we feel for the blood we cannot wipe away. Shakespeare never shows its interior carnage; precisely by not showing it, he flashes it before us with unbearable clarity, image by cut image. The concentration of hole in 2.3 is thus anything but casual.

The remaining two instances—in Titus's lines at 3.2 and Aaron's confession at 5.1—serve as structural keystones. Titus's "*make thou a hole*" anticipates the climax with Lavinia and transforms *hole* into a *sink* that absorbs tears—"That all the tears... may run into that sink." Aaron's speech links the conspiracy explicitly to "*that guileful hole*," naming agency and plot. Saturninus's earlier, "*I'll see what hole is here*," completes a triad across Acts 2, 3, and 5—secondary ruler, tragic protagonist, shadow protagonist—through which the word draws an invisible thread. The recurrence stitches the play like a tapestry: not accidental, but a meticulous inlay, a hidden device by which Shakespeare sews characters and their motives into a single fabric.

Thus *hole* is not merely a tool for representing horror. Rooted in the earth, it can symbolize the emergence of fate itself—destiny that *surprises* (in the older sense) from below. Focusing on this unassuming word reveals scaffolding beneath Shakespeare's construction. If the play's blazing images sometimes overwhelm the audience's recognition of such devices, that may be precisely because the "spice" of Shakespeare's invention works too well: the holographic shimmer of image after image beguiles actors, readers, and spectators alike, even as the underlying supports have been carefully calculated and set in place.

To summarize the findings of Chapter 5: by tossing seemingly ordinary, unobtrusive words into the fabric of the play, Shakespeare first has protagonists and other characters speak them almost off-handedly. Opposed figures then take up the same tokens, voicing what the words call forth in their own minds, until the utterances harden into declarations. In this way, the same lexical item is voiced across rival camps; as such, it functions like a **linguistic canon**—not a solitary pitch but a harmony, saturated with polysemy.

Sewn into the tapestry of the drama, these words tether the dramatis personae to the threads that Shakespeare himself has drawn through them. Those threads—logic, passion, motive—tighten until movement becomes impossible; and with each voicing of the keystone term, the play's mechanism advances one tooth, irreversibly.

Shakespeare's genius does not end there. Even if the plot appears to turn on human motives, the observations here suggest that behind the play's irreversibility there works an unseen, more-than-human force—rooted, as it were, in the earth and stretching toward the heavens—whose pressure no one can arrest. The action gathers speed and scope until it collides headlong with its climax. *Dishonored*, *surprised*, *hole*: each shows how Shakespeare tests and extends the semantic capacities of ordinary words. In the case of *surprised*, the sense recorded by lexicography did not fully canonize the range we see on stage; yet *Titus Andronicus* reads as an experiment in meaning, trialing how far one verb can be driven. Shakespeare invents terms, loads tokens with iridescent, many-sided values, and seals them within the drama. By tracing these keystones and the scaffolds

they rest upon, we recover the marks of his experiments—unfinished yet legible—and glimpse not merely the mechanics of human society, but the workings of something that pervades it. Those traces, we contend, are preserved in the very words that gleam with a subtle, changeable sheen.

## 6. Conclusion

This study presents a new methodology that treats anomalies in lexical frequency—*Vocabulary Frequency Anomaly* (VFA)—as traces of dramaturgical intention, extracting them with a Poisson-based statistical procedure across Shakespeare’s thirty-seven plays. In contrast to traditional stylometry, which relies chiefly on high-frequency items and global features of distribution, our approach is distinctive in centering on mid-frequency words and making the probabilistic concentration of such items within particular plays the core object of analysis.

