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Metaphors We Campaign by: Political Metaphor Analysis in U.S. Presidential Campaigns (1960–2024)

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Abstract

We present an exploratory computational analysis of cognitive patterns in U.S. presidential campaign manifestos through metaphorical concept mappings. We examine documents from 1960 to 2024, using MetaPro to extract metaphors from both the Republican and Democratic parties' rhetoric. Our goal is to propose a novel way of political analysis by generating insights into the cognitive foundations of election rhetoric and revealing distinct patterns. Our research focused on three key ideas: (1) the evolution of the conceptual landscape of campaign rhetoric over six decades, (2) the different metaphorical strategies of incumbent and challenger campaigns, and (3) the divergence of Democratic and Republican parties in their metaphorical repertoires. The analysis reveals a moderate decline in cross-cycle mapping turnover over the observed timeline, as well as structural differences between incumbents and challengers, and the parties themselves, suggesting that political polarization is observable even at the level of metaphors.

Keywords: computational metaphor analysis; cognitive linguistics; political discourse; concept mappings; MetaPro

Introduction

Political language encodes the hidden conceptual structures through which parties aim to understand and influence governance and social change (Kövecses, 2010; Lakoff & Johnson, 1980). Conceptual metaphor theory states that metaphors are more than merely linguistic expressions: they reflect human cognition by mapping abstract domains onto more understandable source domains (Lakoff & Johnson, 1980). Examples such as ARGUMENT IS WAR, TIME IS MONEY, and LIFE IS A JOURNEY illustrate how the innate nature of metaphors can be used to reason in complex scenarios. When politicians talk about “moving the country forward” or “building the middle class”, they use such mappings that the listener sometimes does not even notice; however, with the careful choice of the metaphor, they can induce deeper ideological commitments (Lakoff, 2002).

Despite the proliferation of studies on the presidency, a significant research gap exists at the intersection of longitudinal rhetorical analysis and cognitive linguistics. The majority of existing research in the field builds on manual analysis that is qualitative rather than quantitative (Charteris-Black, 2004; Ferrari, 2007; Steen, 2011). While Conceptual Metaphor Theory has established the importance of metaphors in political cognition, there are still only a few examples of data-driven methodologies that are capable of analysing these cognitive

patterns over large amounts of textual data or long historical periods. Traditional methods fail at scale due to their labor-intensive nature (Charteris-Black, 2004; Steen, 2011), while standard text mining might miss the nuanced nature of complex metaphorical structures (Charteris-Black, 2004; Stefanowitsch & Gries, 2007). The primary goal of this study is to scale the extraction of metaphorical mappings in political texts by applying an existing automated pipeline across six decades of U.S. presidential manifestos, revealing the distinct metaphorical signatures of political parties and the evolution of these cognitive structures. Methodologically, we concurrently demonstrate the viability of neural-symbolic extraction tools to uncover stable, interpretable cognitive macro-trends without manual annotation.

In this paper, we employ MetaPro (Mao, Li, et al., 2023) to analyse U.S. presidential manifestos (1960–2024) to investigate how metaphorical cognition in Democratic and Republican parties has evolved. We study three research questions:

1. How has the metaphorical repertoire of the two parties evolved across six decades in their campaign rhetoric? We explore trends in novelty and diversity of concept mappings over the examined timeline.
2. Does political rhetoric change measurably depending on whether it is of a party in power or in opposition? We characterize differences through the number of metaphors in certain domains.
3. How distinctive are the metaphorical signatures of Democratic and Republican parties? We identify predominantly Republican and Democratic source domains that, reveal their distinctive metaphorical “fingerprints”.

Related Work

Recently, the study of metaphors in political discourse has shifted from qualitative rhetorical analysis to large-scale computational studies. Thus, we build upon three tranches of related literature: theory of political metaphor, the specific ideological framings of U.S. politics, and recent advancements in natural language processing for metaphor extraction.

Cognitive Foundations of Political Rhetoric

The theoretical groundwork for this study has been laid by Conceptual Metaphor Theory, which states that metaphors have a deeper meaning than merely being stylistic ornaments to a speech or text, as they are a fundamental mechanism of

human cognition (Kövecses, 2010; Lakoff & Johnson, 1980). In political discourse, the metaphors' function is to simplify and make complex abstractions, such as the economy or international relations, understandable through mapping them to everyday domains such as FAMILY or JOURNEY (Mio, 1997). This cognitive analogy enables political actors and parties to effectively communicate their ideologies or concrete actions in a way that resonates with potential voters, or even hides less favourable conclusions (Beer & Landtsheer, 2004). As Ferrari (2007) notes, these practices are crucial in political campaigns where the main task is to construct a positive self-image, while also delegitimizing the opposing sides.

