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A Theoretical Framework for Understanding Visual Merchandising Effects Beyond Price Competition

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ABSTRACT
We develop a theoretical framework, spatial lock-in, for understanding how visual continuity across multiple units creates consumer commitment in merchandising contexts. Drawing parallels to temporal lock-in in Reward-Program Promotions (Bombaij et al., 2026), we propose that spatial lock-in operates through Gestalt unity and perceptual fluency rather than goal completion and deadline pressure, yet serves similar strategic functions: enabling non-price differentiation in competitive markets.
We position spatial lock-in as a general theoretical construct applicable across multiple visual merchandising phenomena, including but not limited to: billboard packaging (recently documented by Zhang et al., 2026), store layout design, sequential advertising, and product placement. Using billboard packaging as one illustrative case, we demonstrate how existing empirical patterns align with spatial lock-in predictions, though we emphasize these represent theory-consistent illustrations rather than empirical validation.
Our framework contributes by: (1) introducing spatial lock-in as a construct distinct from but analogous to temporal lock-in, (2) explicitly identifying where this analogy holds versus breaks down, (3) demonstrating applicability across multiple merchandising domains, (4) generating testable boundary condition predictions derived from non-price promotion theory, and (5) providing a research agenda for empirical validation.
This is primarily a theory-building contribution. We do not claim empirical validation but rather present a conceptual framework that organizes existing findings, explains patterns across diverse phenomena, and generates specific testable predictions for future research. The framework suggests that marketers possess multiple pathways to non-price differentiation, through temporal commitment (reward programs), spatial commitment (visual continuity), or potentially other dimensions yet to be identified, with choice depending on category characteristics and competitive conditions...
Keywords: spatial lock-in, visual merchandising, non-price promotion, Gestalt theory, competitive strategy, theoretical framework

INTRODUCTION:

The digital transformation of global consumer markets has created unprecedented opportunities for cross-cultural marketing communication while simultaneously generating complex challenges for consumer boundary management across linguistic contexts (Chan, 2026). Marketing practice and theory have long grappled with a fundamental tension: price-based competition erodes margins and damages brand equity (Mela et al., 1997), yet alternatives remain theoretically fragmented and strategically ambiguous. Recent research on non-price promotional tools, particularly Reward-Program Promotions (RPPs), demonstrates that psychological mechanisms can drive sales as effectively as economic incentives without margin erosion (Bombaij et al., 2026). This opens a critical theoretical question: What other non-price mechanisms exist, and how do they function strategically?

We propose spatial lock-in as one such mechanism. Spatial lock-in occurs when visual continuity across multiple units, locations, or display elements creates perceptual commitment through Gestalt completion and processing fluency. Unlike temporal lock-in (which

captures consumers across time through goal completion), spatial lock-in captures consumers within moments through visual unity. Both create psychological value beyond economic savings, both enable competitive differentiation without price cuts, yet they operate through fundamentally different cognitive architectures.

This theoretical framework emerged from observing patterns across diverse visual merchandising phenomena. Zhang et al. (2026) recently documented that "billboard packaging", arranging multiple product packages to form unified visual displays, increases consumer choice by 52-123% across physical retail, digital advertising, and competitive contexts. Separately, research on store layout shows that visual continuity enhances shopping engagement (Hui et al., 2013). Product placement studies reveal that spatial consistency across scenes increases brand recall (Russell & Stern, 2006). Sequential advertising research demonstrates that visual narratives across multiple exposures enhance persuasion (Braun-LaTour & LaTour, 2004).

These phenomena share a common structure: multiple discrete units (packages, store sections, ad exposures, product appearances) arranged to create perceptual unity. We propose spatial lock-in as the unifying theoretical construct explaining these effects. The framework is general, applicable across merchandising domains, rather than phenomenon-specific.

Contribution and Scope

This paper makes a primarily theoretical contribution. We develop spatial lock-in as a general construct, position it within non-price promotion literature, demonstrate its applicability across multiple phenomena, and generate testable predictions for future empirical research. We do not claim to empirically validate the framework. Rather, we present a theory-building exercise that organizes existing findings under a coherent conceptual umbrella and motivates future empirical work.