In *Titus Andronicus*, *Henry V*, and *Hamlet*, clusters of vocabulary—beginning with *survive*, *few*, and *rank*—have already been shown in the author’s prior work to display statistically significant skews and to participate deeply in each play’s intellectual nucleus and affective architecture. The present study reverses that logic: in a form of reverse engineering, we first identify sets of words exhibiting VFA and then, by focusing on those words in situ, investigate where and how Shakespeare advanced hidden acts of expressive invention. On this analysis, for example, the repeated voicing of *dishonored* and *surprise* by multiple speakers in *Titus Andronicus* does not amount to mere tautological repetition; rather, different characters utter the same word from their own positions, and the pattern functions as propulsive design—evidence of structural intent. Likewise, the concentrated and polysemous deployment of *hole* is intricately built in as a device that symbolizes fated entrapment and tragic inevitability, surpassing sheer gruesomeness. With such seemingly unobtrusive words, Shakespeare has his protagonists and their antagonists speak in ways that—when these lexical elements are linked—suggest forces at work behind the drama that exceed human motive: an unseen, more-than-human current that gradually ensnares the players, accelerates the action, and drives the plot headlong toward its climax. In this sense, these otherwise modest tokens operate as lexical waypoints; voiced across opposed figures and their circles, they function, as it were, as a **linguistic canon**.

Thus, detecting VFA enables us to back-illuminate words deliberately chosen and positioned by the author, bringing us closer to the workshop of literary creation. The scholarly significance of this study lies in demonstrating that statistical deviations in lexical distribution—beyond what chance would predict—can carry dramaturgical meaning.

Moreover, the methodology is not confined to Shakespeare. It is broadly applicable to other literary and philosophical texts, offering a pathway to make core concepts newly visible and to decode authorial design, and thereby marking a new development within the field of digital humanities.

In sum, the present work advances the claim that statistically identifying anomalies in word frequency can serve as a key to the creative dynamics of literary expression. Future research will extend this method to additional works and multilingual corpora, with the aim of pursuing general principles that govern lexical choice in literary composition.

## Notes

### <sup>1</sup> Additional Illustration: Poisson Probabilities

To make the idea concrete, let us look explicitly at probabilities under the Poisson distribution.

#### (1) *abatement*

Consider the token *abatement*. Across the thirty-seven plays it appears only three times—once each in *Twelfth Night*, *King Lear*, and *Cymbeline*. In this case  $\lambda = 0.0718386$ , yielding

$$P(\lambda = 0.0718386; m=3) = 10^{-1.57794}.$$

This magnitude is entirely ordinary: if three isolated occurrences are distributed as singletons across three different plays out of thirty-seven, the pattern is not statistically unusual.

#### (2) *harmony*

In the present database the thirty-seven plays are arranged, as far as ascertainable, in approximate order of composition—from *Henry VI, Part 2* through *Henry VIII*. The distribution of *harmony* across the thirty-seven plays is:

$$\{1,1,0,0,0,1,2,0,2,0,2,0,0,2,0,0,1,0,0,0,0,1,0,1,0,0,0,0,0,0,2,1,0,2,1\}.$$

No single play exhibits a marked concentration; occurrences are one—or at most two—per play. In *The Taming of the Shrew* the count is two; for that play  $\lambda = 0.5075724$ , and

$$P(\lambda = 0.5075724; m=2) = 10^{-1.758622}.$$

This probability, too, is unexceptional; a sparse scattering of one or two tokens over several plays is not statistically anomalous.

<sup>2</sup> With regard to the vocabulary extracted from *Henry V* and *Hamlet* through the present research methodology, a separate discussion will be provided in a subsequent paper.

<sup>3</sup> All quotations of *Titus Andronicus* are from *Titus Andronicus*, ed. Barbara A. Mowat and Paul Werstine, The Folger Shakespeare Library (Simon & Schuster, 2015), cited parenthetically.

<sup>4</sup> *OED Online* (Oxford UP, August 2025), s. v. “surprise, v.”

## References

- The Arden Shakespeare CD-ROM: Texts and Sources for Shakespeare Study*. Thomas Nelson, 1997.
- The Arden Shakespeare Complete Works*, Kindle Edition. Edited by Richard Proudfoot, Ann Thompson, and David Scott Kastan. The Arden Shakespeare, 2010.
- The Arden Shakespeare Third Series Complete Works*. Edited by Richard Proudfoot, Ann Thompson, David Scott Kastan and H.R. Wouldhuysen. The Arden Shakespeare, 2021.
- Burgess, Anthony. *Shakespeare*. Ivan R. Dee, 1994.
- Chambers, E. K. *The Elizabethan Stage*, 4 vols. Clarendon Press, 1923.