Ideology and Metaphorical Framing

Previous research has examined how political actors rely on metaphorical architecture to communicate their ideologies. Lakoff (2002)'s work on "Moral Politics" argues that U.S. political polarization is deeply rooted in two opposing family-based models: the conservative "Strict Father" model (where discipline, order, and hierarchy are at the center) and the liberal "Nurturant Parent" model (with key structures like empathy, fairness, and community). This distinction underpins our analysis of the parties' distinct metaphorical cognition.

Subsequent works have also confirmed such differences through corpus analysis methods. Charteris-Black (2004) introduced "Critical Metaphor Analysis", to demonstrate how political leaders rely on metaphors to align policies with cultural and national myths and identities. Moreover, source domains can also be used to drive action, for example, in crisis communication with the use of WAR metaphors (Atmawijaya, 2025) or the LIFE IS A JOURNEY metaphor in political discourse (Silaški & Đurović, 2019). However, in spite of positive results, the majority of these studies have been limited to specific domains or short timeframes leaving long term metaphorical evolution largely unexplored.

The Shift to Computational Analysis

Traditionally, metaphorical analyses were prone to human error as they predominantly relied on manual identification. Besides the human factor, these methods were also limited by sample size (Steen, 2011). Recent developments in computational linguistics approaches enabled researchers to also observe macro-level trends across political discourse, such as the evolution of populist rhetoric in digital spaces (Wang et al., 2025), diplomatic narratives in international debates (Mao, Zhang, et al., 2024) or even the effect of trauma on cognitive patterns (Jia et al., 2025). These automated approaches allow for analysis of the longitudinal evolution of metaphors over multiple years or decades (Zinken, 2007), providing insight to saturation or shifting of such cognitive systems.

A specific tool that tackles the challenge of metaphor detection in large unstructured textual data has been developed by Mao, Li, et al. (2023), through the design of a neurosymbolic architecture. MetaPro is capable of extracting TARGET

IS SOURCE mappings by analyzing linguistic anomalies and concept associations. Further developments, applications in diverse fields, such as finance (Mao, Du, et al., 2023), cognitive science (Mao et al., 2025) and weather disasters (Mao, Lin, et al., 2024). By applying this framework to the corpora drawn from the Manifesto Project, our study bridges the gap between the theoretical depth of cognitive linguistics and the empirical breadth of computational social science.

In summary, current research in political metaphor analysis has broader limitations, especially when trying to uncover lasting cognitive structures rather than individual rhetorical expressions. First, the primary unit of analysis often remains the surface metaphorical expression, such as keywords, lexical triggers, or short patterns. This focus makes it hard to reconstruct broader concept mappings consistently and comparably over time. As a result, many studies tend to be descriptive, relying on example-driven interpretations or local frequency counts. They often fail to create a clear representational layer of conceptual mappings that can be tracked over time on a larger scale. Second, there is surprisingly limited longitudinal coverage. While individual case studies have provided valuable insights, they are usually restricted to short time frames, a few elections, or a narrow range of topics, such as crises, immigration, or foreign policy. This leads to an evidence gap; it remains unclear whether the observed metaphorical patterns signal stable party thinking, temporary campaign tactics, or larger socio-historical shifts in public discourse. Without a comprehensive analysis spanning multiple decades under a unified extraction and measurement approach, claims about changes in party rhetoric are hard to support. Third, prior work rarely integrates a computationally explicit representation of cognitive structure with a quantitative framework for comparison. While Conceptual Metaphor Theory provides a strong interpretative lens, and corpus-based approaches provide scale, there is often a missing middle layer that operationalizes metaphors as structured, comparable units. In particular, few studies formalize concept mappings as analyzable objects that can be aggregated, compared, and tracked longitudinally. This limits the ability to move from illustrative examples to systematic measurement of cognitive dynamics.

