

Preserving Policy Through Narrative Transformation: A Computational Analysis of Mormon Tithing Discourse, 1850-2024

Abstract

How did Mormon leaders preserve their demanding ten percent tithing requirement unchanged from 1899 to 2024 while the cultural, political, and theological contexts supporting such demands transformed dramatically? This study addresses this puzzle through computational analysis of 4,002 tithing passages from general conferences (1850-2024), applying the Narrative Policy Framework to test Armand Mauss's theory of optimum tension—the idea that successful religious movements oscillate between assimilation and retrenchment to maintain institutional distinctiveness. Using large language models and fine-tuned DistilBERT models trained on empirically-derived anchor texts, I systematically measure three coordinated rhetorical dimensions across 175 years: commandment versus opportunity framing, fear versus love appeals, and material versus spiritual emphasis. The analysis documents cyclical patterns rather than linear progression, revealing periods of authoritarian retrenchment alternating with assimilationist appeals, with rhetorical shifts corresponding temporally to external crises including federal persecution, financial instability, and economic downturns. The findings demonstrate how Mormon leaders maintained demanding practices through coordinated narrative evolution rather than policy modification, while advancing computational methodologies for measuring institutional communication across temporal scopes exceeding conventional historical approaches. This study contributes systematic measurement of patterns Mormon historians have observed qualitatively and establishes replicable methods for analyzing long-term rhetorical change in religious discourse.

Introduction

In October 1926 Joseph Fielding Smith delivered a stern rebuke. He declared that "the man who has received the truth and yet will not walk in it deserves the greater condemnation" and placed refusal to pay tithing alongside other sins such as using tobacco, violating the Word of Wisdom, failing to keep the Sabbath, or otherwise ignoring the Lord's commandments. Such a person, he insisted, "is not loyal to the Church of Jesus Christ of Latter-day Saints."¹ Eighty-one years later, Elder Yoshihiko Kikuchi addressed the same requirement in language of invitation, calling tithing "a token of gratitude, obedience, and thanksgiving" that "increases our love for the Lord."² Both leaders discussed the identical requirement—ten percent of income—yet their approaches differed fundamentally.

This transformation illustrates a central puzzle in Mormon institutional development: How did church leaders preserve one of their most demanding behavioral requirements unchanged while systematically adapting the narrative frameworks that motivated compliance? When facing environmental pressure, many organizations abandon demanding practices or modify them to reduce compliance burdens. Yet from Lorenzo Snow's 1899 formalization through global expansion in the 21st century, Mormon leaders maintained the identical ten percent requirement

while the cultural, political, and theological contexts that originally supported such demands transformed dramatically.

Mormon historians have documented this rhetorical evolution qualitatively. Thomas Alexander traced the church's "transition" from sectarian authoritarianism toward mainstream cultural values between 1890 and 1930. Armand Mauss developed the theory of "optimum tension," arguing that successful religious movements must oscillate between assimilation to host culture and retrenchment to preserve distinctiveness—too much assimilation risks loss of identity, while too much separation provokes repression. His "angel and beehive" framework illuminated how Mormon institutions have historically navigated these competing pressures through cycles of accommodation and retrenchment.

This study tests Mauss's optimum tension theory through empirical measurement. Using computational analysis of over 4,000 passages referencing tithing from general conferences between 1850 and 2024, I apply the Narrative Policy Framework from public policy studies to document systematic change across three coordinated dimensions: commandment versus opportunity framing, fear versus love appeals, and material versus spiritual emphasis. The analysis reveals cyclical patterns rather than linear progression—periods of authoritarian retrenchment alternating with assimilationist appeals—corresponding temporally with specific environmental pressures including federal persecution, financial crises, global expansion, and shifting American cultural values. The findings suggest that Mormon institutional resilience operated through coordinated narrative evolution rather than policy modification, advancing understanding of how the church preserved distinctive practices while responding to changing environments. The computational methodology enables comprehensive analysis across temporal scopes exceeding conventional historical approaches and provides replicable methods for measuring long-term rhetorical change in religious discourse.

This paper proceeds through five sections: theoretical framework integrating NPF and optimum tension theory, historical overview of Mormon tithing development across three environmental eras, computational methodology using large language models to measure rhetorical dimensions, empirical findings including trend analysis and environmental correlations, and interpretation of results with implications for understanding Mormon institutional communication and development.

Theoretical Framework: The Narrative Policy Framework and Religious Institutional Communication

The Narrative Policy Framework (NPF) emerged to address a fundamental question in policy studies: whether narratives play systematic and measurable roles in policy processes. Developed by Jones and McBeth and refined by Shanahan, Jones, McBeth, and Radaelli, the NPF bridges interpretive and positivist approaches by arguing that policy narratives both socially construct reality and can be measured empirically through systematic analysis.³

The framework rests on several core assumptions about policy actors and narrative construction. Policy actors operate under bounded rationality, making decisions based on limited information and cognitive constraints rather than perfect strategic calculation. However, their narrative choices respond predictably to environmental pressures and feedback mechanisms, creating

systematic patterns that can be measured and analyzed. Policy narratives serve multiple functions simultaneously: they help actors make sense of complex policy environments, justify institutional positions to stakeholders, and motivate desired behaviors among target populations.

Structural Elements of Policy Narratives

NPF analysis typically begins with identifying generalizable structural elements that appear consistently across policy narratives. Every policy narrative contains a setting that establishes the policy context and defines the scope of the issue being addressed. Characters populate these narratives in recognizable roles: heroes who advocate for preferred solutions, villains who create or perpetuate policy problems, and victims who suffer from current policy failures. The plot establishes causal relationships between characters and outcomes, explaining how policy problems arise and how proposed solutions will address them. Finally, the moral provides the policy solution being advocated, often implicitly rather than through explicit policy recommendations.⁴⁴

These structural elements enable systematic comparison across different policy contexts and time periods. The same policy issue can be narrated through completely different character configurations, causal mechanisms, and moral frameworks, with each variation appealing to different stakeholder values and motivational systems. Understanding how these elements shift over time reveals strategic adaptation as policy actors respond to changing environmental conditions and stakeholder expectations.

Strategic Elements: Adaptive Mechanisms for Environmental Change

Beyond structural analysis, NPF identifies tools that policy actors use to adapt their narratives across changing conditions. These mechanisms enable organizations to maintain policy continuity while modifying how they frame, justify, and motivate compliance with behavioral requirements.⁵

Scope of conflict strategies involve choices about how narrowly or broadly to frame policy issues and institutional roles. Narrow scope framing presents policy requirements as technical matters requiring expertise and limiting stakeholder involvement in implementation decisions. Broad scope framing expands stakeholder participation by emphasizing multiple perspectives, diverse benefits, and complex trade-offs that require widespread input and consideration. Policy actors strategically shift between narrow and broad scope presentations depending on coalition competition, environmental conditions, and desired outcomes.

The devil-angel shift represents choices about causal logic and motivational frameworks within policy narratives. Devil shift narratives emphasize problems, focusing on negative outcomes that will result from policy failure and positioning opponents as responsible for harmful consequences. Angel-shift narratives emphasize solutions, focusing on positive outcomes that will result from policy success and positioning proponents as enabling beneficial consequences. The same policy requirement can be motivated through either causal logic, with each approach creating different stakeholder relationships and compliance dynamics.

Causal mechanism variation involves choices about the types of benefits policy compliance should produce and through what processes those benefits should operate.⁵ Policy actors can emphasize immediate, measurable outcomes that appeal to rational calculation and short-term

feedback mechanisms. Alternatively, they can emphasize long-term, transformational outcomes that appeal to meaning-making and identity formation processes. Different causal mechanisms resonate with different stakeholder values and cultural contexts, enabling policy actors to maintain behavioral requirements while adapting benefit frameworks to changing environmental expectations.

Multi-Level Analysis: Individual, Organizational, and Cultural Dynamics

NPF operates through three analytical levels that capture different aspects of narrative influence and adaptation.⁶ This multi-level approach enables analysis of how organizational narrative changes (meso-level) respond to cultural shifts (macro-level) while influencing individual behavior (micro-level), creating feedback loops that reward successful adaptation while penalizing approaches that become misaligned with environmental conditions.

The micro-level examines how narratives influence individual attitudes, beliefs, and compliance behaviors. Policy narratives shape how stakeholders understand policy requirements, evaluate institutional credibility, and make decisions about cooperation or resistance. Individual responses to narrative change provide feedback mechanisms that reward effective messaging strategies while penalizing approaches that fail to resonate with stakeholder expectations. The meso-level focuses on strategic narrative construction within organizations and policy coalitions. This level examines how policy actors coordinate their messaging, adapt their communication strategies across different audiences, and modify their narratives in response to environmental changes and competitive pressures. Organizational narrative strategies reflect institutional learning processes, resource constraints, and legitimacy management needs that operate over months and years rather than immediate response cycles. The macro-level analyzes how broad cultural narratives shape policy realities and constrain available strategic options over extended time periods. Cultural shifts in values, authority relationships, and causal beliefs create environmental pressures that influence organizational narrative strategies. Macro-level changes operate slowly but fundamentally, requiring policy organizations to adapt their basic assumptions about stakeholder motivations, acceptable authority claims, and legitimate benefit frameworks.

NPF Applications to Religious Institutional Analysis

Religious institutions exhibit many of the core organizational characteristics that NPF assumes about policy actors: they create binding rules with explicit compliance expectations, maintain formal enforcement mechanisms, depend on voluntary resource flows from stakeholder populations, and face legitimacy pressures from changing cultural and economic environments.¹⁰¹¹ ¹² The Mormon church's tithing system demonstrates these characteristics through exact behavioral requirements (ten percent of income) unchanged for over 100 years, formal enforcement via temple recommend interviews that link financial contributions to access to sacred ordinances, and direct resource dependence on voluntary member contributions. NPF proves valuable even when it addresses narrative adaptation under policy continuity, like the Mormon tithing case where identical behavioral requirements persisted across environmental changes while narrative frameworks evolved.⁷

Religious institutions combine features of advocacy organizations (mobilizing shared values), service organizations (providing benefits), and regulatory bodies (maintaining behavioral standards), with recent NPF scholarship demonstrating the framework's transportability beyond traditional policy settings.⁷ ⁸ Churches use adaptive strategies including contemporary styles,

demographic targeting, and inclusive approaches to marginalized groups,²³ with successful adaptation requiring coordinated modifications across multiple environmental interface dimensions.²⁴ Research on Mormon institutional dynamics reveals sophisticated coordination mechanisms preserving institutional unity across extended periods,²⁵ with documented financial management systems²⁶ and systematic evolution of communication patterns corresponding with broader organizational changes.^{27 28 29} These coordination capabilities reflect organizational learning processes enabling approaches to maintaining demanding requirements across cultural transformation.^{30 68}

However, religious institutions present distinct considerations: divine authority claims can insulate leaders from stakeholder pressures, theological consistency constraints may limit available narrative strategies,^{17 18} and voluntary resource dependence creates incentives for environmental sensitivity.^{19 13 14 15 16 87 88} Empirical research reveals mixed results applying traditional organizational theories to religious contexts, suggesting faith-based institutions may require modified frameworks that account for theological motivations alongside rational calculations.^{20 21 22 31} Existing scholarship on Mormon institutional behavior, however, helps address these concerns directly. Documentation of LDS leadership dynamics shows Mormon leaders demonstrate environmental sensitivity and narrative coordination through sophisticated decision-making processes, strategic use of institutional precedent, and learning mechanisms that accumulate decades of organizational memory and environmental adaptation strategies.⁹ These studies suggest that even institutions claiming divine guidance may exhibit the environmental responsiveness and narrative coordination that NPF assumes about policy actors.

Scholars of Mormon Studies expand on this by emphasizing the tension between assimilation to host culture and preservation of religious distinctiveness. Armand Mauss's "angel and beehive" metaphor explores how Mormon leaders have historically shifted between assimilation and retrenchment, arguing that new religious movements survive by maintaining an "optimum tension" with their surrounding societies. Too little tension leads to loss of identity through complete assimilation, while too much provokes repression⁹⁷. Mauss further argues that religious movements do not move inexorably toward either pole; instead, they oscillate between assimilation and retrenchment across different historical moments. In his view, successful leaders continually recalibrate their narratives, tightening rhetorical demands when assimilation threatens the group's distinctiveness and loosening them when retrenchment risks alienating potential converts. This cyclical perspective implies that rhetorical adaptation should exhibit both periods of intensification and periods of relaxation rather than a simple linear progression. Such insights complement the Narrative Policy Framework by highlighting how narrative strategies can calibrate institutional distinctiveness in response to changing cultural pressures. Integrating Mauss's insights enriches the theoretical framework by linking narrative adaptation to broader dynamics of assimilation, identity preservation and cyclical recalibration⁹⁷.

Using the Narrative Policy Framework allows these sociological ideas to be tested empirically. The NPF deconstructs public stories into consistent components—settings, characters, plot, moral—and measures how their prevalence changes across contexts and time. In other words, the NPF provides a systematic method for quantifying narrative adaptation and evaluating whether institutional discourse actually cycles between high-tension retrenchment and low-tension assimilation, as Mauss hypothesizes.

NPF Predictions for Mormon Tithing Discourse

Grounding Mauss's optimum tension concept within the Narrative Policy Framework generates three testable hypotheses about Mormon tithing discourse.

H1: Assimilation–retrenchment cycles. If Mauss is correct that movements oscillate between assimilation and retrenchment, then Mormon tithing rhetoric should exhibit recurrent cycles of intensification and relaxation rather than linear progression. I expect periods of high-tension rhetoric emphasizing obligation, consequences, and institutional authority, followed by low-tension periods emphasizing voluntary participation, positive outcomes, and individual agency.

H2: Narrative coordination. During these cycles, multiple rhetorical elements should shift together rather than independently. If leaders construct coherent narratives, changes across different dimensions of institutional messaging should occur simultaneously to support either retrenchment or assimilation.

H3: Environmental triggers. Transitions between cycles should correspond to identifiable internal and external pressures. Legal persecution, economic crises, demographic shifts, or global expansion may spur retrenchment or assimilation phases.

Operationalizing NPF Through Three Rhetorical Dimensions

To test these hypotheses, I operationalize NPF's strategic mechanisms through three measurable rhetorical dimensions, each capturing a different aspect of narrative adaptation in Mormon tithing discourse.

Commandment versus Opportunity operationalizes scope of conflict strategies—choices about how narrowly or broadly to frame policy issues. Narrow scope presents requirements as technical matters limiting stakeholder involvement; broad scope expands participation by emphasizing multiple perspectives and diverse benefits. Commandment framing exemplifies narrow scope by presenting tithing as binary divine obedience requiring no deliberation. Joseph F. Smith declared that "By this principle (tithing) the loyalty of the people of this Church shall be put to the test," while Lynn Robbins taught in 2005 that "if a destitute family is faced with the decision of paying their tithing or eating, they should pay their tithing."^{31 110} This positions leaders as authoritative agents implementing non-negotiable mandates. Conversely, opportunity framing expands scope by inviting consideration of individual circumstances, repositioning tithing as "the highest privilege of your membership in the Church of Jesus Christ."³³ Narratively, narrow scope casts members as potential villains robbing God, while broad scope positions them as protagonists choosing voluntary consecration.

Fear versus Love operationalizes devil-angel shift mechanisms—choices about causal logic and motivational frameworks. Devil shift narratives emphasize problems and negative outcomes from policy failure; angel shift narratives emphasize solutions and positive outcomes from success. Fear-based appeals exemplify devil shift by creating motivation through consequence avoidance and divine punishment warnings, as in Malachi's passage: "Will a man rob God? Yet ye have robbed me...Ye are cursed with a curse."³⁶ Love-based appeals achieve angel shift by positioning compliance as enabling positive outcomes through attraction to rewards rather than penalty avoidance. Yoshihiko Kikuchi's 2007 teaching illustrates this: tithing "is a token of

gratitude, obedience, and thanksgiving...Paying tithing increases our love for the Lord."⁶² ⁶¹ Narratively, fear populates stories with villains and victims suffering curses, while love foregrounds heroes who willingly sacrifice and beneficiaries who receive blessings.