- \_\_\_\_\_. *William Shakespeare: A Study of Facts and Problems*, 2 vols. Clarendon Press, 1930.
- Folger Shakespeare Library. *Shakespeare's Plays* from Folger Digital Texts. Edited by Barbara Mowat, Paul Werstine, Michael Poston, and Rebecca Niles. Folger Shakespeare Library, 20 January 2016, www.folgerdigitaltexts.org.
- Hassani, S. *Mathematical Methods For Students of Physics and Related Fields*. Springer-Verlag, 2009, 797-800.
- Lavenda, B. H. *Statistical Physics: A Probabilistic Approach*. John Wiley & Sons, 1991.
- The New Oxford Shakespeare: The Complete Works: Modern Critical Edition*, Kindle Edition. Edited by Gary Taylor, John Jowett, Terri Bourus, and Gabriel Egan. Oxford UP, 2016.
- The Norton Shakespeare*, 3rd Edition. Edited by Stephen Greenblatt, Walter Cohen, Suzanne Gossett, Jean E. Howard, Katharine Eisaman Maus, Gordon McMullan. W. W. Norton, 2016.
- The Oxford English Dictionary 2nd edition on CD-ROM* Version 4.0. Oxford UP, 2009.
- Oxford English Dictionary (OED) Online*. Oxford UP, 27 August 2025, <https://www.oed.com/>.
- Riley, K. F., Hobson, M. P., and S. J. Bence. *Mathematical Methods for Physics and Engineering: A Comprehensive Guide*, 3rd edition, Cambridge UP, 2006, 1174-79.
- The Riverside Shakespeare*, 2nd Edition. Edited by G. Blakemore Evans et al. Houghton Mifflin Company, 1997.
- Schmidt, A. *Shakespeare Lexicon and Quotation Dictionary: A Complete Dictionary of All the English Words, Phrases, and Constructions in the Works of the Poet*, vol. 1 and vol. 2. Walter de Gruyter, 1971.
- Shakespeare, William. *Titus Andronicus*. Edited by J. C. Maxwell, The Arden Shakespeare, Methuen, 1985.
- \_\_\_\_\_. *Titus Andronicus*. Edited by Jonathan Bate, The Arden Shakespeare, 3rd series, revised ed., Bloomsbury, 2018.
- \_\_\_\_\_. *Titus Andronicus*. Edited by Alan Hughes, The New Cambridge Shakespeare, updated ed., Cambridge UP, 2006.
- \_\_\_\_\_. *Titus Andronicus*, Kindle Edition. Edited by Barbara A. Mowat and Paul Werstine, The Folger Shakespeare Library, Simon & Schuster, 2015.
- \_\_\_\_\_. *Titus Andronicus*, Kindle Edition. Edited by Harry R. McCarthy, Gary Taylor, Terri Bourus, Rory Loughnane, Anna Pruitt, Francis X. Connor, The New Oxford Shakespeare, Oxford UP, 2025.
- Spevack, M. *The Harvard Concordance to Shakespeare*. Harvard UP, 1973.
- Horie, Satoko. "A Fundamental Study on an Analytical Method of the English Evolution." *Expression-Formation Studies [Hyogen Kenkyu]*, 2008, vol. 87, 72-81. (In Japanese)
- \_\_\_\_\_. "Drama That Evolves into Reality: Exploring the Word 'few' from Shakespeare to Churchill's Wartime Speeches." *English Usage and Style*, 2017, vol. 34, 5-30. (In Japanese)
- \_\_\_\_\_. "Exploring Shakespeare's Innovation: A Study of the Word 'Survive'." *Studies In Humanities and Social Sciences*, 2023, vol. 127, 1-24.
- \_\_\_\_\_. "Study on Word Fluctuations Where Shakespeare Creates New Expressions: Quest for Hidden Thoughts or Pathos through Digital Distillation." *Studies in Humanities and Social Sciences*, 2024, vol. 128, 1-22.
- \_\_\_\_\_. "Analysis of Anomalous Frequency Words: "Rank" and *Hamlet*." *Studies in Humanities and Social Sciences*, 2024, vol. 129, 1-19.