To address these gaps, our work adopts a mapping-centric perspective, where metaphorical expressions are abstracted into TARGET IS SOURCE concept mappings, and these mappings form the basic unit of analysis. This allows us to construct a temporal cognitive space in which political discourse can be analyzed not only in terms of frequency, but also in terms of structural properties such as diversity, turnover, and alignment across parties and electoral contexts.

Corpus

Our investigated corpus is drawn from the Manifesto Project (version 2025a)¹. This comprehensive collection of political manifestos across countries and parties provides access to manifestos of both the Republican and Democratic parties.

¹<https://manifesto-project.wzb.eu/>

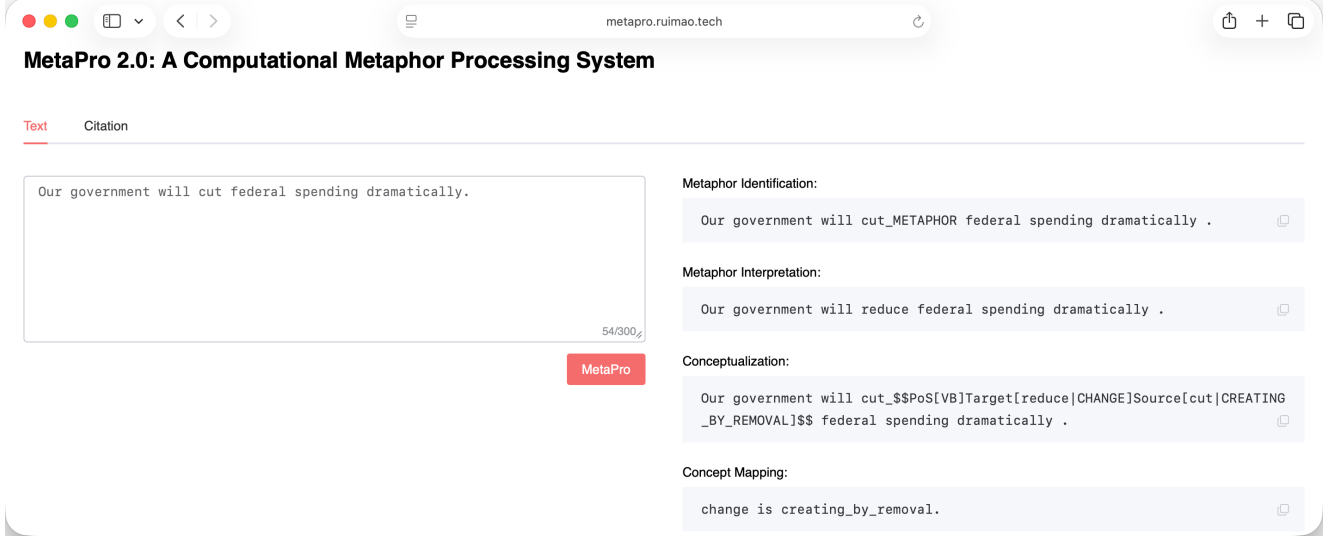


Figure 1: The example output of MetaPro.

Table 1: Metaphor statistics for Democratic and Republican manifestos.

	Democratic	Republican
Avg. words per manifesto	8,691	8,795
Avg. metaphors per manifesto	460.0	506.6
Metaphors per 1000 words	52.93	57.60
Total metaphors	7,820	8,105
Total sources	644	729
Total targets	624	675
Total unique mappings	2,142	2,442

We examined manifestos from 1960 to 2024, yielding 34 documents total (one per party per election cycle). Due to COVID-19, in 2020 the Republican Party did not adopt a new platform and instead re-adopted its 2016 manifesto. To avoid artificially duplicating 2016 mappings, we omit the 2020 Republican manifesto from analyses. Table 1 shows the overall statistics of the manifestos after analysis with MetaPro. This corpus is the complete population of U.S. presidential manifestos for 1960–2024, not a random sample; we therefore report descriptive characterisations of historical trends rather than inferential tests against a reference population.

Analytical Framework

Metaphor Extraction

We use MetaPro to extract metaphors in the form `TARGET` is `SOURCE` from each manifesto. For each document, we compute: total metaphor count, number of unique concept mappings, metaphors per 1,000 words, and a diversity index (unique mappings / total mappings). At the party level, we aggregate mappings across all manifestos for the parties and

calculate the same metrics for further use. MetaPro processing consists of metaphor identification (Mao & Li, 2021), metaphor interpretation (Mao et al., 2022), and concept mapping generation (Ge et al., 2022). These stages jointly transform surface-level linguistic expressions into structured conceptual representations that can be quantitatively analyzed. The performance of each computational module is reported in the corresponding papers.