Material versus Spiritual operationalizes causal mechanism variation—choices about what types of benefits compliance produces and through what processes. Policy actors can emphasize immediate, measurable outcomes appealing to rational calculation, or long-term, transformational outcomes appealing to meaning-making and identity formation. Material emphasis represents temporal causal chains where tithing produces measurable worldly benefits, as in Heber J. Grant's 1929 promise of "peace, prosperity and financial success" for those "honest with our Heavenly Father."³⁶ Spiritual emphasis represents transcendent causal chains linking tithing to character transformation, developing "an honest and pure heart"³⁷ through willing sacrifice and emphasizing personal revelation and spiritual development transcending material measurement. Narratively, material emphasis frames plots where obedience yields tangible prosperity; spiritual emphasis tells stories of inner transformation, shifting the moral from worldly success to eternal growth.

These dimensions capture coordinated shifts across NPF's structural elements—setting, characters, plot, and moral—enabling tests of whether Mormon tithing discourse exhibits the cyclical oscillations, coordinated shifts, and environmental responsiveness predicted by optimum tension theory. Testing these hypotheses requires examining environmental conditions that created adaptation pressures across Mormon institutional history. The following analysis identifies three distinct periods that generated different environmental challenges, establishing the foundation for measuring whether Mormon tithing discourse exhibits the cyclical oscillations, coordinated shifts and external responsiveness predicted by NPF-operationalized optimum tension.

Historical Context: Institutional Adaptation Across Environmental Change

The transformation between Joseph Fielding Smith's 1926 threats of divine condemnation and Yoshihiko Kikuchi's 2007 invitations to spiritual growth illustrates significant change in Mormon tithing discourse over eight decades.⁴⁴ This rhetorical evolution occurred across three distinct periods: crisis-driven institutionalization , gradual environmental adaptation , and systematic response to globalization and cultural pluralism .

Era One: Crisis Response and Institutional Foundation

Historical scholarship reveals that early Mormon definitions of tithing were fluid and far from the later standardized ten percent. In December 1837 Missouri bishops defined tithing as two percent of a member's net worth after deducting debts and emphasized that voluntary tithing was preferable to forced taxes ¹⁰¹. Joseph Smith's July 1838 revelation introduced a more demanding law requiring members to donate all "surplus property" upon conversion and then one-tenth of their annual "interest" thereafter¹⁰¹ ³². Bishop Edward Partridge explained that this meant paying six dollars on a \$1,000 capital at the typical six-percent interest rate ¹⁰¹. Subsequent instruction from the Quorum of the Twelve alternated between reinforcing this obligation and liberalizing it. For example, in 1841 they reduced the initial donation to a tenth of possessions and annual increase¹⁰¹, while later pronouncements again required a tenth of all property and

money¹⁰¹. These definitions show that the modern concept of paying ten percent of income developed gradually rather than being present from the church's origins.^{33 34}

Even with flexible definitions, tithing compliance remained low during the nineteenth century. Members could satisfy their obligations through labor, personal property, livestock, and produce rather than cash until 1908¹⁰¹, and frontier Utah's scarcity of cash meant that most tithing was paid in kind. For example, of the \$143,372 in tithing receipts recorded in 1868 only \$25,114 was in cash, with the rest paid in labor or goods¹⁰². Brigham Young estimated that less than ten percent of Saints paid a full tithe between 1847 and 1870¹⁰¹, and church leaders rarely excommunicated members solely for nonpayment¹⁰². Local bishops sometimes excused poverty-stricken members from paying, leading to wide variation in practice across regions¹⁰¹. These historical realities show tithing remained peripheral in early Mormonism and explain the magnitude of the reforms that followed.

This experimental approach served multiple functions beyond revenue generation. Local leaders used tithing as indicators of spiritual commitment and community loyalty, creating informal social pressures while reinforcing Mormon theological distinctiveness through financial obligations exceeding typical Protestant expectations.³⁵ The 1880s disrupted this gradual development through escalating federal pressure against polygamy, culminating in the devastating 1887 Edmunds-Tucker Act.⁷⁹ This legislation dissolved the church as a legal corporation and confiscated over \$1 million in assets, including temples and tithing funds.³⁶ Federal seizure created a vicious cycle: as assets disappeared into federal coffers, members worried that paying tithing might fund their persecutors, leading to dramatic contribution decreases precisely when institutional needs peaked.

Historical scholarship shows that the fiscal crisis Snow confronted was rooted in multiple contingent factors. Tithing receipts had plummeted following the Panic of 1893, and by the mid-1890s they totaled only around \$350,000 per year—far below pre-depression levels—while annual interest on church debt exceeded \$100,000⁹⁶. At the same time, the Edmunds-Tucker Act's confiscation of church property, expensive construction projects like the Salt Lake Temple, and failed investment schemes left the Church roughly \$2.3 million in debt⁹⁵. Horne notes that Snow and his advisers considered selling off ranches and other assets to avoid bankruptcy, but concluded that only a comprehensive tithing reformation could solve the financial crisis⁹⁵. Recognizing these economic and political pressures situates the 1899 "St. George revelation" within broader historical contingencies rather than purely theological motives⁹⁵.

By September 1898, Lorenzo Snow inherited an institution facing potential bankruptcy. The church carried approximately \$2.3 million in debt with annual interest payments exceeding \$100,000—an enormous burden for an organization whose annual tithing receipts totaled only \$77,000 the previous year.³⁷ Snow's response came through the "St. George revelation" of May 17, 1899. Speaking to 2,000 Saints, Snow paused mid-speech as he received what he described as divine revelation: "The time has now come for every latter-day saint, who calculates to be prepared for the future and to hold his feet strong upon a proper foundation, to do the will of the Lord and to pay his tithing in full."³⁸ This revelation established tithing as mandatory divine law with exactly ten percent as non-negotiable requirement. Snow's implementation proved comprehensive: detailed lists of non-tithe payers by 1900, declarations that failing to pay tithing was "worse than the non-observance of the Word of Wisdom," and formal establishment of

tithing payment as temple recommend requirement.³⁹ These enforcement mechanisms linked financial contributions directly to sacred ordinances and community standing.

Results were immediate and decisive. Tithing compliance jumped from 18.4 percent in 1898 to 25.6 percent in 1899. Enhanced revenue enabled the church to eliminate half its debt by 1901 and achieve complete financial independence by 1907, when Joseph F. Smith announced "we expect to see the day when we will not have to ask you for one dollar of donation for any purpose."⁴⁰ ⁴¹ Snow's 1899 revelation established both institutional framework and theological foundation that would persist through subsequent environmental changes.

Era Two: Modernization and Environmental Adaptation

The second era saw substantial institutional growth as the Church navigated major upheavals while building its modern global foundation. Following Snow's successful institutionalization of tithing, leaders spent six decades managing explosive membership growth from approximately 250,000 in 1900 to over 1.6 million by 1960.⁴³ This period included two world wars, the Great Depression, massive urbanization, and early international expansion beyond the Mormon corridor.

Early decades built upon Snow's foundation while adapting to changing circumstances. Heber J. Grant's presidency brought significant transformation through his business and banking background. Grant introduced professional management approaches to church administration, emphasizing record-keeping and modern financial practices.⁴⁵ His business expertise created institutional capacity for more advanced approaches to member motivation and compliance management. Grant developed new frameworks connecting tithing to contemporary values of financial planning and personal prosperity. Rather than relying solely on divine command, church leaders began presenting tithing as personally beneficial strategy aligned with modern American emphasis on individual success and rational decision-making.⁴⁶ This modernization illustrates the assimilation side of what Armand Mauss calls the "angel and beehive" dynamic. In the first half of the twentieth century, the Church deliberately sought respectability in American society and embraced middle-class values, moving from a disreputable sect toward a mainstream church. Leaders such as Grant adopted corporate management models and entrepreneurial rhetoric, signaling that Mormonism could harmonize religious commitment with American prosperity. Yet Mauss cautions that assimilation carries the risk of blurring a movement's distinctive boundaries. Religious communities must maintain an **optimum tension**; too much assimilation produces what he calls a "predicament of respectability" in which the faith loses its defining peculiarity.

By the mid-twentieth century, Mormon leaders sensed that assimilation had gone too far and began moving in a more sect-like direction to recover lost distinctiveness. Institutional programs such as correlation tightened doctrinal conformity and standardized instruction to create clear boundaries around Mormon identity. Mauss views correlation as a vehicle for retrenchment, though some scholars argue that correlation also reflected ongoing assimilation to corporate managerial norms. Either way, leaders were recalibrating between assimilation and retrenchment in an effort to maintain optimum tension. As will be discussed in the results, the rhetorical data from this era shows oscillations between commandment-oriented appeals and invitations to voluntary sacrifice, patterns that resonate with Mauss's cyclical framework.

Administrative reforms during this period institutionalized oversight of tithing and reflected the professionalization of church governance. The Council on the Disposition of the Tithes—originally organized in 1838 and reconstituted in 1943—assigned the First Presidency, Quorum of the Twelve Apostles, and Presiding Bishopric joint responsibility for disbursing tithing funds⁹⁸. This council provided legal separation between church officers and property and symbolized the growing role of the Twelve in financial management, paving the way for correlation's later centralization⁹⁸. Leaders like Heber J. Grant and N. Eldon Tanner introduced modern accounting practices and corporate governance principles to ensure transparency and maintain donor confidence⁹⁶.

The reconstituted council quickly assumed an active role in budgetary decisions. President David O. McKay described the 1944 meeting that brought three members of the Quorum of the Twelve together with the First Presidency and Presiding Bishopric as historic because it marked the first time these leaders officially considered Church expenditures⁹⁸. While the church continued to emphasize voluntary commitment, administrators also linked compliance to tangible benefits. At Brigham Young University, faculty salary increases and continued employment were tied to personal tithing histories¹⁰⁰, and earlier attempts to deduct tithing directly from salaries had met with protests¹⁰⁰. Such examples show that narrative appeals to spiritual duty coexisted with formal enforcement mechanisms, illustrating how institutional practices and doctrinal persuasion worked together to preserve the law of tithing.

The Great Depression created particular challenges for institutional adaptation. Leaders confronted economic hardship realities while maintaining contribution expectations from members facing unemployment and poverty. This crisis required developing new approaches that emphasized spiritual rather than material benefits, anticipating needs for later global expansion among economically diverse populations.⁴⁷ David O. McKay's administration accelerated institutional modernization.⁴⁹ His international growth emphasis and adoption of modern communication technologies required tithing frameworks applicable across diverse cultural and economic contexts.⁴⁸ McKay began systematic correlation efforts to standardize teachings globally, creating pressure for approaches that could translate beyond traditional Mormon communities.

Simultaneously, urbanization created new institutional challenges. Members moved from tight-knit rural communities with easy compliance monitoring to anonymous urban environments where traditional community-based enforcement proved inadequate.⁵⁰ By the 1950s, American religious culture was shifting toward individual choice, personal fulfillment, and therapeutic spirituality, patterns differing significantly from earlier institutional authority models.⁵¹ Younger Mormons increasingly questioned traditional authority while maintaining religious commitment, requiring new institutional approaches acknowledging changing cultural expectations.

Era Three: Global Adaptation and Systematic Transformation

The third era witnessed dramatic institutional changes as the Mormon church became a truly global organization. This period began with "Correlation", a comprehensive institutional reorganization under Harold B. Lee's direction that transformed church operations worldwide.⁵³ Church membership expanded from 1.6 million in 1960 to over 16 million by 2020, with dramatic growth occurring outside traditional western United States Mormon regions.⁵⁴ This expansion created unprecedented administrative challenges. Local leaders worldwide had

developed varying approaches, creating inconsistencies that threatened institutional coherence across diverse cultural, economic, and linguistic contexts.

Correlation centralized authority and standardized teachings globally through unified manuals, coordinated training, and consistent communication across multiple continents.⁵⁵ For tithing policy, this meant developing frameworks applicable to members in vastly different economic circumstances rather than approaches designed for American communities familiar with local church projects and regional prosperity. Spencer W. Kimball's presidency proved particularly significant for institutional adaptation.⁵⁷ Kimball's background with Native American communities sensitized him to limitations of culturally homogeneous approaches, preparing him for global leadership during the most rapid international expansion period in church history,⁵⁶ and his presidency coincided with significant cultural changes.

Critiques from within Mormon studies highlight that the correlation program's standardization created a "gospel culture" rooted in U.S. middle-class norms. Anthropologists Walter van Beek and Henri Gooren observed that local congregations in Africa and Oceania were discouraged from incorporating indigenous music, dance, or dress into worship services despite no doctrinal prohibition⁹⁹. Such restrictions, while intended to protect doctrinal purity, can appear as cultural imperialism and hinder localization of tithing instruction. These critiques show the tension between centralized uniformity and cultural accommodation in a global church and illustrate the challenges of translating tithing narratives across diverse economic and cultural settings⁹⁹.

The period also witnessed massive temple expansion beginning in the 1970s. Kimball increased operating temples from 15 to 37, while Gordon B. Hinckley added 85 temples, bringing totals from 47 to 124 by 2008.⁵⁸ This expansion brought temple worship within global reach while creating new institutional frameworks transcending cultural and economic boundaries. Temple expansion proved particularly significant because temple worship requires members to affirm full tithe-paying status during worthiness interviews, linking financial contributions directly to meaningful religious experience.⁵⁹

The modern era required addressing practical realities of serving developing nation members where traditional approaches proved problematic. The church needed frameworks that could apply universally regardless of economic circumstances while maintaining ten percent expectations from all members. This required theological development preserving institutional requirements while acknowledging global economic realities. N. Eldon Tanner's influence as First Presidency counselor proved crucial. His business background and experience managing financial growth informed institutional approaches presenting tithing as universal spiritual discipline rather than culturally specific practice.⁶⁰ By the 2000s, renewed institutional emphasis on tithing emerged during temple expansion, as leaders needed frameworks connecting financial obligations to global religious experiences transcending cultural boundaries.⁶²

Methodology: Computational Analysis of Rhetorical Transformation

Data Collection

General conference provides optimal data for testing NPF predictions as the church's most controlled communication channel. Systematic preparation, review processes, and consistency

requirements create ideal conditions for observing strategic narrative construction and detecting coordinated institutional adaptation rather than local variation. I extracted every passage containing "tithing" from general conference talks between April 1850 and April 2024 from the LDS General Conference online archive, yielding 4,042 unique paragraphs from 683 speakers.⁵² After removing formatting artifacts and passages shorter than fifty characters, the final corpus contained 4,002 substantial references.

Computational Measurement Approach

Measuring three rhetorical dimensions across this corpus requires systematic scoring that captures semantic relationships despite 175 years of evolving religious language.^{63 64 65 66 67} The challenge is consistently evaluating rhetoric across passages expressing identical concepts through different vocabulary, metaphors, and cultural references.