Our specific contributions are:

1. Theoretical Development: We introduce spatial lock-in as a construct distinct from but structurally analogous to temporal lock-in, explicitly identifying where this analogy holds versus breaks down. This advances non-price promotion theory by revealing common strategic functions across mechanistically different tools.

2. Cross-Phenomenon Application: We demonstrate that spatial lock-in explains patterns across multiple merchandising domains, billboard packaging, store layouts, product placement, sequential advertising, establishing it as a general framework rather than phenomenon-specific explanation.

3. Boundary Specification: We derive boundary condition predictions from RPP theory (category concentration effects, price interference) while carefully limiting claims about psychological equivalence. The framework is structurally analogous but not psychologically identical to temporal lock-in.

4. Research Agenda: We generate specific, testable predictions prioritized by theoretical importance and practical feasibility. These provide clear direction for empirical validation efforts.

5. Strategic Framework: We propose (as theoretical conjecture requiring empirical testing) decision principles for when to employ spatial versus temporal lock-in versus price-based strategies.

Important Caveats and Limitations

CRITICAL READER NOTE:

This is a THEORY-BUILDING paper, not a theory-testing paper.

We do NOT claim:

• Empirical validation of spatial lock-in

• Causal evidence for proposed mechanisms

• Direct tests of boundary conditions

• Confirmed managerial prescriptions

We DO offer:

• A theoretical framework organizing diverse phenomena

• Theory-consistent patterns in existing research

• Testable predictions for future empirical work

• Conjectural (not validated) strategic guidance

Where we reference existing studies (particularly Zhang et al., 2026), we present these as ILLUSTRATIVE CASES consistent with spatial lock-in predictions, not as confirmatory evidence. Post-hoc pattern identification differs fundamentally from prospective hypothesis testing.
Readers should approach managerial implications as theoretical conjectures requiring empirical validation before implementation.

Paper Roadmap

The paper proceeds as follows. We first review non-price promotion literature, emphasizing temporal lock-in in Reward-Program Promotions as a theoretical foundation. We then develop the spatial lock-in framework, explicitly identifying where the temporal-spatial analogy holds versus breaks down. Next, we demonstrate framework applicability across four merchandising domains, using billboard packaging (Zhang et al., 2026) as one illustrative case alongside store layout, product placement, and sequential advertising. We then derive boundary condition predictions from non-price promotion theory. Finally, we present theoretical implications, conjectural managerial guidance, and a prioritized research agenda for empirical validation.

Theoretical Background

The Challenge of Non-Price Competition

Marketing managers face a strategic dilemma. Price promotions effectively drive short-term volume (meta-analytic elasticity of -2.62; Bijmolt et al., 2005) but carry significant costs: margin erosion, increased consumer price sensitivity, damaged brand equity, and failure to expand category sales (Mela et al., 1997; Van Heerde et al., 2004). Yet alternatives remain theoretically fragmented. Package design, shelf placement, loyalty

programs, advertising, and visual merchandising are treated as separate phenomena with distinct literatures, lacking unifying theoretical principles.

Recent work on non-price promotional strategies offers progress. Bombaij et al. (2026) demonstrate that Reward-Program Promotions (RPPs), where consumers collect stamps toward free products, generate sales lifts of 51.4% (equivalent to 20.8% price discounts) without margin erosion. Critically, they identify temporal lock-in as the underlying mechanism: consumers commit to brands across multiple purchase occasions to complete collections, driven by goal-gradient effects and deadline pressure.

Temporal Lock-In: Mechanisms and Strategic Functions

Bombaij et al.'s (2026) temporal lock-in framework reveals how non-price tools create psychological value. The mechanism involves:

1. Incomplete Collections: Consumers begin accumulating stamps/points but have not yet reached reward thresholds, creating psychological incompletion (Zeigarnik effect).

2. Goal-Gradient Acceleration: As consumers approach completion, motivation and purchase frequency increase (Kivetz et al., 2006). The "anguish" of incomplete collections drives behavior.

3. Deadline Pressure: Time-limited programs create urgency, accelerating purchase decisions independent of economic calculation.

4. Effort Justification: Having invested time and purchases, consumers justify continued participation to avoid "wasting" prior effort (sunk cost effects).

Strategically, temporal lock-in serves critical functions:

• Competitive Differentiation: Allows brands to compete on dimensions other than price, particularly valuable in concentrated categories where price wars threaten margins.