Mapping Turnover

For measuring cross-cycle mapping turnover, we define a rolling novelty measure: Let M_t denote the set of unique concept mappings in election year t . We define the rolling-window novelty as

$$\text{Novelty}_{\text{roll}}(t) = 1 - \frac{|M_t \cap M_{t-2:t-1}|}{|M_t|},$$

where $M_{t-2:t-1} = M_{t-2} \cup M_{t-1}$. It measures the real novelty of the manifestos’ metaphorical landscape, correcting for the natural saturation in the conceptual mapping space. Rolling novelty scores range from 0 (all mappings have appeared in prior cycles) to 1 (all mappings are unique). We also compute this separately for each party besides the overall novelty.

Cross-Party Mapping Overlap

We quantify Democratic-Republican mapping overlap by

$$J_t = \frac{|M_t^{\text{Dem}} \cap M_t^{\text{Rep}}|}{|M_t^{\text{Dem}} \cup M_t^{\text{Rep}}|},$$

where the lower the value (Jaccard similarity), the more distinct the metaphorical repertoires are and the higher the more similar they are. We compute J_t for each election year to trace temporal patterns in party divergence. We additionally report the frequency-weighted Jaccard and the Jensen-Shannon

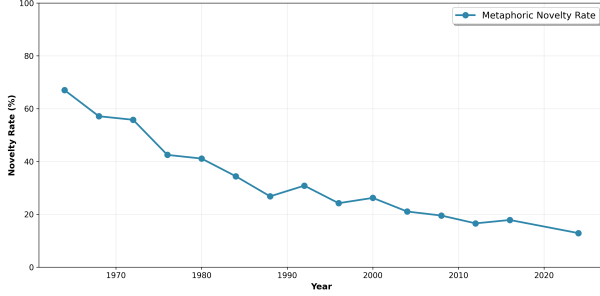


Figure 2: Cumulative novelty: unique metaphors used by year.

similarity ($1 - \text{JSD}$) over normalised mapping distributions as robustness checks that account for usage intensity rather than set membership alone.

Divergence in Source Domain Distributions

To identify which source concepts most distinctively represent each party, we compute a divergence score for each source domain: Let f_s^{Dem} and f_s^{Rep} denote the normalized frequency (per 10,000 metaphors) of source s in Democratic and Republican manifestos. We define the divergence score as:

$$D_s = f_s^{\text{Rep}} - f_s^{\text{Dem}},$$

where negative values indicate that sources are more prevalent in Democratic manifestos, and positive values represent Republican-leaning sources. We rank all source domains by the divergence score and visualize the top 10 most distinctive sources for each party in a butterfly (diverging bar) chart.

Results

Finding 1: Evolution of Mapping Turnover

Figure 2 shows the evolution of the number of unique concept mappings in each election year. The graph displays a clear downward trend from 1960 through 2024, however this might be due to a natural saturation of the conceptual space and needs further observations. To control for the natural saturation, we implement the previously discussed rolling-novelty score in Figure 3, under two normalisations: by the cycle’s own mapping count (left) and by total words in the cycle (right). Both panels still display a downward trend, but a more subtle one; the length-normalised view additionally rules out that the decline simply reflects shorter contemporary manifestos. To further investigate the declining trend we separately look at the two parties in Figure 4, with 1-, 2-, and 3-election rolling windows as a sensitivity check. The downward trajectory is preserved across all window choices for both parties, and the outlying spikes (such as the 1996 Democratic peak) remain visible at every window.

Finding 2: Incumbent and Challenger Campaigns

Figure 5 contrasts metaphor frequencies (per 1k metaphors) associated with STRUCTURE/STABILITY (left)

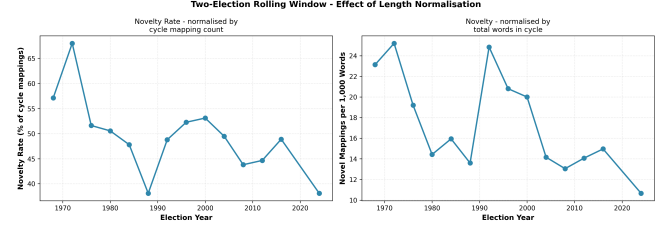


Figure 3: Rolling-window mapping turnover (2-election baseline) under two normalisation schemes. Left: share of a cycle’s mappings not seen in the prior two cycles. Right: novel mappings per 1,000 words, which controls for manifesto-length differences across cycles.