Fine-tuned BERT models analyzing ideological dimensions in political discourse have become established methodology in political science. These transformer-based models successfully detect political ideology, track rhetorical evolution, and measure communication strategies across contexts. Applications include classifying ideology in parliamentary speeches with performance exceeding traditional dictionary methods, analyzing ideological positioning in social media discourse, and measuring populist rhetoric across multiple European political systems.^{104 105 106} These applications prove particularly valuable for longitudinal analysis. BERT-based models track ideological shifts in U.S. congressional speeches over decades, capturing semantic relationships stable across evolving vocabularies—challenges directly analogous to analyzing 175 years of religious discourse.¹⁰⁷ The approach also measures multidimensional ideological constructs, simultaneously assessing economic and social conservatism in political texts, establishing precedent for this study's three-dimensional framework.¹⁰⁸

I used knowledge distillation techniques using large language models (LLMs) as teacher models to train smaller student models for large-scale analysis.^{70 72 92 93 94} This approach, gaining traction in political science applications analyzing campaign communications, combines LLM interpretive sophistication with computational efficiency for comprehensive corpus analysis.¹⁰⁹

I constructed empirically-derived "anchor texts" as exemplars capturing distinct rhetorical poles. Negative framings (commandment, fear, material) scored negative; positive framings (opportunity, love, spiritual) scored positive. The commandment anchor emphasizes "binding covenant" and "required of the faithful," while the opportunity anchor uses "invitation to spiritual growth" and "generous hearts experience joy."⁶⁹ A large language model (DeepSeek Reasoner) scored paragraphs using fixed prompts presenting dimensions, displaying anchor exemplars at -1, 0, and +1, and requesting JSON output: {"score": number in [-1,1], "rationale": " ≤ 40 words"}. Anchors calibrate the model's judgment. The system stores prompt version, anchor texts, returned score, and rationale, creating paired numeric-and-reason records serving as training targets and audit trails for qualitative inspection.

After validating LLM-generated labels against manual ground truth scores, I trained three regression heads (one per dimension) on DistilBERT, using LLM scores as targets. DistilBERT is a streamlined BERT (Bidirectional Encoder Representations from Transformers) variant designed for text classification.^{71 73 74} These standard pooled-representation regressors, optimized with mean-squared error and early stopping, clip predictions to [-1, +1]. DistilBERT provides

high-N time trends for figures; stored LLM rationales provide audit layers for qualitative inspection and error analysis.

The analysis produces continuous scores from -1 (commandment/fear/material) to +1 (opportunity/love/spiritual), with 0 as neutral.⁷⁵ This continuous scoring detects gradual rhetorical shifts that discrete classification misses, providing sufficient granularity to track decades of institutional adaptation.^{76 77} Additional methodology documentation appears in Appendix A.

Validation and Analysis Approach

Validation proceeded through four layers: human comparison, model-model agreement, trend robustness, and environmental correlation. First, two independent researchers manually coded one hundred passages across three dimensions. Comparing coders' consensus with LLM labels yielded strong convergent validity for fear versus love ($r = 0.768$) and commandment versus opportunity ($r = 0.721$), with moderate agreement for material versus spiritual ($r = 0.543$). Weaker performance on the latter reflects passages interconnecting temporal and spiritual claims, a difficulty evident in both human and machine annotations.

Second, I compared LLM labels to DistilBERT predictions across 2,302 passages. Agreement was strongest for fear versus love ($r = 0.807$) and commandment versus opportunity ($r = 0.757$). Student models exhibited tighter score distributions ($SD \approx 0.23\text{--}0.31$) than LLMs ($SD \approx 0.29\text{--}0.48$), indicating greater stability without signal loss. Where systems diverged, LLM rationales showed disagreements concentrated in mixed-register sermons pairing prosperity language with spiritual formation claims, providing audit trails for interpretation.

Third, I assessed trend robustness comparing annual means and 5-/10-year moving averages from both systems. All procedures recovered identical qualitative historical patterns, validating student-model scores for temporal trend analysis while preserving LLM rationales for qualitative audit.

Fourth, correlation analysis with DW-NOMINATE political ideology measures⁹¹ across three eras assesses environmental alignment. DW-NOMINATE scores measure congressional ideological positions from roll-call voting patterns, providing standardized American political ideology measures from 1789 to present. The first dimension captures economic liberal-conservative spectrum (-1 to +1); the second historically captured cross-cutting issues like civil rights, though its importance has diminished since the 1970s. These measures proxy broader cultural and political changes religious institutions encounter, as congressional voting reflects shifts in American values, authority relationships, and individual versus institutional control expectations.

Results

Descriptive Patterns Across Three Eras

Table 1 reveals substantial differences in rhetorical positioning across three historical periods. Era 1 (1850-1900) exhibits the most negative scores across all dimensions, with mean values of -0.114 (Commandment), 0.054 (Fear), and -0.135 (Material). Era 2 (1900-1960) shows moderate

movement toward positive values: -0.009 (Commandment), 0.123 (Fear), and -0.030 (Material). Era 3 (1960-Present) demonstrates comprehensive transformation with all dimensions reaching positive territory: 0.098 (Commandment), 0.216 (Fear), and 0.060 (Material). The progression from Era 1's authoritative, fear-based, materially-focused approaches to Era 3's opportunity-oriented, love-based, spiritually-focused rhetoric represents a shift of 0.21 to 0.31 standard deviations across dimensions.

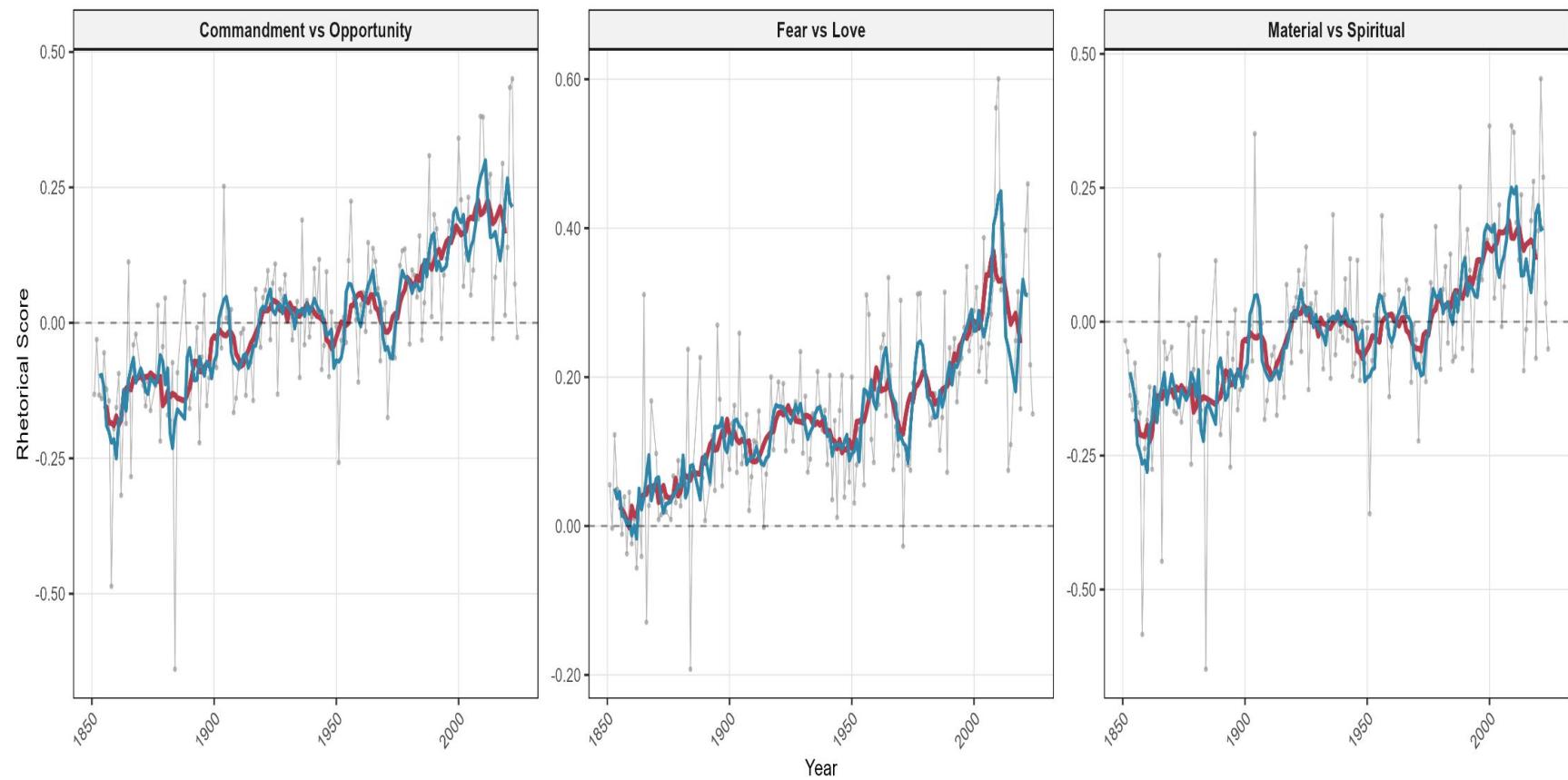
Table 1: Descriptive Statistics by Era and Dimension

Era	Dimension	N	Mean	SD	Min	Max
Era 1: Early Development (1850-1900)						
	Commandment	1,256	-0.114	0.255	-0.807	0.597
	Fear	1,256	0.054	0.171	-0.334	0.764
	Material	1,256	-0.135	0.263	-0.822	0.658
Era 2: Growth & Evolution (1900-1960)						
	Commandment	1,630	-0.009	0.263	-0.741	0.772
	Fear	1,630	0.123	0.196	-0.390	0.751
	Material	1,630	-0.030	0.273	-0.794	0.776
Era 3: Modern Adaptation (1960-Present)						
	Commandment	1,030	0.098	0.278	-0.726	0.736
	Fear	1,030	0.216	0.221	-0.355	0.846
	Material	1,030	0.060	0.295	-0.757	0.804
Note: N = number of observations; SD = standard deviation. All statistics rounded to three decimal places.						

Figure 1 displays temporal progression across all three dimensions from 1850 through 2024, showing annual means alongside 5-year and 10-year rolling averages. The smoothed averages reveal sustained directional trends obscured by annual volatility, particularly during transition periods between eras. The 10-year moving averages eliminate noise from single-year fluctuations

while preserving medium-term cyclical patterns, making visible the oscillations predicted by optimum tension theory.

Figure 1. Rhetorical Transformation across Tithing Rhetoric



Gray: annual means | Blue: 5-year moving average | Red: 10-year moving average

Positive scores indicate movement toward opportunity/love/spiritual orientation; negative scores indicate commandment/fear/material emphasis

Era 1 (1850-1900): High Volatility Without Sustained Direction

The earliest period exhibits dramatic swings in rhetorical positioning without sustained directional trends. The Commandment dimension ranges from -0.49 (1858) to +0.11 (1865), oscillating repeatedly between negative and positive territory. The Fear dimension shows similar instability, with scores fluctuating between -0.19 (1884) and positive peaks throughout the period. Standard deviations for Era 1 (0.255 for Commandment, 0.171 for Fear, 0.263 for Material) substantially exceed those in later eras, indicating greater rhetorical inconsistency.

Three major inflection points punctuate this period. First, 1858 shows the period's deepest negative positioning (Commandment: -0.49, Material: -0.58). Second, 1884 marks the most extreme negative rhetorical positioning in the entire dataset, with all three dimensions reaching historic lows: Commandment plummets to -0.64, Fear drops to -0.19, and Material reaches -0.65. Third, scores rebound sharply after 1884 but continue fluctuating dramatically through the decade's remainder, distinguishing Era 1 from the more sustained directional movements observed in later periods.

By era's end, 10-year moving averages show all dimensions approaching neutral or slightly positive territory (1899: Commandment -0.10, Fear 0.10, Material -0.11), suggesting transition toward the more stable patterns characterizing Era 2.

Era 2 (1900-1960): Stabilization with Crisis-Driven Surges

The second era demonstrates substantially reduced volatility and more sustained positive trends, particularly during economic crises. The period opens with a dramatic positive spike around 1904-1907, with all three dimensions reaching their highest values to that point: Commandment peaks at 0.25 (1904), Fear at 0.26 (1904), and Material at 0.35 (1904).

Following this opening surge and subsequent decline, the 1920s sustain elevated positive rhetoric. The Fear dimension reaches 0.23 (1929), levels not matched again until the 1960s. The 1930s-1940s show further elevation across all dimensions, with the Material dimension crossing into sustained positive territory for the first time in the dataset. The Fear dimension maintains scores above 0.15 throughout most of the Depression years (1929-1939).

The era concludes with post-war corrections and stabilization through the late 1950s. However, a notable negative excursion occurs in 1951 (Commandment: -0.26, Material: -0.36), representing the most significant negative deviation in Era 2. By 1960, all dimensions have returned to positive territory (Commandment: 0.03, Fear: 0.18, Material: -0.05), setting the stage for Era 3's sustained upward trends.

Era 3 (1960-Present): Sustained Positive Trends with Crisis Intensification

The modern era exhibits consistently positive upward trajectories across all three dimensions, with 10-year moving averages showing remarkably stable increases even when annual data displays significant variation. Standard deviations remain elevated (Commandment: 0.278, Fear: 0.221, Material: 0.295) but occur around higher mean values, indicating volatility around positive rather than neutral or negative baselines.

The era opens with sharp volatility during 1962-1963, showing dramatic fluctuation followed by sustained upward movement through the remainder of the 1960s. The Fear dimension reaches

0.33 by 1965, while Commandment climbs to 0.14. A temporary negative excursion in 1971 (Commandment: -0.17, Material: -0.22) represents the deepest negative swing in Era 3 but proves short-lived, with all dimensions returning to positive territory by mid-decade.

The strongest positive surge in the entire dataset occurs during 2008-2012. All three dimensions reach their highest sustained levels: Fear rises from 0.28 (2007) to 0.33 (2008), then 0.56 (2009), peaking at 0.60 (2010). Commandment similarly surges from 0.19 (2008) to 0.38 (2009 and 2010). Material follows comparable patterns, reaching 0.37 (2009) and 0.35 (2010). This represents increases of +0.32 (Fear), +0.19 (Commandment), and +0.19 (Material) from pre-crisis baselines—the largest coordinated increases in the dataset.

A similar but briefer pattern appears during 2020-2022. The Commandment dimension spikes to 0.43 (2021) and 0.45 (2022), representing the highest single-year and second-highest scores in the dataset. Fear reaches 0.40 (2021) and 0.46 (2022). These scores exceed even the 2008-2012 peak for Commandment, though the pattern proves less sustained.

Coordination Across Rhetorical Dimensions

Beyond era-specific patterns, the data reveal systematic coordination across the three rhetorical dimensions. Table 2 presents within-era correlations between dimension pairs, demonstrating that shifts occur in tandem rather than independently.

Table 2: Within-Era Correlations Between Rhetorical Dimensions

Era	Commandment-Fear	Commandment-Material	Fear-Material
Era 1 (1850-1900)	0.72	0.96	0.75
Era 2 (1900-1960)	0.68	0.96	0.71
Era 3 (1960-Present)	0.85	0.95	0.81

Note: All correlations significant at $p < 0.001$

Correlations between dimensions remain consistently high across all eras, with Era 3 exhibiting the most coordinated rhetorical shifts. The Commandment-Material correlation remains extremely high throughout (0.96, 0.96, 0.95), indicating these dimensions move nearly in lockstep across the entire 175-year period. Fear-based appeals show strengthening coordination over time, rising from moderate-to-strong correlation in Era 1 (0.72 with Commandment, 0.75 with Material) to very strong correlation in Era 3 (0.85 with Commandment, 0.81 with Material).

Visual inspection of Figure 1 confirms this quantitative pattern. The three lines tracking different dimensions exhibit synchronized peaks and valleys, particularly during crisis periods. The 1884 trough shows all three dimensions reaching their lowest values simultaneously. The 1904-1907 surge affects all dimensions concurrently. The 2008-2012 spike demonstrates near-perfect synchronization, with all three dimensions rising, peaking, and declining in tandem.

Environmental Correspondence Patterns

Figure 2 presents correlations between rhetorical dimensions and DW-NOMINATE political ideology scores, which proxy broader American cultural and political trends. The heatmap shows different correlation patterns across the three eras.