• Category Expansion: Unlike price promotions that shift sales between brands, RPPs can expand total category sales by creating new purchase occasions.

• Loyalty Building: Multi-visit requirements create sustained engagement rather than one-time transactions.

• Margin Protection: Generates sales lift without reducing per-unit margins or signaling low quality through discounts.

Critically, Bombaij et al. (2026) document boundary conditions:

1. Category Concentration: RPPs generate 63.6% lifts in high-concentration versus 53.0% in low-concentration categories. When brands compete intensely, non-price differentiation becomes more valuable.

2. Price Interference: Combining RPPs with price discounts reduces effectiveness through "multi-attribute diminishing sensitivity", price becomes dominant and consumers ignore unique features.

3. Implementation Requirements: RPPs require infrastructure (tracking systems, reward fulfillment) and sustained consumer attention across visits.

This framework establishes that psychological mechanisms (goal completion) can rival economic mechanisms (price savings) in driving choice, and that strategic effectiveness depends on competitive context and isolation from price signals. We propose spatial lock-in as a complementary mechanism operating through different cognitive architecture but serving similar strategic functions.

Toward Spatial Lock-In: Visual Continuity as Commitment

While temporal lock-in captures consumers across time, spatial lock-in operates within moments through visual unity. The core insight: when multiple discrete elements are arranged to create perceptual continuity, the visual system processes them as unified wholes rather than separate parts. This Gestalt completion creates psychological commitment analogous to (but mechanistically distinct from) goal completion in temporal lock-in.

Gestalt psychology, dating to Wertheimer (1923), demonstrates that humans perceive organized patterns rather than collections of elements. Relevant principles include:

• Proximity: Objects placed near each other are perceived as grouped
• Continuity: Elements arranged on continuous lines/curves are perceived as related
• Closure: Minds complete incomplete patterns, filling gaps to perceive wholes
• Common Fate: Elements with shared characteristics are perceived as units

Recent consumer research validates these principles in merchandising contexts. Volles et al. (2024) show that consumers perceive bundled products as unified wholes, which alters quantity judgments and increases total purchases. Deng et al. (2016) demonstrate that display orientation (horizontal vs. vertical) affects processing fluency through match with human vision. These findings suggest strategic opportunities: if visual continuity creates perceptual unity, and unity enhances processing fluency, then creating spatial lock-in through coordinated visual elements should increase preference and choice.

Critically, spatial lock-in operates through different mechanisms than temporal lock-in:

• Processing Fluency: Unified displays are processed more easily than fragmented ones (Reber et al., 2004), generating positive affect and increased preference.

• Attentional Capture: Visual continuity creates larger perceptual footprints, automatically attracting attention (Milosavljevic et al., 2012).

• Immediate Response: Unlike temporal lock-in requiring multiple visits, spatial lock-in operates within single encounters through automatic perceptual processing.

• Unconscious Processing: Consumers may not consciously notice Gestalt unity, unlike deliberate collection tracking in RPPs.

Despite these mechanistic differences, we propose that spatial lock-in serves similar strategic functions: enabling competitive differentiation without price cuts, particularly in concentrated competitive environments. The next section develops this framework formally.

Developing the Spatial Lock-In Framework

Definition and Core Construct

SPATIAL LOCK-IN: FORMAL DEFINITION

Spatial lock-in occurs when multiple discrete visual elements (packages, display units, advertising exposures, environmental features) are arranged to create perceptual continuity, such that the visual system processes them as unified wholes rather than separate parts, generating commitment through Gestalt completion and processing fluency.
Key Components:

1. Multiple Discrete Units: Physically separate elements
2. Visual Continuity: Coordinated imagery/design creating perceptual flow
3. Gestalt Processing: Automatic grouping into unified wholes
4. Psychological Commitment: Preference for unified displays over fragmented alternatives
5. Choice Impact: Increased selection probability, attention, or engagement

This definition is intentionally general, applying across merchandising domains rather than tied to specific implementations. The construct requires multiple units (not single items), visual continuity (not random arrangements), and perceptual consequences (not just aesthetic preferences).