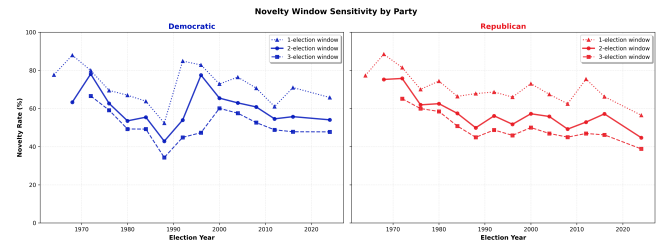


Figure 4: Mapping-turnover rate by party under 1-, 2-, and 3-election rolling windows.

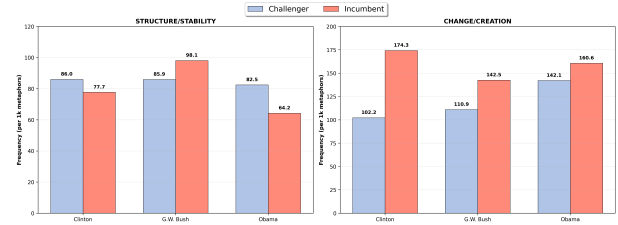


Figure 5: Metaphorical characteristics: incumbents versus challengers for three re-elected presidents.

and CHANGE/CREATION (right) for three re-elected presidents, comparing their opposition-party (challenger) versus incumbent-party campaigns (Trump is excluded from this due to the lack of a new Republican manifesto in 2020). A consistent pattern emerges for CHANGE/CREATION: incumbents exhibit markedly higher rates than challengers for all three cases (Clinton: 174.3 vs. 102.2; G. W. Bush: 142.5 vs. 110.9; Obama: 160.6 vs. 142.1). In contrast, STRUCTURE/STABILITY metaphors show a weaker and more context-dependent incumbency effect: challengers rely more on stability framing for Clinton and Obama (86.0 vs. 77.7; 82.5 vs. 64.2), while Bush’s incumbent campaign increases stability metaphors (98.1 vs. 85.9). Overall, the figure supports the incumbency hypothesis most strongly for CHANGE/CREATION metaphors, while stability-related framing varies by electoral context and president.

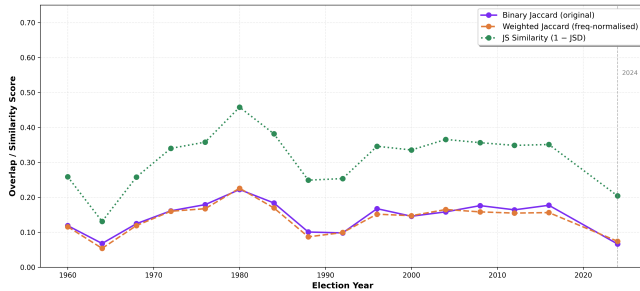


Figure 6: Cross-party mapping overlap over time under three metrics: binary Jaccard (set overlap), weighted Jaccard (frequency-sensitive), and Jensen-Shannon similarity (1 – JSD) over normalised mapping distributions.

Finding 3: Party-Specific Metaphorical Patterns

Figure 6 plots three complementary cross-party overlap measures over time: binary Jaccard, weighted (frequency-sensitive) Jaccard, and Jensen-Shannon similarity (1 – JSD). The binary and weighted Jaccard curves stay consistently low (roughly 0.07–0.22) and track each other almost exactly; Jensen-Shannon similarity is higher in absolute value but exhibits the same temporal contour, indicating that cross-party divergence is visible at both the set level and the frequency level. All three curves rise gradually from 1960 to a clear peak around 1980, suggesting a temporary convergence in dominant framing. After 1980, overlap drops sharply into the late 1980s/early 1990s, then stabilises in the 1992–2024 period at a modest plateau with minor fluctuations. The final point shows a great decline by 2024, consistent with increasingly distinct party “metaphorical fingerprints” and minimal shared conceptual ground in contemporary campaigns.