Figure 2: Institutional-Political Correlations Across Historical Eras

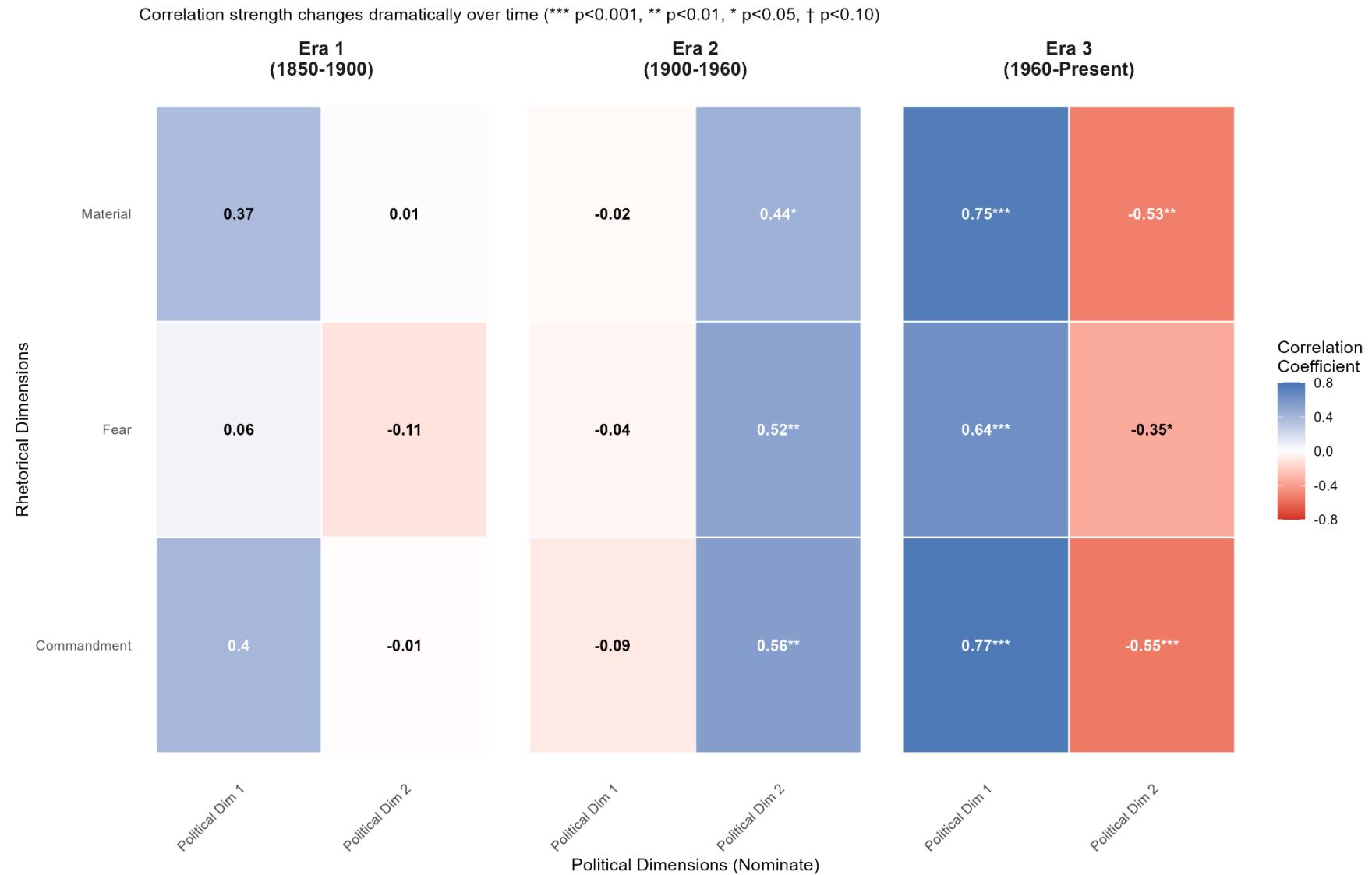


Figure 3. Tithing Rhetoric and Political Ideology Over Time: Economic Dimension

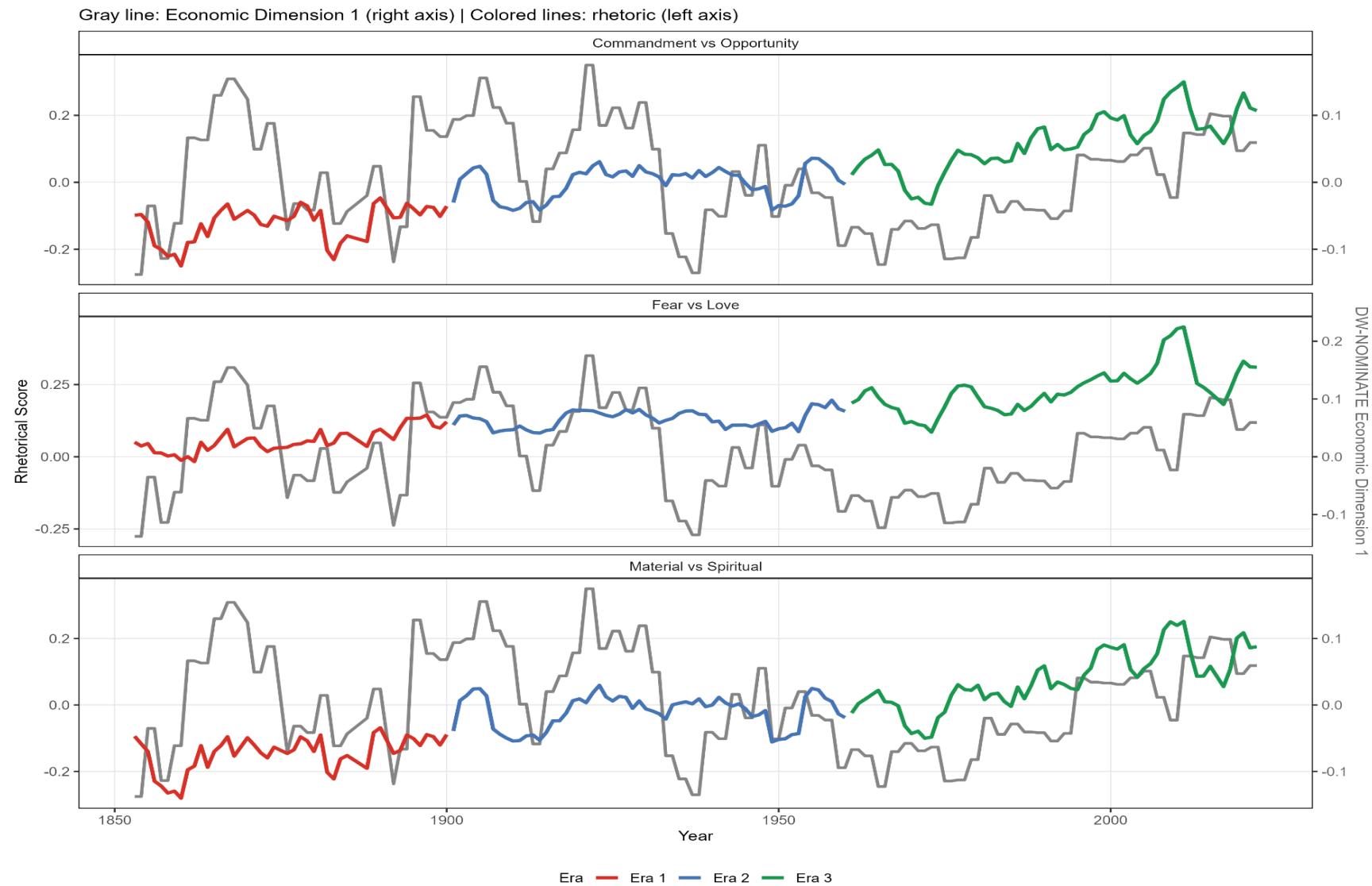
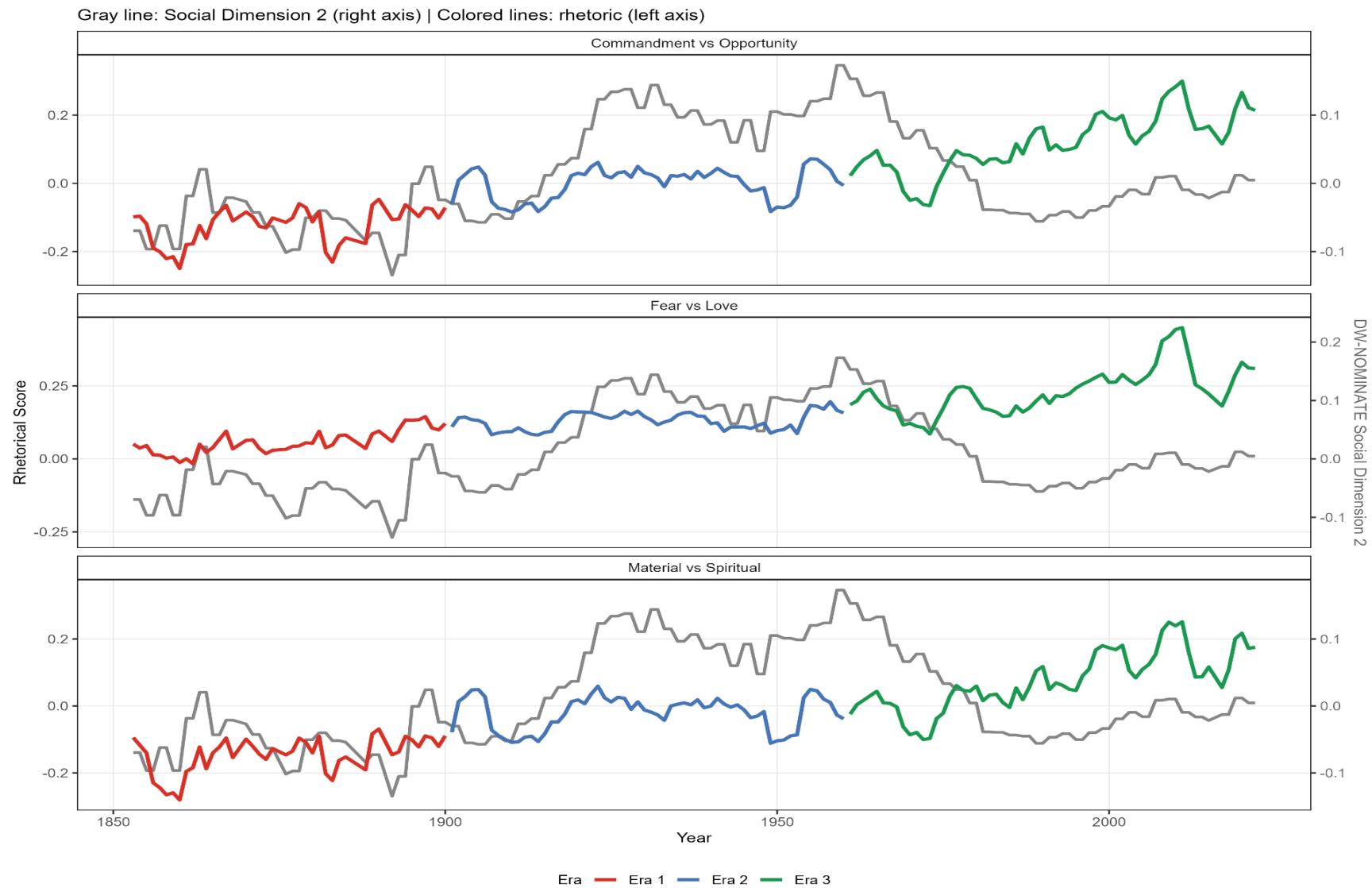


Figure 4. Tithing Rhetoric and Political Ideology Over Time: Social Dimension



Era 1 shows moderate positive correlations between political conservatism (Political Dimension 1) and Commandment/Material rhetoric (0.40 and 0.37 respectively), while Fear shows minimal correlation (0.06). Political Dimension 2 exhibits essentially no relationship with any rhetorical dimension in Era 1. Era 2 demonstrates a striking shift: essentially no correlation with Political Dimension 1 (ranging from -0.02 to -0.09 across all three rhetorical dimensions), but moderate to strong positive correlations with Political Dimension 2 (0.44* to 0.56** across Material, Fear, and Commandment). This represents a complete reversal from Era 1's pattern, where Political Dimension 1 showed the stronger relationships. Era 3 exhibits the most dramatic pattern change. All three rhetorical dimensions show strong positive correlations with Political Dimension 1 (0.64*** to 0.77***), indicating tight coupling between Mormon rhetoric and economic-ideological conservatism. Simultaneously, all three dimensions show negative correlations with Political Dimension 2 (-0.35* to -0.55***), representing another complete reversal from Era 2's pattern.

Figures 3 and 4 display these relationships visually over time, revealing temporal correspondence patterns beyond simple correlation coefficients. In Era 3 particularly, rhetorical changes occur in proximity to sharp changes in political ideology, regardless of baseline correlation direction. When Political Dimension 1 experiences sharp negative swings, rhetorical measures show sharp positive movements during similar time periods, and vice versa, even though the overall correlation is positive. Similarly, when Political Dimension 2 shows sharp positive swings, rhetoric exhibits positive movements during overlapping periods, despite the overall negative correlation.

This suggests that Era 3 Mormon rhetoric may respond to the *magnitude* of political-cultural change rather than simply tracking ideological direction. The systematic nature of these evolving correlation patterns across 175 years—from Era 1's moderate relationship with Political Dimension 1, to Era 2's strong relationship with Political Dimension 2, to Era 3's strong relationships with both dimensions but in opposite directions—provides empirical evidence of how Mormon tithe rhetoric's relationship to broader political and cultural measures has transformed over time.

Assessment Against Hypotheses

The temporal patterns provide evidence addressing all three hypotheses derived from NPF-operationalized optimum tension theory, though with varying degrees of support and some notable complexities.

H1 (Assimilation-Retrenchment Cycles) receives strong support from the oscillation patterns observed across eras. Rather than linear progression toward either pole, the data reveal cyclical movement: retrenchment in Era 1 (negative scores, high volatility), partial assimilation in early Era 2 (positive movement, stabilization), mid-century volatility including a 1951 negative excursion, renewed assimilation in Era 3 (sustained positive trends), and crisis-driven spikes (2008-2012, 2020-2022) within the broader assimilationist trajectory. The 10-year moving averages particularly illuminate these cycles, showing waves of intensification and relaxation rather than monotonic change. However, the overall trend across the 175-year period is toward more positive scores, suggesting cycles occur within a broader assimilationist trajectory rather than returning to Era 1 baselines.

H2 (Narrative Coordination) receives robust support. The consistently high within-era correlations (Table 2), strengthening coordination over time (Era 1: 0.68-0.96; Era 3: 0.81-0.95), synchronized peaks and valleys in Figure 1, and the near-perfect correlation between Commandment and Material dimensions (0.96 in both Era 1 and Era 2, 0.95 in Era 3) all demonstrate that multiple rhetorical elements shift together rather than independently. The coordination proves consistently strong rather than increasing dramatically, though Fear shows somewhat stronger integration with the other dimensions in Era 3 compared to earlier eras. The near-perfect synchronization during the 2008-2012 period—with all three dimensions rising, peaking, and declining in tandem—exemplifies coordinated narrative construction rather than fragmented messaging.

H3 (Environmental Triggers) receives qualified support. The dramatically shifting correlation patterns with internal events and political ideology measures across eras (Figure 2) demonstrate that rhetorical positioning relates systematically to internal and broader political-cultural trends, though the nature of that relationship changes substantially over time. Era 1's moderate correlation with economic conservatism, Era 2's strong correlation with cross-cutting political issues, and Era 3's strong but opposite-signed correlations with both political dimensions all suggest environmental responsiveness, but through different mechanisms in different periods. The temporal correspondence patterns visible in Figures 2 and 3—particularly Era 3's tendency to show rhetorical shifts proximate to sharp political changes regardless of baseline correlation direction—further support environmental responsiveness while complicating simple causal models. However, not all major internal and external events produce rhetorical shifts of equal magnitude, and correlation patterns alone cannot establish causal mechanisms.