The Temporal-Spatial Analogy: Where It Holds

Table 1 - Spatial lock-in bears structural similarities to temporal lock-in

Dimension	Temporal Lock-In (RPPs)	Spatial Lock-In
Fundamental Mechanism	Incomplete collections create pressure to complete	Incomplete visual patterns create pressure to unify
Psychological Driver	Goal-gradient effects, deadline motivation	Gestalt completion, processing fluency
Commitment Type	Across time and multiple transactions	Within moment and single encounter
Strategic Function	Non-price differentiation in competition	Non-price differentiation in competition
Value Creation	Psychological (collection completion)	Psychological (perceptual unity)

As shown in Table 1, the analogy holds at strategic and structural levels: both create psychological value beyond economic savings, both enable competitive differentiation without margin erosion, both rely on incompletion → completion dynamics. These parallels justify borrowing boundary condition predictions from RPP theory (category concentration, price interference) while recognizing mechanistic differences.

Critical Section: Where the Temporal-Spatial Analogy Breaks Down

While spatial and temporal lock-in share structural similarities, important differences constrain the analogy's applicability:

1. TIME HORIZON AND RELATIONSHIP BUILDING
• Temporal: Requires multiple visits over days/weeks/months, building sustained brand relationships
• Spatial: Operates in single encounter lasting seconds, no sustained relationship
• Implication: Spatial lock-in cannot build long-term loyalty like RPPs; effects are immediate but potentially transient

2. COGNITIVE PROCESSING ARCHITECTURE
• Temporal: Deliberate, conscious, goal-oriented processing involving explicit calculation and commitment
• Spatial: Automatic, potentially unconscious, perceptual processing occurring below awareness threshold
• Implication: Different susceptibility to counterarguing, reactance, and deliberate avoidance

3. MOTIVATIONAL DYNAMICS
• Temporal: Goal-gradient acceleration, effort justification, sunk cost effects, deadline urgency
• Spatial: Processing fluency, attentional capture, aesthetic preference, completion satisfaction
• Implication: Similar outcomes (increased choice) through fundamentally different psychological routes

4. CONSUMER AWARENESS AND CONTROL
• Temporal: Consumers know they're collecting and can choose to stop
• Spatial: Consumers may not consciously notice visual unity or Gestalt grouping
• Implication: Different ethical considerations and potential for consumer backlash

5. COMPETITIVE IMITABILITY
• Temporal: Requires infrastructure (tracking systems, redemption processes, partnerships)
• Spatial: Relatively easy to copy (primarily arrangement and design coordination)
• Implication: Spatial lock-in may provide weaker sustainable competitive advantage

6. MEASUREMENT AND ATTRIBUTION
• Temporal: Easy to track (redemption rates, collection completion)
• Spatial: Difficult to isolate effects from other visual factors
• Implication: Harder to demonstrate ROI and optimize implementation

CRITICAL CAVEAT: The temporal-spatial framework proposes STRUCTURAL ANALOGY (both use incompletion-to-completion dynamics) and STRATEGIC PARALLELISM (both serve non-price differentiation functions) but NOT PSYCHOLOGICAL EQUIVALENCE. The mechanisms differ fundamentally in processing mode, time horizon, and motivational architecture.

Therefore, boundary condition predictions borrowed from RPP research (e.g., category concentration effects, price interference) should be treated as THEORETICAL CONJECTURES requiring empirical validation, not as confirmed extensions of RPP findings.

This explicit acknowledgment of analogy limits strengthens rather than weakens the framework. It clarifies scope, identifies empirical priorities, and prevents over-extension beyond justified theoretical grounds. The framework remains valuable for organizing phenomena and generating predictions while honestly acknowledging uncertainty about mechanistic parallels.

Spatial Lock-In Across Multiple Merchandising Phenomena

To establish spatial lock-in as a general theoretical construct rather than phenomenon-specific explanation, we demonstrate its applicability across four distinct merchandising domains: (1) billboard packaging, (2) store layout and environmental design, (3) product placement in media, and (4) sequential advertising. Each represents multiple discrete units arranged to create visual continuity, with evidence of choice effects consistent with spatial lock-in predictions.

Important methodological note: The evidence presented is THEORY-CONSISTENT rather than theory-confirming. These are post-hoc identifications of patterns aligning with spatial lock-in framework, not prospective hypothesis tests. Readers should interpret these as illustrative cases motivating future research, not as empirical validation.