Figure 7 displays the source concepts that most distinctively characterize each party. Democrats predominantly employ POWER, ACTION, JUSTICE, JOURNEY, and CREATION, while Republicans emphasize REGION, ADJUSTMENT and TRANSACTION. These divergences reflect frequency differences rather than total absence: every top-10 source is attested in both parties’ corpora in at least six election cycles. These divergent source domain profiles suggest different cognitive frameworks and metaphorically structured realities.

Discussion

Evolution of Campaign Rhetoric

The continuous decline in conceptual innovation (seen in Figures 2–4) could be explained by the standardization of campaign communication since the 1970s, as message discipline became central to electoral competition and campaigns increasingly favored tested rhetoric frames (Blumler & Kavanagh, 1999). They were using topics that are broadly acceptable and easily repeatable across cycles, thus reducing the incentives for metaphorical experimentation and novel mappings. This tendency is continued by today’s media and

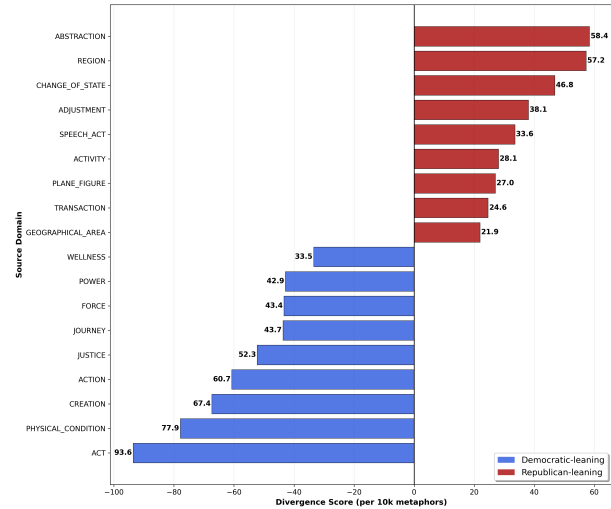


Figure 7: Distinctive source domains by party (butterfly divergence chart): metaphorical fingerprints.

audience segmentation: in an environment with rapid message testing, campaigns are rewarded for easily understandable framings rather than complex rhetorics.

Figure 4 suggests that both parties largely follow this pattern, with occasional metaphoric innovations. Episodic spikes plausibly reflect periods in which parties must react to new conditions, e.g., economic restructurings or geopolitical transitions, temporarily widening the conceptual repertoire. The main Democratic outlier around 1996, for example, could display the Clinton-era effort to consolidate a forward-oriented “bridge to the 21st century” narrative (Bennett, 2013) and aligns with a broader “New Democrat” repositioning that emphasized modernization (Hale, 1995). Such rhetorical repositioning can generate a higher novelty by introducing or recombining conceptual resources to mark ideological change. By contrast, the comparatively smoother Republican trajectory may indicate a more incremental evolution in dominant framings over the same period, resulting fewer spikes of conceptual innovation.

Incumbent and Challenger Divergence

The incumbent-challenger comparison in Figure 5 reveals a reorientation of metaphorical emphasis when candidates move from opposition into office. Re-elected presidents’ campaigns tend to shift from STRUCTURE/STABILITY when running for the first term, towards CHANGE/CREATION based metaphors when fighting for reelection. This pattern suggests that incumbency reconfigures the rhetorical “burden of proof”: challengers must first diagnose what is broken and why the current order fails, whereas incumbents must justify continuity of leadership by using activity and forward motion related framings. Classic theories of retrospective voting emphasize that incumbents are evaluated through perceived performance and outcomes, making it rational to emphasize action-oriented narratives that

translate governing records into visible accomplishments (Fiorina, 1978; Plescia & Kritzing, 2017). In practical terms, CHANGE/CREATION mappings make credit-claiming legible: governing records get narrated through verbs of motion - *moving forward, building, delivering* - rather than through static frames. The Clinton 1996 and Obama 2012 incumbent manifestos show this pattern most clearly, with CHANGE/CREATION rates of 174.3 and 160.6 per 1k metaphors respectively, well above their challenger-cycle counterparts.