Discussion and Conclusion

How do religious institutions preserve demanding practices across dramatic cultural transformation? The Mormon tithing case reveals a distinctive mechanism: rhetorical evolution compensates for environmental change while core requirements remain fixed. Between Joseph Fielding Smith's 1926 threats of divine condemnation and Yoshihiko Kikuchi's 2007 invitations to spiritual growth lies not policy modification but narrative transformation—systematic shifts from commandment to opportunity framing, fear to love appeals, and material to spiritual emphasis. Yet the underlying requirement—ten percent of income—persisted unchanged. This computational analysis of 175 years of general conference discourse demonstrates that Mormon leaders navigated environmental pressures through coordinated narrative adaptation rather than doctrinal relaxation.

Three interconnected mechanisms enabled this adaptation: an asymmetric ratchet pattern where assimilationist advances prove largely irreversible despite periodic retrenchments, coordinated shifts across narrative dimensions reflecting sophisticated institutional communication, and systematic responsiveness to environmental pressures. Successful high-demand movements may preserve distinctiveness not through policy rigidity but through narrative flexibility—maintaining substantive requirements while adapting motivational frameworks.

Why Rhetorical Change Doesn't Reverse: The Ratchet Mechanism

The data reveal cyclical oscillations—1880s retrenchment, early twentieth-century assimilation, mid-century volatility, sustained modern assimilation, and crisis-driven intensifications—confirming Mauss's insight that movements must recalibrate between assimilation and distinctiveness.⁹⁷ However, the pattern requires modification of his pendulum metaphor. The 10-year moving averages show sustained upward movement from 1850 through 2024, with each retrenchment failing to return rhetoric to prior baselines. Even the highest recent authoritarian scores remained substantially more positive than Era 1 averages. This ratchet pattern suggests the church navigated optimum tension not through symmetric oscillation but through managed directional change punctuated by strategic slowdowns.

Understanding why this ratchet happens requires examining transformations in American religious culture. Modern culture shifted from "religious man" to "psychological man," privileging individual well-being over communal moral codes.⁹⁸ Americans reframed their religious participation through personal choice, therapeutic spirituality, and individual fulfillment rather than institutional obligation.^{50 51} These shifts created irreversible expectations about religious authority. Once Mormon leaders adopted therapeutic language, returning to pure commandment rhetoric would violate cultural norms members had internalized. The movement from fear-based warnings to love-based invitations mirrors this therapeutic turn, demonstrating how institutions reframe demanding practices to resonate with contemporary values without altering the practices themselves.

This challenges theories predicting doctrinal relaxation following cultural liberalization. Research documents how many American congregations reduced behavioral demands, adopted contemporary styles, and emphasized inclusive approaches during late twentieth century shifts.^{8 15 86 88} The Mormon case demonstrates an alternative: preserving high-cost requirements through narrative evolution that maintains distinctiveness while adapting motivational frameworks. Therapeutic rhetoric substitutes for doctrinal modification, achieving cultural resonance without sacrificing distinctiveness.

The ratchet mechanism reveals why Mauss's optimum tension operates asymmetrically. Movements facing assimilation pressures can respond through doctrinal relaxation or rhetorical adaptation. Once cultural expectations shift toward therapeutic individualism, symmetric pendulum swings become impossible—returning to authoritarian rhetoric would alienate members who have internalized contemporary values.

Coordination as Institutional Capability

The synchronized movement across commandment-opportunity, fear-love, and material-spiritual dimensions raises a question: why did multiple elements shift together rather than independently? The consistently high within-era correlations—ranging from 0.68 to 0.96—indicate coordination rather than fragmented adaptation. This pattern proves striking during crisis periods, when rhetoric shifted simultaneously across all three dimensions rather than leaders adjusting isolated elements.

Archival research drawing from hundreds of diaries, interviews with church aides, and insider access to historical records reveals systematic coordination mechanisms, strategic use of institutional precedent, and learning processes that accumulated organizational memory despite external persecution.⁹ Documentation demonstrates that nineteenth-century leaders maintained deliberate coordination across multiple channels through formal structures and informal

consultation.²⁵ The coordinated shifts documented here extend this understanding by showing that coordination operated in the specific content and framing of institutional discourse. This suggests coherent narrative frameworks rather than ad hoc adjustment of isolated elements. The ability to construct narratives where setting, characters, plot, and moral all aligned—commandment framing with fear appeals and material emphasis, or opportunity framing with love appeals and spiritual emphasis—created internally consistent messages that maintained institutional credibility.

This coordination proved crucial for maintaining demanding practices during the transition from sectarian isolation to mainstream respectability.³⁵ Successfully navigating this shift required simultaneous adaptation across multiple dimensions while preserving core requirements. Leaders could not simply soften commandment language while maintaining fear appeals—mismatched messaging would create dissonance and undermine credibility. The ability to move commandment, emotional appeal, and benefit framing together created coherent narratives that could resonate with changing expectations while maintaining distinctiveness.⁹⁷

The extremely high Commandment-Material correlations (0.96 in Era 1 and 2, 0.95 in Era 3) warrant acknowledgment of potential measurement concerns. Such consistency might reflect semantic overlap—passages emphasizing divine commandment may naturally employ material consequence language, making dimensions difficult to distinguish empirically. However, synchronized repositioning during crisis periods and strengthening coordination of Fear appeals over time (rising from 0.68-0.75 in Era 1 to 0.81-0.85 in Era 3) suggest genuine coordination rather than pure artifact. Whether this reflects conscious planning or emergent patterns from shared theological frameworks remains an open question, but the synchronized nature of change indicates systematic rather than fragmented processes.

The theoretical implication extends beyond the Mormon case: coordination capacity itself may distinguish successful high-demand movements from those that fail to maintain distinctive practices. Organizations that coordinate narrative adaptation across dimensions can preserve demanding requirements while adapting to pressures. Organizations that modify elements independently risk incoherent narratives that undermine credibility and commitment.

Internal and External Event Triggers

Rhetorical shifts correspond to multiple internal and external crises. The 1880s retrenchment coincided with federal persecution through the Edmunds-Tucker Act, which confiscated over \$1 million in assets.^{36 79 80} The early twentieth-century shift aligned with financial recovery (debt elimination by 1907⁸¹) and the transition toward mainstream respectability.³⁵ The 1930s-1940s elevation occurred during the Great Depression and World War II.⁴⁷ The 1960s volatility corresponded with internal budget crises⁸² and David O. McKay's correlation reforms.^{48 49 53 55} Era 3's sustained trajectory coincided with massive international expansion,^{56 57 58} while the 2008-2012 surge aligned with the Great Recession⁸³ and the 2020-2022 spike with COVID-19 disruptions.

The correlation patterns with DW-NOMINATE political ideology measures demonstrate environmental responsiveness to broader cultural trends. The shifting relationships across eras—Era 1's moderate correlations with economic conservatism, Era 2's strong correlations with cross-cutting political issues, Era 3's strong correlations with economic conservatism but negative correlations with cross-cutting dimensions—indicate that Mormon rhetoric tracked changing

political-cultural configurations. Political Dimension 2 captured slavery and civil rights in the nineteenth century, shifted toward New Deal coalitions mid-century, and declined after the 1970s as American politics aligned along a single liberal-conservative dimension.⁹¹ Mormon rhetoric appears to have responded to whatever dimension proved most salient in each era.

However, among these diverse pressures, financial crises—both church-internal (1899 debt, 1960s deficit) and external economic downturns (Great Depression, 2008 recession, 2020 pandemic)—show particularly strong and consistent correspondence with repositioning. Several major financial crisis aligns temporally with dramatic shifts. The 1899 debt crisis prompted Lorenzo Snow's revelation establishing mandatory tithing, yielding immediate compliance increases from 18.4 to 25.6 percent.^{37 38 39 40 95 96} The 2008-2012 Great Recession produced the largest coordinated rhetorical increases in the dataset. The 2020-2022 COVID-19 spike produced dramatic intensification, with Commandment scores reaching the highest single-year values recorded.

Why would financial crises produce consistent responses than other pressures? Tithing represents the church's primary fiscal policy. When the institution faces financial threats, discourse about tithing becomes discourse about institutional survival. Abstract cultural assimilation pressures—shifts in gender roles, changing attitudes toward authority, therapeutic individualism—influenced rhetoric over the long term, creating the assimilationist trajectory documented. However, these cultural pressures operated gradually across decades, allowing incremental adaptation through natural leadership turnover. Financial crises created immediate resource threats requiring rapid mobilization of member contributions, making tithing discourse the primary mechanism for institutional response.

The evolution from authoritarian demands during early crises (1880s, 1899) to therapeutic intensification during modern crises (2008, 2020) demonstrates institutional learning about effective strategies under different cultural conditions. When Lorenzo Snow faced the 1899 debt crisis, he employed pure commandment rhetoric—"the time has now come for every latter-day saint...to do the will of the Lord and to pay his tithing in full"—combined with comprehensive enforcement mechanisms linking temple access to compliance.^{38 39} This proved effective in turn-of-the-century Utah, where members expected authoritarian religious leadership. Heber J. Grant's business background introduced professional management approaches during the Depression, connecting tithing to contemporary values of personal prosperity.^{45 46 96} N. Eldon Tanner's influence during the 1960s crisis informed approaches presenting tithing as universal spiritual discipline supporting global expansion.⁶⁰

By 2008-2012, leaders intensified rhetoric through therapeutic frameworks emphasizing opportunity, love, and spiritual growth rather than commandment, fear, and material consequences. The surge in positive scores demonstrates that intensification need not mean returning to authoritarian baselines—leaders increased emphasis while maintaining contemporary therapeutic framing. This evolution suggests Mormon leadership may have learned to respond to financial pressures through culturally-appropriate frameworks rather than fixed authoritarian demands. Institutional outcomes—compliance rates, revenue generation, member retention—provided feedback mechanisms that rewarded effective strategies, enabling accumulated organizational learning across multiple crisis cycles.

This refines Mauss's optimum tension theory by specifying how different pressures operate. Multiple pressures—persecution, cultural transformation, global expansion, political realignment—create conditions requiring adaptation, consistent with Mauss's emphasis on maintaining tension with host society.⁹⁷ However, pressures directly threatening institutional resources elicit more immediate and consistent responses than abstract cultural assimilation dynamics. The church navigated optimum tension not simply by monitoring cultural distance from mainstream society, but by responding strategically to concrete challenges—financial, organizational, political—while adapting motivational frameworks to maintain member commitment and resource flows across changing contexts. Financial imperatives function as institutional grammar, structuring the timing and intensity of rhetorical adaptation while broader cultural shifts determine the available vocabulary for such adaptation.

Limitations and Future Directions

Several limitations require acknowledgment. The extremely high Commandment-Material correlations (0.96 across Era 1 and 2, 0.95 in Era 3) raise construct validity concerns requiring investigation through factor analysis and qualitative assessment of whether these represent distinct dimensions or measurement artifacts from semantic overlap. The temporal correspondences between rhetorical shifts and financial crises cannot establish causal mechanisms; event-study analyses testing whether rhetorical changes predict measurable outcomes—tithing revenue, membership retention, missionary success—while controlling for confounding factors would strengthen causal claims. Applying these computational methods to other demanding Mormon practices—polygamy abandonment, Word of Wisdom enforcement, priesthood policy evolution—would test whether the church employs consistent crisis-response strategies across domains or tailors approaches to specific practices.

This study analyzed rhetorical change while holding the underlying requirement constant, but future research should examine the relationship between evolving rhetoric and persistent enforcement mechanisms. Modern leaders present tithing through voluntary covenant language² while temple recommend interviews link financial contributions to access to sacred ordinances,⁵⁹ and historical practices monitored employee tithing compliance at church institutions.¹⁰⁰ How does this potential tension between therapeutic rhetoric and bureaucratic enforcement affect member experience during financial crises? Do members perceive contradictions between invitation-based messaging and compliance requirements? This gap between rhetoric and enforcement addresses a fundamental dilemma for religious institutions in pluralistic societies—maintaining distinctive practices while avoiding illegitimate exercises of coercive authority.¹⁷ Understanding whether this dual system sustains expansion across contexts where ten percent represents genuine material hardship rather than symbolic sacrifice⁹⁹ requires investigation beyond rhetorical analysis alone.

Comparative analysis of other high-demand movements—Jehovah's Witnesses' contribution expectations, Seventh-day Adventist tithing systems, Orthodox Jewish financial obligations, evangelical megachurch giving campaigns—would test whether crisis-driven rhetorical intensification within assimilationist trajectories represents a general feature of successful high-cost religions or a Mormon-specific pattern. Such comparison could identify boundary conditions for optimum tension theory and specify which organizational features enable successful narrative adaptation while maintaining demanding practices.

Conclusion

This study demonstrates that rhetorical adaptation—not doctrinal modification—enabled the Latter-day Saints to preserve their demanding ten percent tithing requirement across 175 years of environmental transformation. Computational analysis of over 4,000 passages from general conference discourse reveals systematic patterns in how Mormon leaders navigated the competing pressures of cultural assimilation and institutional distinctiveness. The movement from Joseph Fielding Smith's 1926 threats of condemnation to Yoshihiko Kikuchi's 2007 invitations to spiritual growth represents coordinated transformation across three narrative dimensions—commandment to opportunity, fear to love, material to spiritual—while the underlying behavioral requirement remained unchanged.

The study advances theoretical understanding in three key areas. First, the ratchet mechanism refines Mauss's optimum tension theory by demonstrating that successful movements may navigate competing pressures through asymmetric adaptation—managed directional change punctuated by strategic retrenchments rather than reversible pendulum swings. Cultural shifts toward therapeutic individualism create irreversible expectations about religious authority, making symmetric oscillation impossible while enabling high demands to persist through alternative motivational frameworks. Second, the coordination patterns reveal that institutional communication capability—the capacity to shift multiple narrative dimensions simultaneously—is an important feature of institutional communication. Mormon leaders' ability to construct coherent narratives where setting, characters, plot, and moral all aligned enabled cultural resonance while maintaining institutional credibility. Third, the environmental analysis finds that both internal and external events, and in particular pressures directly threatening institutional resources and revenue generation, drive rhetorical change. These rhetorical punctuations appear to operate within a more general assimilationist trend.

However, important questions remain for future investigation. Do the extremely high dimensional correlations reflect genuine coordination or measurement overlap requiring methodological refinement? Can the dual strategy of therapeutic rhetoric and bureaucratic enforcement sustain global expansion across diverse economic contexts where ten percent represents material hardship rather than symbolic sacrifice? Does institutional learning about crisis response generalize to other high-demand movements, or do Mormon-specific features—hierarchical authority structures, prophetic revelation claims, temple theology—enable adaptation strategies unavailable to other religious traditions? What mechanisms explain why financial imperatives provide more consistent environmental triggers than cultural dynamics, and do these mechanisms operate similarly in other resource-dependent institutions? By combining computational methods with historical theory and explicit hypothesis testing, this study provides a template for investigating how religious institutions adapt to survive and thrive across changing worlds while raising new questions about the limits and transferability of these adaptation mechanisms.

References

¹ Joseph Fielding Smith, in Conference Report, October 1926 (Salt Lake City: The Church of Jesus Christ of Latter-day Saints, 1926), 70.

² Yoshihiko Kikuchi, "Will a Man Rob God?" *Ensign*, May 2007, 97-98.

³ Michael D. Jones and Mark K. McBeth, "A Narrative Policy Framework: Clear Enough to Be Wrong?" *Policy Studies Journal* 38, no. 2 : 329-353; Elizabeth A. Shanahan, Michael D. Jones, Mark K. McBeth, and Claudio M. Radaelli, "The Narrative Policy Framework," in *Theories of the Policy Process*, ed. Christopher M. Weible and Paul A. Sabatier, 4th ed. (Boulder, CO: Westview Press, 2017), 173-213.

⁴ Jones and McBeth, "A Narrative Policy Framework," 331-333.

⁵ Shanahan et al., "The Narrative Policy Framework," 177-178.

⁶ Ibid., 179-180.