Phenomenon 1: Billboard Packaging

Zhang et al. (2026) documented that arranging multiple product packages to form unified visual displays, termed "billboard packaging", substantially increases consumer choice. Their three studies showed 52-123% improvement across physical retail (farmers market), digital advertising (TikTok), and competitive choice (online shopping simulation). The mechanism proposed involved visual salience (larger perceived size) and Gestalt principles (perceptual unity).

Spatial Lock-In Interpretation: Billboard packaging represents a prototypical case of spatial lock-in. Multiple discrete units (individual packages) are arranged to create visual continuity (coordinated imagery forming larger displays). The visual system processes these as unified wholes through Gestalt grouping (proximity, continuity, closure). Processing fluency increases, attention is captured, and choice probability rises.

Patterns consistent with spatial lock-in framework:

• Effect magnitude increased with competitive intensity: Study 1c (maximum concentration: two brands head-to-head) showed strongest effect (h=0.58), while Study 1a (moderate competition: farmers market) showed medium effect (h=0.46), and Study 1b (lower product concentration, though high attentional competition) showed smaller effect (h=0.027).

• All studies held price constant or de-emphasized price information, potentially avoiding the interference effects predicted by non-price promotion theory.

• Effects appeared immediately (single exposure), consistent with automatic perceptual processing rather than deliberate calculation.

• Visual continuity was essential: the continuous image across packages created unity, not just multiple displays of the same product.

Limitations of this evidence: Studies were not designed to test spatial lock-in theory. Effect size progression across studies is suggestive but could reflect numerous alternative factors. No studies manipulated category concentration or price salience directly. Nevertheless, the pattern consistency provides initial plausibility for spatial lock-in framework while highlighting empirical priorities.

Phenomenon 2: Store Layout and Environmental Design

Retail environment research demonstrates that visual continuity across store sections influences shopping behavior, though this literature has not previously been organized under a unifying theoretical construct.

Evidence of spatial continuity effects:

• IKEA's showroom design creates visual narratives across multiple room displays, guiding customers through continuous spatial experiences. Research on IKEA specifically shows longer shopping durations and higher basket sizes compared to traditional layouts (Rosenbaum et al., 2017).

• Hui et al. (2013) demonstrate that visually cohesive store environments (coordinated color schemes, continuous design themes) increase approach behaviors and purchase intentions compared to visually fragmented layouts.

• Research on "visual merchandising zones" shows that coordinated displays of complementary products (e.g., complete outfit displays spanning multiple fixtures) increase cross-category purchases (Kerfoot et al., 2003).

Spatial Lock-In Interpretation: These phenomena reflect spatial lock-in at environmental scale. Multiple discrete sections (room displays, product zones, fixture arrangements) are coordinated to create perceptual flow. Customers unconsciously follow visual narratives,

processing the environment as unified experience rather than disconnected areas. This unity enhances engagement and purchase probability.

The mechanism aligns with spatial lock-in predictions: visual continuity creates processing fluency (easier navigation, reduced cognitive load), attentional guidance (visual paths through space), and aesthetic preference (unified environments preferred over chaotic ones). While existing research hasn't explicitly tested spatial lock-in, the pattern consistency is notable.

Limitations: Most store design research examines overall environments rather than isolating visual continuity effects. Many confounds exist (product assortment, pricing, service quality). Nevertheless, the consistent finding that visual coordination enhances outcomes supports spatial lock-in as plausible organizing framework.

Phenomenon 3: Product Placement in Film and Television

Product placement research reveals that spatial consistency across scenes, products appearing in multiple locations within a narrative, enhances brand recall and attitude, though mechanisms remain debated.

Evidence of spatial continuity in placement:

• Russell & Stern (2006) show that products appearing consistently across scenes (e.g., specific beverage brand visible in multiple locations throughout a film) generate higher recall than single prominent placements, even controlling for total exposure time.

• Balasubramanian et al. (2006) demonstrate that "visual plot connection", products integrated into visual narrative flow across scenes, enhances persuasion compared to disconnected appearances.

• Van Reijmersdal et al. (2009) find that placement effectiveness increases when products maintain visual consistency (same packaging, presentation style) across multiple appearances within programs.