On the other hand, when candidates run as challengers, their persuasive leverage often comes from highlighting risk or institutional malfunction, which are expressed through STRUCTURE/STABILITY sources (e.g., strengthening and securing). This asymmetry is consistent with research showing that incumbency conditions campaign communication strategies and advantages, including differences in what incumbents emphasize and how they frame their appeals (Druckman et al., 2020). The way the three presidents talk about “stability” shows that it isn’t just an issue for challengers. As an incumbent, Bush’s emphasis on stability fits the post-9/11 context, where appearing steady and in control of information was persuasive, even if that sense of stability wasn’t entirely secure (Pfiffner, 2004).

Cognitive Polarization

Low cross-party overlap in Figure 6 suggest that Democrats and Republicans have long relied on distinct metaphorical repertoires. The uptick from 1960–1980 fits a period of shared macro-contexts, e.g., Cold War politics, postwar prosperity ideals. In this period, despite conflicts over civil rights, Vietnam, and Watergate, both parties gravitated to common national concerns (security, economic performance, trust in government) (Murphy, 2008) - resulting in similar high-level metaphors (strength vs. weakness, decline vs. renewal). The 1980 peak likely reflects crisis-driven convergence. Stagflation, energy shocks, and the Iran hostage crisis compressed campaign discourse into a narrower set of abstractions, encouraging shared contrasts such as weakness vs. strength, loss vs. recovery, and disorder vs. control (Fiorina, 1978). The post-1980 drop matches sustained ideological sorting and clearer party branding. Reagan-era realignment is often seen as consolidating modern conservatism and shifting Republican rhetoric toward smaller government, deregulation, and a distinct moral vocabulary (Smith, 2007). After 1992, overlap stabilizes at a low plateau: the parties remain far apart but occasionally share frames imposed by common shocks (Tama, 2024), e.g., war/terror, financial crises, and pandemics. Notably, not every major shock produces a visible convergence: the 2004 post-9/11 and 2008 financial-crisis cycles sit near the post-1992 plateau rather than above it, suggesting that crisis alone is not sufficient to compress partisan framing once ideological sorting has hardened. The sharp decline by 2024 suggests an intensification of partisan differentiation in campaign framing, with fewer shared perspectives even when addressing similar national problems.

Further analysis of the party rhetoric reveals which are the

most Republican and Democratic domains. Figure 7 finds that sources like CREATION, JOURNEY, JUSTICE, and WELLNESS are more often used on the Democratic side, while the Republicans prefer to draw metaphors from sources like ADJUSTMENT, TRANSACTION, and SUPPORT. These findings reflect distinct cognitive models of what politics *is*: for Democrats, a struggle towards justice and wellness, while Republican patterns can be related to a careful management of assets. Thus, citizens voting for each party are not merely choosing between different solutions within a shared problem space, but rather picking a side between two different conceptual political spaces.

Conclusion

Across six decades of U.S. presidential election manifestos, we characterize how Democratic and Republican parties build different cognitive frameworks. Our findings reveal modest contractions in mapping turnover, structural effects of incumbency, and persistent divergence between parties, where each deploys a distinctive metaphorical “fingerprint” that reflects fundamentally different ways of conceptualizing political reality. Future work can extend this approach beyond manifestos to speeches, debates, and social media, testing whether these metaphorical fingerprints persist across genres and communication channels. It can also link shifting concept-mapping profiles to external events and electoral outcomes, clarifying when cognitive convergence emerges under shared crises and when divergence intensifies through institutional, media, and coalition dynamics. Methodologically, this study validates automated metaphor extraction for large-scale cognitive analysis. By mapping historical party rhetoric without manual intervention, we demonstrate that MetaPro can effectively bridge qualitative theory and computational text analysis.

Limitations

First, the corpus represents one document per party per election cycle. This makes the dataset historically comprehensive but relatively small in terms of document count. As a result, our findings should be interpreted as descriptive evidence of long-term rhetorical tendencies rather than as causal claims about electoral behaviour, voter cognition, or campaign effects. Second, metaphorical patterns are influenced by changing historical contexts. Economic crises, wars, social movements, technological shifts, and institutional realignments can all reshape campaign rhetoric. While we discuss several plausible historical explanations, the present study does not formally model these external events. Therefore, the relationship between metaphorical change and socio-political context remains interpretive rather than causal. Third, our party-level comparison necessarily simplifies internal variation within each party. Democratic and Republican manifestos reflect broad coalition documents rather than the views of all candidates, factions, or voters. The metaphorical fingerprints identified in this study should therefore be understood as aggregate party-level tendencies, not as uniform cognitive styles shared by all political actors within a party.

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