⁷ Michael D. Jones, Elizabeth A. Shanahan, and Mark K. McBeth, eds., *The Science of Stories: Applications of the Narrative Policy Framework* (New York: Palgrave Macmillan, 2014).

⁸ Mark Chaves, *Congregations in America* (Cambridge, MA: Harvard University Press, 2004).

⁹ D. Michael Quinn, *The Mormon Hierarchy: Extensions of Power* (Salt Lake City: Signature Books, 1997); Quinn, *The Mormon Hierarchy: Origins of Power* (Salt Lake City: Signature Books, 1994). Quinn's documentation of internal church governance draws from hundreds of diaries, interviews with former church aides, and his experience as an insider within the LDS historical department to reveal systematic patterns of strategic decision-making, environmental responsiveness, and coordinated institutional adaptation among Mormon leadership.

¹⁰ Paul J. DiMaggio and Walter W. Powell, "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields," *American Sociological Review* 48, no. 2 : 147-160. ; Mark S. Mizruchi and Lisa C. Fein, "The Social Construction of Organizational Knowledge: A Study of the Uses of Coercive, Mimetic, and Normative Isomorphism," *Administrative Science Quarterly* 44, no. 4 : 653-683.

¹¹ Christopher P. Scheitle, "The Sociology of Religious Organizations," *Sociology Compass* 2, no. 3 : 981-999.

¹² Jeffrey Pfeffer and Gerald R. Salancik, *The External Control of Organizations: A Resource Dependence Perspective* (New York: Harper & Row, 1978).

¹³ Ben K. Agyei-Mensah, "Accountability and Internal Control in Religious Organisations: A Study of Methodist Church Ghana," *African Journal of Accounting, Auditing and Finance* 5, no. 2 : 95-112.

¹⁴ Reed E. Nelson, "Organization-Environment Isomorphism, Rejection, and Substitution in Brazilian Protestantism," *Organization Studies* 10, no. 2 : 207-224.

¹⁵ Nancy T. Ammerman, *Congregation and Community* (New Brunswick, NJ: Rutgers University Press, 1997).

¹⁶ Mark C. Suchman, "Managing Legitimacy: Strategic and Institutional Approaches," *Academy of Management Review* 20, no. 3 : 571-610.

¹⁷ José Casanova, *Public Religions in the Modern World* (Chicago: University of Chicago Press, 1994).

¹⁸ Noel Hyndman, "A Model of Financial Accountability and the Church of England," *Financial Accountability & Management* 17, no. 3 : 245-264.

¹⁹ Pfeffer and Salancik, *The External Control of Organizations*.

²⁰ Seok-Pyo Jun and G. M. Armstrong, "The Bases of Power in Churches: An Analysis from a Resource Dependence Perspective," *The Social Science Journal* 34, no. 1 : 105-130.

²¹ Paul Tracey, "Religion and Organization: A Critical Review of Current Trends and Future Directions," *Academy of Management Annals* 6, no. 1 : 87-134.

²² Kristjan Ohlsson, "Religious Organisations as Investors: A Christian Perspective on Shareholder Engagement," *Journal of Business Ethics* 123, no. 1 : 179-192.

²³ Cobb, Ryon J., Samuel L. Perry, and Kevin D. Dougherty. "United by faith? Race/ethnicity, congregational diversity, and explanations of racial inequality." *Sociology of Religion* 76, no. 2 : 177-198.

²⁴ Daniel Miller and Ming-Jer Chen, "Sources and Consequences of Competitive Inertia: A Study of the U.S. Airline Industry," *Administrative Science Quarterly* 39, no. 1 : 1-23.

²⁵ Mark E. Mendenhall, Frank C. Butler, and Philip T. Roundy, "The Formation and Preservation of Behavioral Integration in the Top Management Team of The Church of Jesus Christ of Latter-day Saints," *Journal of Management History* 29, no. 3 : 287-312.

²⁶ The Church of Jesus Christ of Latter-day Saints, "Church Finances," *Church History Topics*, accessed August 18, 2025, <https://www.churchofjesuschrist.org/study/history/topics/church-finances>.

²⁷ Kevin D. Dougherty and Michael O. Emerson, "The Changing Complexion of American Congregations," *Journal for the Scientific Study of Religion* 57, no. 1 : 24–38, <https://doi.org/10.1111/jssr.12495>. See also Mark Chaves, Joseph Roso, Anna Holleman, and Mary Hawkins, *Congregations in 21st Century America* (Durham, NC: Duke University, Department of Sociology, 2021), https://sites.duke.edu/ncsweb/files/2022/02/NCSIV_Report_Web_FINAL2.pdf.

²⁸ William G. Hartley, "Mormon Administrative and Organizational History: A Source Essay," Religious Studies Center, Brigham Young University.

²⁹ Gordon Shepherd and Gary Shepherd, "Mormonism in Secular Society: Changing Patterns in Official Ecclesiastical Rhetoric," *Review of Religious Research* 26, no. 1 : 28-42.

³⁰ James G. March, "Exploration and Exploitation in Organizational Learning," *Organization Science* 2, no. 1 : 71-87.

³¹ Paul Tracey, "Religion and Organization," 102-108.

³² Doctrine and Covenants 119:3-4; 120:1.

³³ Leonard J. Arrington, *Great Basin Kingdom: An Economic History of the Latter-day Saints, 1830-1900* (Cambridge: Harvard University Press, 1958), 132-156.

³⁴ E. Jay Bell, "The Windows of Heaven Revisited: The 1899 Tithing Reformation," *Journal of Mormon History* 20, no. 1 : 47-52.

³⁵ Thomas G. Alexander, *Mormonism in Transition: A History of the Latter-day Saints, 1890-1930* (Urbana: University of Illinois Press, 1986), 58-60.

³⁶ Sarah Barringer Gordon, *The Mormon Question: Polygamy and Constitutional Conflict in Nineteenth Century America* (Chapel Hill: University of North Carolina Press, 2002), 175-180.

³⁷ Bell, "Windows of Heaven Revisited," 47-48.

³⁸ Lorenzo Snow, quoted in LeRoi C. Snow, "The Lord's Way out of Bondage," *Improvement Era*, July 1938, 439.

³⁹ Alexander, *Mormonism in Transition*, 63-65.

⁴⁰ Bell, "Windows of Heaven Revisited," 55-58.

⁴¹ Joseph F. Smith, Conference Report, April 1907, 7.

⁴² Data compiled from LDS General Conference Corpus (<https://www.lds-general-conference.org/>), 1850-2024.

⁴³ Deseret News 2022 Church Almanac (Salt Lake City: Deseret News, 2022), 77-82.

⁴⁴ Joseph Fielding Smith, Conference Report, October 1926, 70.

⁴⁵ Ronald W. Walker, "Grant's Watershed: Succession in the Presidency, 1887-1889," *BYU Studies* 43, no. 2 : 195-229.

⁴⁶ Heber J. Grant, Conference Report, April 1912, 30.

⁴⁷ Glen L. Rudd, *Pure Religion: The Story of Church Welfare Since 1930* (Salt Lake City: The Church of Jesus Christ of Latter-day Saints, 1995), 15-45.

⁴⁸ Gregory A. Prince and William Robert Wright, *David O. McKay and the Rise of Modern Mormonism* (Salt Lake City: University of Utah Press, 2005), 254-280.

⁴⁹ David O. McKay, Conference Report, April 1965, 6.

⁵⁰ Wade Clark Roof, *Spiritual Marketplace: Baby Boomers and the Remaking of American Religion* (Princeton: Princeton University Press, 1999), 45-75.

⁵¹ Ibid., 45-75.

⁵² Data compiled from LDS General Conference Corpus (<https://www.lds-general-conference.org/>), 1850-2024.

⁵³ Prince and Wright, *David O. McKay and the Rise of Modern Mormonism*, 254-280.

⁵⁴ Deseret News 2022 Church Almanac, 77-82.

⁵⁵ Armand L. Mauss, *The Angel and the Beehive: The Mormon Struggle with Assimilation* (Urbana: University of Illinois Press, 1994), 175-205.

⁵⁶ Philip Rieff, *The Triumph of the Therapeutic: Uses of Faith After Freud* (New York: Harper & Row, 1966).

⁵⁷ Spencer W. Kimball, Conference Report, April 1977, 117.

⁵⁸ Deseret News 2010 Church Almanac (Salt Lake City: Deseret News, 2010), 143-168.

⁵⁹ Edward L. Kimball, "Temple Recommend Interviews: Practices and Patterns," *Dialogue: A Journal of Mormon Thought* 35, no. 4 : 127-145.

⁶⁰ G. Homer Durham, N. Eldon Tanner: His Life and Service (Salt Lake City: Deseret Book, 1982), 258-285.

⁶¹ Yoshihiko Kikuchi, "Tithing: An Opportunity to Prove Our Faithfulness," *Ensign*, May 2007, 84.

⁶² Data compiled from LDS General Conference Corpus (<https://www.lds-general-conference.org/>), 1850-2024.

⁶³ Lincoln A. Mullen, *America's Public Bible: A Commentary* (Stanford: Stanford University Press, 2023); see also Jonas Kreiburg and Berenike Herrmann, "Computational text analysis within the Humanities: How to combine working practices from the contributing fields?," *Language Resources and Evaluation* 53, no. 3 : 565-602.

⁶⁴ Scott Deerwester et al., "Indexing by latent semantic analysis," *Journal of the American Society for Information Science* 41, no. 6 : 391-407.

⁶⁵ Islam Inkpen, "Semantic text similarity using corpus-based word similarity and string similarity," *ACM Transactions on Knowledge Discovery from Data* 2, no. 2 : 1-25.

⁶⁶ Jiaqi Yang et al., "Measuring the short text similarity based on semantic and syntactic information," *Future Generation Computer Systems* 114 : 158-180.

⁶⁷ Ankita Sahni et al., "A Novel Approach to Find Semantic Similarity Measure between Words," *2nd International Symposium on Computational and Business Intelligence* : 89-92.

⁶⁸ Yunfeng Lu, "Competition and Isomorphism in Religious Organizations: Chinese Buddhist Organizations under Competitive Pressure," *Comparative Sociology* 24, no. 1 : 101-130.

⁶⁹ The complete text of all anchor paragraphs, along with detailed technical specifications for the computational analysis, appears in Appendix A.

⁷⁰ Biao Zhang et al., "When Scaling Meets LLM Finetuning: The Effect of Data, Model and Finetuning Method," arXiv preprint arXiv:2402.17193 .

⁷¹ Victor Sanh et al., "DistilBERT, a distilled version of BERT: smaller, faster, cheaper and lighter," arXiv preprint arXiv:1910.01108 .

⁷² Zhang et al., "When Scaling Meets LLM Finetuning."

⁷³ Geoffrey Hinton et al., "Distilling the knowledge in a neural network," arXiv preprint arXiv:1503.02531 .

⁷⁴ Ana Fernández Pizarro et al., "Empirical Study of LLM Fine-Tuning for Text Classification in Legal Document Review," EDRM .

⁷⁵ Formally, the scoring algorithm calculates weighted semantic similarity using the formula: $S = [(-1)s_{-1} + s_0 + (+1)s_{+1}] / (s_{-1} + s_0 + s_{+1})$, where s_k represents the semantic similarity between the passage and anchor k. Technical implementation details appear in Appendix A.

⁷⁶ Antonio Moreno and Teófilo Redondo, "Text analytics: the convergence of big data and artificial intelligence," International Journal of Interactive Multimedia and Artificial Intelligence 3, no. 6 : 57-64.

⁷⁷ Wael H. Gomaa and Aly A. Fahmy, "A survey of text similarity approaches," International Journal of Computer Applications 68, no. 13 : 13-18; Ted Underwood, "The Life Cycles of Genres," Journal of Cultural Analytics 2, no. 2 .

⁷⁸ Kreiburg and Herrmann, "Computational text analysis within the Humanities," 590-595.

⁷⁹ "Antipolygamy Legislation," Church History Topics, The Church of Jesus Christ of Latter-day Saints, accessed August 18, 2025, <https://www.churchofjesuschrist.org/study/history/topics/anti-polygamy-legislation>.

⁸⁰ Ibid.

⁸¹ Joseph F. Smith, Conference Report, April 1907 (Salt Lake City: The Church of Jesus Christ of Latter-day Saints, 1907), 7.

⁸² The Church of Jesus Christ of Latter-day Saints, "Church Finances," Church History Topics, accessed August 18, 2025, <https://www.churchofjesuschrist.org/study/history/topics/church-finances>.

⁸³ Robert Rich, "The Great Recession," Federal Reserve History, November 22, 2013, accessed August 18, 2025, <https://www.federalreservehistory.org/essays/great-recession-of-200709>.

⁸⁴ Elizabeth A. Shanahan, Michael D. Jones, Mark K. McBeth, and Claudio M. Radaelli, "The Narrative Policy Framework," in Theories of the Policy Process, ed. Christopher M. Weible and Paul A. Sabatier, 4th ed. (Boulder, CO: Westview Press, 2017), 177-178.

⁸⁵ Paul J. DiMaggio and Walter W. Powell, "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields," American Sociological Review 48, no. 2 : 147-160.

⁸⁶ Mark Chaves, Congregations in America (Cambridge: Harvard University Press, 2004); Nancy T. Ammerman, Congregation and Community (New Brunswick: Rutgers University Press, 1997).

⁸⁷ Chaves, Congregations in America.

⁸⁸ Ammerman, Congregation and Community.

⁸⁹ José Casanova, *Public Religions in the Modern World* (Chicago: University of Chicago Press, 1994).

⁹⁰ Philip Rieff, *The Triumph of the Therapeutic: Uses of Faith After Freud* (New York: Harper & Row, 1966); Wade Clark Roof, *Spiritual Marketplace: Baby Boomers and the Remaking of American Religion* (Princeton: Princeton University Press, 1999).

⁹¹ Lewis, Jeffrey B., Keith Poole, Howard Rosenthal, Adam Boche, Aaron Rudkin, and Luke Sonnet. *Voteview: Congressional Roll-Call Votes Database*. <https://voteview.com/>

⁹² Li, Juanhui, Sreyashi Nag, Hui Liu, Xianfeng Tang, Sheikh Sarwar, Limeng Cui, Hansu Gu, Suhang Wang, Qi He, and Jiliang Tang. “Learning with less: Knowledge distillation from large language models via unlabeled data.” *arXiv preprint arXiv:2411.08028*.

⁹³ Latif, Ehsan, Luyang Fang, Ping Ma, and Xiaoming Zhai. “Knowledge distillation of llm for automatic scoring of science education assessments.” *arXiv preprint arXiv:2312.15842*.

⁹⁴ Zhao, Jiachen. “Student as an Inherent Denoiser of Noisy Teacher.” *arXiv preprint arXiv:2312.10185*.

⁹⁵ Lorie Winder Horne, “Reexamining Lorenzo Snow’s 1899 Tithing Revelation,” *Mormon Historical Studies* 15, no. 1 : 87–120.

⁹⁶ Thomas G. Alexander, “Church Administrative Change in the Progressive Period, 1898–1930,” in *Joseph F. Smith: Reflections on the Man and His Times*, ed. Craig K. Manscill (Provo, UT: Religious Studies Center, Brigham Young University, 2013), 99–128.

⁹⁷ Armand L. Mauss, “Assimilation and Ambivalence: The Mormon Reaction to Americanization,” *Dialogue: A Journal of Mormon Thought* 16, no. 4 : 41–58.

⁹⁸ David W. Smith, “The Development of the Council on the Disposition of the Tithes,” *BYU Studies Quarterly* 57 : 55–84.

⁹⁹ Henri Gooren, “Leadership, Retention, and U.S. Culture in the LDS Church in Latin America and Europe,” *Dialogue: A Journal of Mormon Thought* 54, no. 2 : 1–30.

¹⁰⁰ Gary James Bergera, “The Monitoring of BYU Faculty Tithing Payments: 1957–1963—Part I,” *Sunstone*, no. 163 : 22–41.

¹⁰¹ D. Michael Quinn, “LDS Church Finances from the 1830s to the 1990s,” in *Sunstone Symposium XIII* (Salt Lake City: Sunstone Education Foundation, 1991), 1–29. Quinn traces early LDS financial policies and shows that definitions of tithing varied widely—ranging from a two-percent assessment on net worth to the 1838 requirement of donating surplus property and ten percent of annual interest—and that until 1908 most Saints paid in kind rather than cash.

¹⁰² Samuel D. Brunson, “To Omit Paying Tithing: Early Latter-day Saints and the Law of Tithing,” in *Approaching Holiness: Essays on the Temple in Latter-day Saint Tradition*, ed. Jared W. Ludlow (Provo: Religious Studies Center, Brigham Young University, 2023), 394–435. Brunson provides quantitative analysis of nineteenth-century tithing receipts, noting that of the \$143,372 in tithing recorded in 1868 only \$25,114 was in cash, with the remainder paid in labor and goods, and that excommunication for non-payment was rare.

¹⁰³ David O. McKay diaries, 11 February 1953 and 2 July 1956 entries, David Oman McKay Papers, Special Collections, University of Virginia. These diary excerpts show that President McKay recommended reducing members' financial obligations to tithing and fast offerings and observed a 65.9 percent increase in tithing collections between 1952 and 1956.

¹⁰⁴ Ludovic Rheault, Kaspar Beelen, Christopher Cochrane, and Graeme Hirst, "Measuring Emotion in Parliamentary Debates with Automated Textual Analysis," *PLoS One* 15, no. 1 : e0168843.

¹⁰⁵ Tobias Widmann and Maximilian Wich, "Creating and Comparing Dictionary, Word Embedding, and Transformer-Based Models to Measure Discrete Emotions in German Political Text," *Political Analysis* 30, no. 4 : 535-550.

¹⁰⁶ Moritz Laurer, Wouter van Atteveldt, Andreu Casas, and Kasper Welbers, "Less Annotating, More Classifying: Addressing the Data Scarcity Issue of Supervised Machine Learning with Deep Transfer Learning and BERT-NLI," *Political Analysis* 31, no. 1 : 84-100.

¹⁰⁷ Jacob Jensen, Ethan Kaplan, Suresh Naidu, and Laurence Wilse-Samson, "Political Polarization and the Dynamics of Political Language: Evidence from 130 Years of Partisan Speech," *Brookings Papers on Economic Activity* 2021, no. 2 : 1-81.

¹⁰⁸ Pablo Barberá, Andreu Casas, Jonathan Nagler, Patrick J. Egan, Richard Bonneau, John T. Jost, and Joshua A. Tucker, "Who Leads? Who Follows? Measuring Issue Attention and Agenda Setting by Legislators and the Mass Public Using Social Media Data," *American Political Science Review* 115, no. 3 : 883-901.

¹⁰⁹ Pedro L. Rodriguez, Arthur Spirling, and Brandon M. Stewart, "Embedding Regression: Models for Context-Specific Description and Inference," *American Political Science Review* 117, no. 4 : 1255-1274.

¹¹⁰ Lynn G. Robbins, "Tithing—a Commandment Even for the Destitute," April 2005 general conference address, The Church of Jesus Christ of Latter-day Saints, accessed August 18, 2025, <https://www.churchofjesuschrist.org/study/general-conference/2005/04/tithing-a-commandment-even-for-the-destitute>. Robbins taught that "Like the widow, if a destitute family is faced with the decision of paying their tithing or eating, they should pay their tithing".

Appendix A: Computational Methodology and Anchor Text Details

The computational analysis employed a three-stage approach to address the challenge of systematically measuring rhetorical dimensions across 175 years of evolving religious discourse: manual corpus review to identify dimensional extremes, large language model (LLM) scoring using constructed anchor texts, and student model training for efficient large-scale analysis.

Stage 1: Manual Corpus Review and Anchor Construction

Anchor construction proceeded through systematic corpus analysis to ensure empirical grounding. The researcher conducted qualitative review of the complete 4,002-passage dataset, identifying recurring phrases and rhetorical patterns that consistently appeared at the extreme

ends of each analytical dimension. Common formulations like "binding covenant," "matters of eternal consequence," and "cursed with a curse" emerged as reliable indicators of commandment-oriented rhetoric, while phrases like "voluntary partnership," "generous hearts," and "invitation to demonstrate love" clustered around opportunity-oriented discourse.

Using this empirically-derived vocabulary, anchors were constructed to bridge temporal language gaps through strategic inclusion of both scriptural/doctrinal references familiar across Mormon discourse periods and contemporary explanatory language. The anchors deliberately combine historical Mormon theological language with contemporary explanatory frameworks, enabling recognition of conceptual equivalencies across temporal linguistic variations. While anchor construction involves interpretive judgment, the process grounds that subjectivity in systematic observation of actual historical usage patterns rather than theoretical assumptions about rhetorical categories.

Stage 2: LLM-Based Scoring with Anchor Texts

Each passage received scores on three rhetorical dimensions using a DeepSeek Reasoner model with standardized prompts containing the constructed anchor texts at positions -1, 0, and +1 for each dimension. The model scored passages by comparing them to the anchor examples, producing continuous scores ranging from -1 to +1 with brief explanatory rationales.

Technical Specifications:

- Model: DeepSeek Reasoner via API
- Temperature: 0.2 for consistent scoring
- Output format: JSON containing numeric score (-1 to +1) and rationale (≤ 40 words)

Stage 3: Student Model Training and Large-Scale Scoring

The LLM-generated scores served as training targets for three DistilBERT-based regression models (one per dimension). This approach enabled processing of the complete 4,002-passage corpus while preserving the LLM's interpretive framework established through the anchor-based scoring process. The student models employ standard pooled-representation regressors optimized with mean-squared error, with predictions clipped to [-1, +1] range.

This three-stage progression enabled systematic analysis of rhetorical change across nearly two centuries of Mormon discourse while maintaining interpretive rigor appropriate for historical religious text analysis.

Rhetorical Dimension Anchors

The following anchor texts were constructed based on empirical patterns identified in the corpus review and designed to capture the extreme positions of each rhetorical dimension while bridging temporal language variations.

Dimension 1: Commandment (-1) ↔ Opportunity (+1)

-1 Anchor (Commandment): "Tithing represents a binding covenant with God that cannot be negotiated or modified according to personal preference. The Lord hath established this as a

standing law unto His people forever. Church leaders consistently teach that temple worthiness requires full compliance with this divine mandate. Ye are commanded to render unto God one-tenth of all your increase, and this requirement shall not pass away. Those who fail to meet this obligation face serious spiritual consequences. Worthiness interviews assess compliance directly: 'Are you a full tithe-payer?' This is a matter of strict obedience to divine law, not personal choice or convenience."

0 Anchor (Neutral): "Leaders teach that tithing is both a sacred duty and a cherished privilege. Verily, it is a commandment from on high, yet also an invitation to exercise faith. When we choose to return one-tenth, we align ourselves with eternal principles and open the door to blessings beyond measure. The Lord doth invite us to prove Him herewith, yet He honors agency—He compels no one. Members often speak of tithing as both obligation and opportunity. Thus this divine law stands at the crossroads of duty and willing discipleship, requiring both submission and grateful hearts."

+1 Anchor (Opportunity): "Behold, the law of tithing is given as a voluntary covenant whereby we may partner with the Almighty in His work. Our Heavenly Father invites His children to participate willingly in building His kingdom upon the earth. Church teachings emphasize that this sacred practice flows from gratitude rather than compulsion. Yea, there is no threat nor penalty—only the promise that generous hearts experience joy abundantly. Each contribution becomes an opportunity to demonstrate love for God and neighbor. We give not from duty but from abundance of heart, choosing freely to consecrate our substance unto the Lord."

Dimension 2: Fear (-1) ↔ Love (+1)

-1 Anchor (Fear): "Leaders consistently warn members about the serious consequences of withholding tithing from the Lord. Those who rob God of tithes bring upon themselves divine displeasure and spiritual darkness. Church teachings emphasize that calamity and scarcity follow the non-compliant. Hearken unto this solemn warning: 'Ye are cursed with a curse, for ye have robbed me, even this whole nation.' The devourer shall not be rebuked for their sakes, and they shall know want and tribulation. We must pay tithing promptly and in full, lest we find the heavens sealed against us and mercy withdrawn. This is no idle counsel; it is a matter of eternal judgment and divine condemnation."

0 Anchor (Neutral): "Obedience to the law of tithing brings peace to the soul, while neglect invites missed opportunities and gentle correction. The Lord doth both caution and lovingly reassure His children: 'Prove me now herewith, saith the Lord of Hosts, if I will not open you the windows of heaven.' He teaches through both warning and promise, allowing each person to weigh carefully the consequences of withholding against the joy that comes from faithful giving. Leaders often speak of balanced motivation. Thus reverent caution is tempered by hopeful encouragement, and wise fear balanced by divine love and mercy."

+1 Anchor (Love): "Behold, the Savior doth motivate His people through perfect love, never through fear or compulsion of any kind. He invites us to join Him in blessing others through our tithes and offerings, drawing us near through divine affection. Church leaders teach that tithing 'is not a matter of dollars, it is a matter of faith and devotion.' Yea, as we give willingly, we feel heaven's approval and our gratitude grows exceedingly. Rather than fearing temporal loss, we rejoice in shared abundance and draw ever closer unto the Giver of all good gifts, experiencing that sacred truth that perfect love casteth out all fear and doubt."

Dimension 3: Material (-1) ↔ Spiritual (+1)

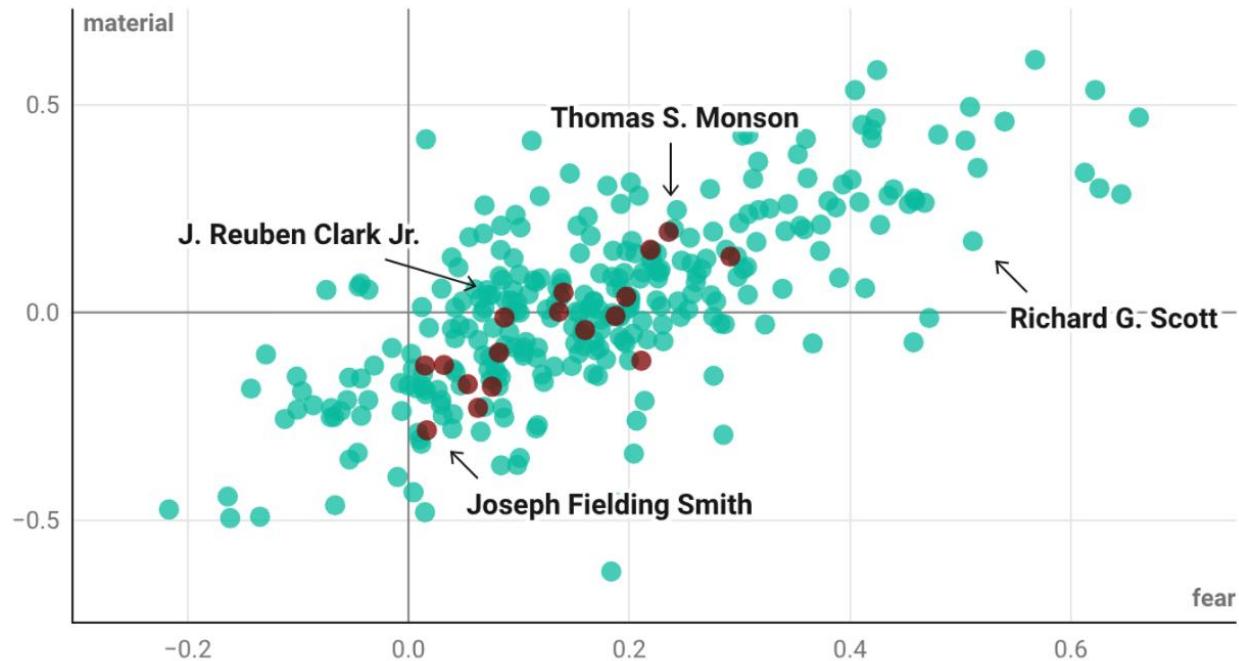
-1 Anchor (Material): "Church testimonies and historical records consistently show that faithful tithe-payers receive tangible financial protection and prosperity from the Lord. Verily, those who pay tithing faithfully are shielded from unemployment, hospital bills, and failed harvests by divine providence. The Almighty doth promise to 'rebuke the devourer for your sakes' in temporal matters. Church members regularly report measurable increases in income and property following faithful tithing. The Lord grants financial opportunities, protects investments, and provides unexpected windfalls. Yea, these material dividends are evidence that tithing is the safest insurance and soundest temporal investment, wherein earthly treasures are multiplied through divine intervention."

0 Anchor (Neutral): "While many testify of unexpected job offers or debts miraculously paid that follow faithful tithing, the deeper miracle is found in the quiet assurance of spiritual peace. The Lord often doth meet temporal needs as promised in the scriptures, yet His choicest rewards elevate the soul—confidence before God, discernment in daily affairs, and strength to do good works. Members often speak of both material protection and spiritual growth. Earthly prosperity may follow faithful giving, but eternal treasures prove more enduring. Thus temporal blessings and spiritual rewards intertwine in the lives of faithful tithe payers, each supporting and magnifying the other."

+1 Anchor (Spiritual): "The highest purpose of tithing is spiritual refinement and sanctification of the soul, not material gain or temporal prosperity. Behold, as we willingly relinquish a portion of earthly means, our attachment to worldly wealth loosens and our hearts turn heavenward unto eternal things. Church leaders teach that the most significant blessings are 'spiritual and subtle,' transforming our very natures through divine grace. Wherefore, the promised windows of heaven pour out revelation, humility, and closeness to Christ—treasures far more precious than any earthly riches. We become more Christlike through willing sacrifice, our souls enlarged and purified through sacred consecration and devotion unto the Lord."

Appendix B: Additional Charts and Tables

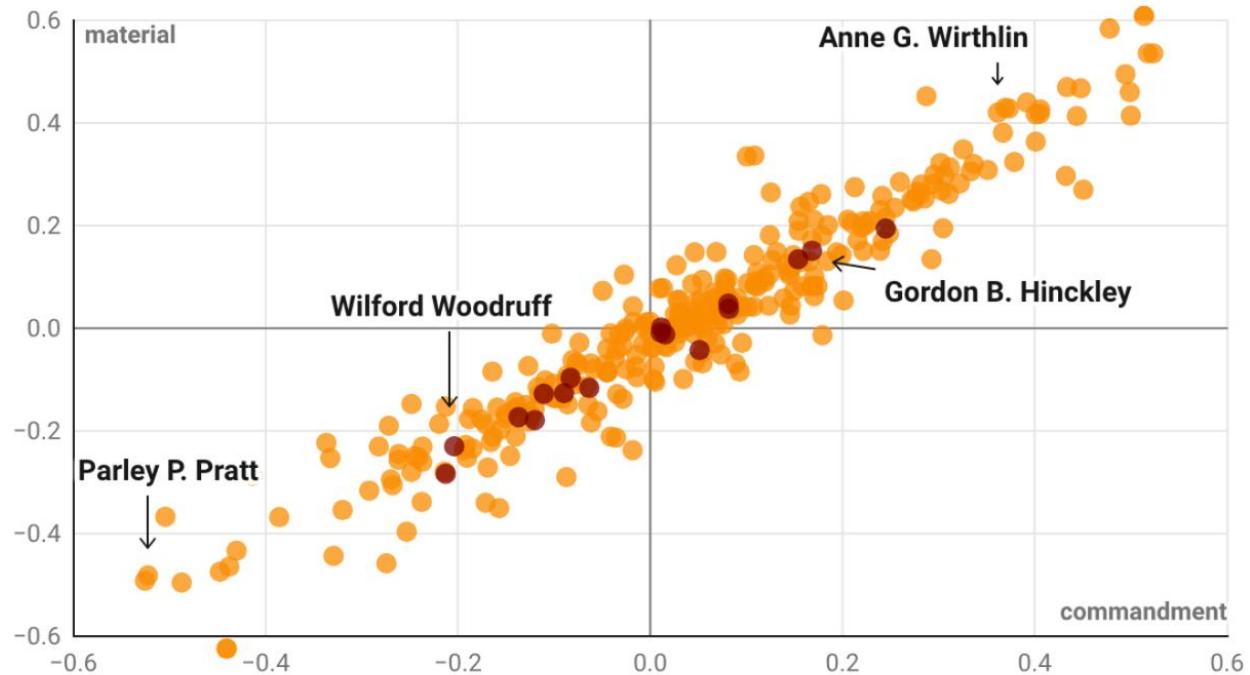
Material/Spiritual vs Fear/Love



Note: Each dot represents a GC speaker's average rhetoric score pair. Negative/Positive values indicate more material-fear/spiritual-love rhetorical patterns. Red dots indicate a Church president.

[Click here for an interactive version of this chart](#)

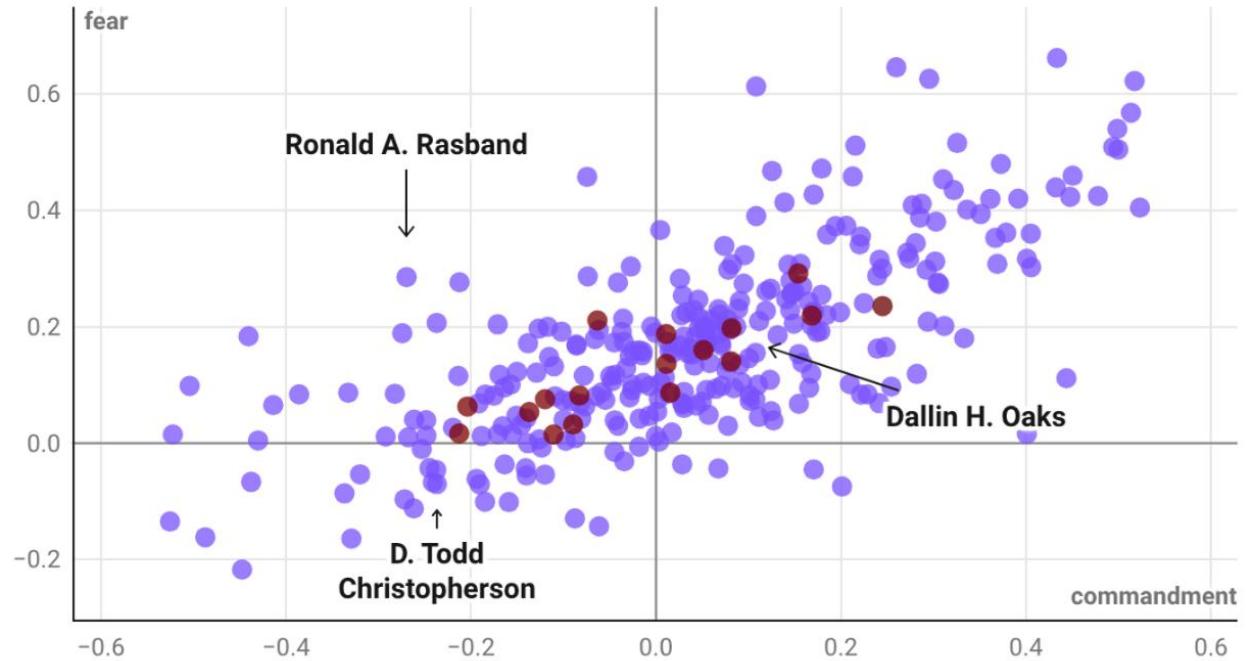
Material/Spiritual vs Commandment/Opportunity



Note: Each dot represents a GC speaker's average rhetoric score pair. Negative/Positive values indicate more material-commandment/spiritual-opportunity rhetorical patterns. Red dots indicate a Church president.

[Click here for an interactive version of this chart](#)

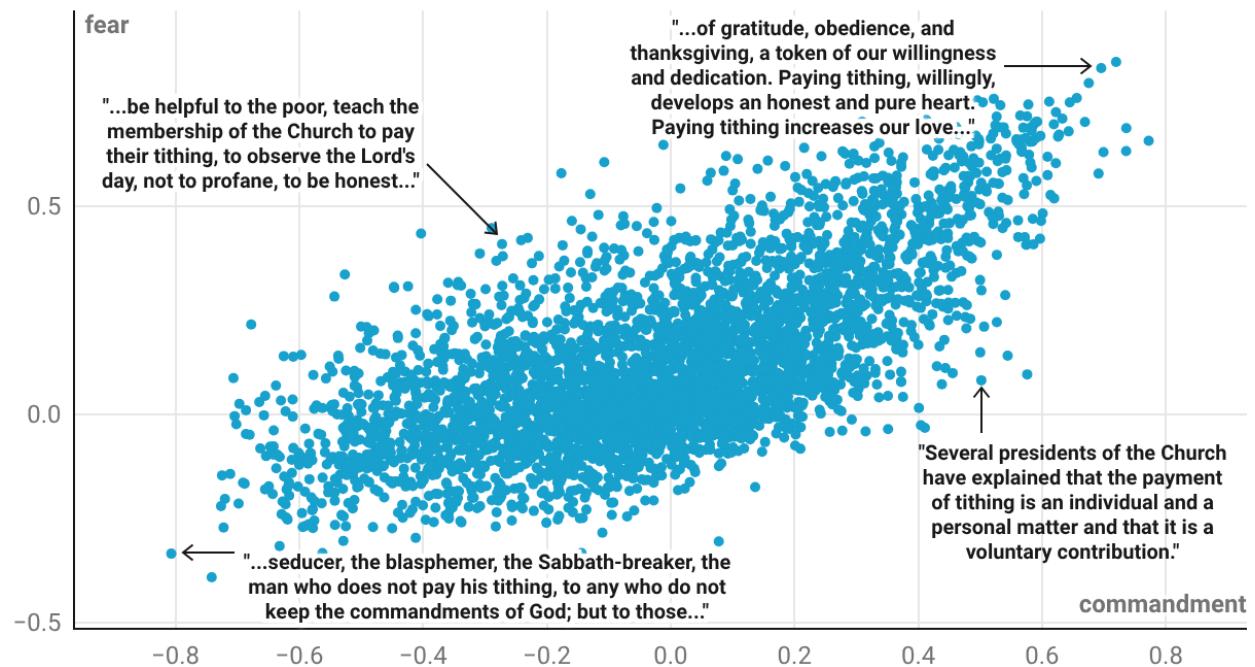
Fear/Love vs Commandment/Opportunity



Note: Each dot represents a GC speaker's average rhetoric score pair. Negative/Positive values indicate more fear-commandment/love-opportunity rhetorical patterns. Red dots indicate a Church president.

[Click here for an interactive version of this chart](#)

Individual Quotes - Fear/Commandment Dim.



Note: Each dot represents a single GC quote, plotted based on each rhetorical dimension scale. A negative/positive score indicates fear-commandment/love-opportunity rhetorical patterns.

[Click here for an interactive version of this chart](#)

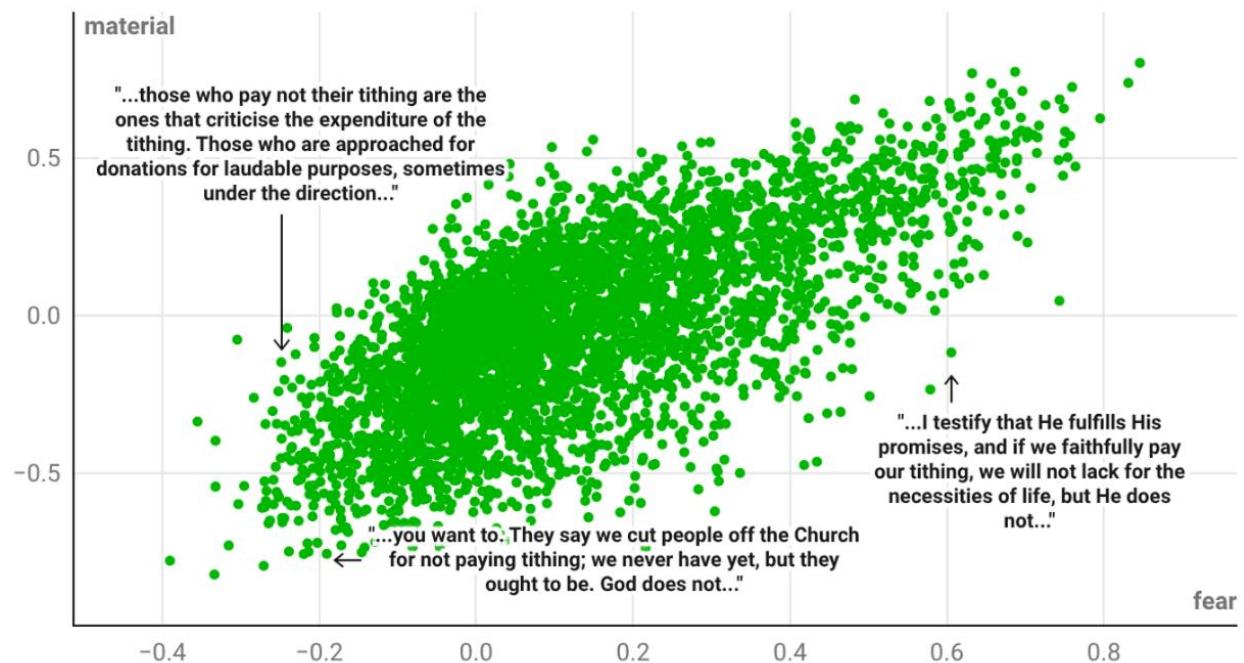
Individual Quotes - Material/Commandment Dim.



Note: Each dot represents a single GC quote, plotted based on each rhetorical dimension scale. A negative/positive score indicates material-commandment/spiritual-opportunity rhetorical patterns.

[Click here for an interactive version of this chart](#)

Individual Quotes - Material/Fear Dim.



Note: Each dot represents a single GC quote, plotted based on each rhetorical dimension scale. A negative/positive score indicates material-fear/spiritual-love rhetorical patterns.

[Click here for an interactive version of this chart](#)

Table B1: Qualitative Text Excerpts

year	text	speaker	dimension	score
1884	"...seducer, the blasphemer, the Sabbath-breaker, the man who does not pay his tithing, to any who do not keep the commandments of God; but to those..."	John Taylor	commandment	-0.807
1933	"...day, when we are law breakers, when we fail to pay an honest tithing to the Lord, when we fail to keep the Word of Wisdom, and..."	John Wells	commandment	-0.741
2002	"...Quorum of the Twelve, answered: " A man who has not paid his tithing is unfit to be baptized for his dead.... If a man..."	Robert D. Hales	commandment	-0.726
1899	"...to the Latter-day Saints. If the people dwelling upon this land pay not their tithing, it shall not be a land of Zion unto them. " It is..."	Brigham Young Jr	commandment	-0.725
1926	"...tobacco, who will violate the Word of Wisdom, who refuses to pay his tithing, to keep the Sabbath day, or who in any other way will not..."	Joseph Fielding Smith	commandment	-0.722
1912	"...the lessons that devolve upon us. I thank God for the privilege of paying tithing. I rejoice in having the opportunity of showing my gratitude to my Heavenly Father..."	Heber J. Grant	commandment	0.772
1943	"...that the recovery I have made has been really miraculous. Gratitude for increase in Tithing p5-6 I am grateful to the Lord for the way in which He has opened..."	Heber J. Grant	commandment	0.736
1998	"...and then she thanked our Heavenly Father for the privilege of living the law of tithing. I immediately experienced a feeling of comfort and assurance. Living the law of..."	Ronald E. Poelman	commandment	0.736
2007	"...dedication. Paying tithing, willingly, develops an honest and pure heart. Paying tithing increases our love for the Lord. The Lord said, " It is a..."	Yoshihiko Kikuchi	commandment	0.720
2005	"...from that knowledge. We have many bills to pay, but when we pay tithing, let us feel joy for having the opportunity to donate something to the Lord..."	Won Yong Ko	commandment	0.699
1933	"...day, when we are law breakers, when we fail to pay an honest tithing to the Lord, when we fail to keep the Word of Wisdom, and..."	John Wells	fear	-0.390
1971	"...change their habits, to live the Word of Wisdom, or to pay their tithing, all on their own, without the Lord's help, and have failed..."	Eldred G. Smith	fear	-0.355
1884	"...seducer, the blasphemer, the Sabbath-breaker, the man who does not pay his tithing, to any who do not keep the commandments of God; but to those..."	John Taylor	fear	-0.334
1940	"...to come into our Temples who pays no tithing, who only pays half a tithing? How will you feel after this? You will feel that you are taking..."	Joseph Fielding Smith	fear	-0.332
1900	"...we can not do any more ourselves, we might convert others to pay their tithing, if we will take pains to reason with them, that they might not..."	Marriner W. Merrill	fear	-0.332
2007	"...dedication. Paying tithing, willingly, develops an honest and pure heart. Paying tithing increases our love for the Lord. The Lord said, " It is a..."	Yoshihiko Kikuchi	fear	0.846
2007	"...of gratitude, obedience, and thanksgiving, a token of our willingness and dedication. Paying tithing, willingly, develops an honest and pure heart. Paying tithing increases our love..."	Yoshihiko Kikuchi	fear	0.831
1992	"...a generous fast offering, find joy in supporting missionaries, and pay an honest tithing. We can accept Church callings and serve with a happy and grateful heart..."	M. Russell Ballard	fear	0.795
1857	"...but is on hand. He is always ready. A good man pays his Tithing, pays his devotions to God in all sincerity and faith, pays his just..."	Orson Hyde	fear	0.764

2002	"...Heavenly Father loves you. I am grateful that my parents taught me to pay tithing. I bear my humble testimony that paying tithing is a true principle of the..."	Earl C. Tingey	fear	0.760
1884	"...seducer, the blasphemer, the Sabbath-breaker, the man who does not pay his tithing, to any who do not keep the commandments of God; but to those..."	John Taylor	material	-0.822
1926	"...tobacco, who will violate the Word of Wisdom, who refuses to pay his tithing, to keep the Sabbath day, or who in any other way will not..."	Joseph Fielding Smith	material	-0.794
1933	"...day, when we are law breakers, when we fail to pay an honest tithing to the Lord, when we fail to keep the Word of Wisdom, and..."	John Wells	material	-0.778
2002	"...Quorum of the Twelve, answered: " A man who has not paid his tithing is unfit to be baptized for his dead.... If a man..."	Robert D. Hales	material	-0.757
1871	"...you want to. They say we cut people off the Church for not paying tithing; we never have yet, but they ought to be. God does not..."	Brigham Young	material	-0.756
2007	"...dedication. Paying tithing, willingly, develops an honest and pure heart. Paying tithing increases our love for the Lord. The Lord said, " It is a..."	Yoshihiko Kikuchi	material	0.804
1943	"...that the recovery I have made has been really miraculous. Gratitude for increase in Tithing p5-6 I am grateful to the Lord for the way in which He has opened..."	Heber J. Grant	material	0.776
1998	"...and then she thanked our Heavenly Father for the privilege of living the law of tithing. I immediately experienced a feeling of comfort and assurance. Living the law of..."	Ronald E. Poelman	material	0.771
2007	"...of gratitude, obedience, and thanksgiving, a token of our willingness and dedication. Paying tithing, willingly, develops an honest and pure heart. Paying tithing increases our love..."	Yoshihiko Kikuchi	material	0.740
1912	"...the lessons that devolve upon us. I thank God for the privilege of paying tithing. I rejoice in having the opportunity of showing my gratitude to my Heavenly Father..."	Heber J. Grant	material	0.739