Spatial Lock-In Interpretation: Consistent product placement across scenes creates spatial lock-in at narrative level. Multiple discrete appearances (different scenes, locations, contexts) are unified through consistent visual presentation. Viewers' perceptual systems integrate these into coherent brand presence rather than processing each appearance independently.

The mechanism involves Gestalt grouping across temporal sequence: repeated exposure with visual consistency creates unity despite varying contexts. This differs slightly from billboard packaging (spatial arrangement within single frame) but shares the core principle: discrete units coordinated to create perceptual continuity.

Limitations: Product placement research typically doesn't manipulate visual consistency systematically. Many alternative explanations exist (mere exposure, accessibility, source credibility). The spatial lock-in interpretation remains conjectural, though patterns are consistent.

Phenomenon 4: Sequential Advertising

Advertising research on multi-exposure campaigns reveals that visual continuity across sequential ads enhances persuasion, though existing frameworks emphasize repetition rather than perceptual unity.

Evidence of sequential visual effects:

• Historical examples: Burma-Shave roadside signs (1920s-1960s) created sequential word-by-word messages across multiple billboards. Drivers encountered incomplete messages requiring forward progress to complete, creating engagement and high recall (Rowsome, 1965).

• Magazine spread advertising: Research shows that advertisements spanning facing pages (creating unified large-format displays) generate higher attention and recall than separate single-page ads, even controlling for total ad size (Pieters & Wedel, 2004).

• Braun-LaTour & LaTour (2004) demonstrate that advertising campaigns with visual narrative continuity (consistent visual themes progressing across exposures) enhance memory reconstruction and brand attitude compared to thematically disconnected campaigns.

Spatial Lock-In Interpretation: Sequential advertising creates spatial lock-in across exposure occasions. Multiple discrete ad encounters are unified through consistent visual elements, creating perceptual narrative. Unlike temporal lock-in (which requires deliberate goal tracking), this operates through automatic pattern recognition: visual systems detect continuity and complete partial patterns unconsciously.

The Burma-Shave case is particularly illustrative: incomplete messages across billboards create literal incompletion-to-completion dynamics. Drivers encounter fragments requiring forward progress to unify. This mirrors spatial lock-in in packaged displays (incomplete images across packages) though distributed across space/time.

Limitations: Sequential advertising research confounds visual continuity with brand consistency, thematic repetition, and narrative structure. Isolating spatial lock-in effects requires specific manipulations not present in existing literature. Nevertheless, consistent findings that visual coordination enhances outcomes support framework plausibility.

Cross-Phenomenon Summary and Theoretical Implications

Table 2 summarizes spatial lock-in across phenomena:

Phenomenon	Discrete Units	Visual Continuity Mechanism	Evidence Consistency with Spatial Lock-In
Billboard Packaging	Individual packages	Coordinated imagery forming larger displays	Strong: Zhang et al. (2026) direct tests

Store Layout	Store sections/zones	Cohesive environmental themes	Moderate: correlational evidence
Product Placement	Scene appearances	Consistent brand presentation	Moderate: pattern consistent but confounded
Sequential Advertising	Ad exposures	Visual narrative continuity	Moderate: historical and experimental evidence

Several patterns emerge across phenomena:

1. Structural Consistency: All cases involve multiple discrete units arranged for visual continuity, supporting spatial lock-in as general framework rather than billboard-specific explanation.

2. Automatic Processing: Effects appear to operate through perceptual systems (Gestalt grouping, fluency) rather than deliberate cognition, distinguishing spatial from temporal lock-in.

3. Immediate vs. Delayed: Billboard packaging and store layout operate within single encounters; product placement and sequential advertising operate across time. This suggests spatial lock-in spans both simultaneously-present and temporally-distributed arrangements, provided visual continuity is maintained.

4. Scale Variance: Spatial lock-in operates at multiple scales (packages, store sections, narrative sequences), suggesting the principle is scale-free within perceptual processing constraints.

5. Evidentiary Gaps: While patterns are consistent, direct tests are limited primarily to billboard packaging (Zhang et al., 2026). Other domains show suggestive evidence but lack systematic manipulation of visual continuity.

These cross-phenomenon applications demonstrate that spatial lock-in transcends specific implementations, justifying its development as general theoretical construct. However, empirical validation across domains remains an essential priority.

Theoretical Predictions: Boundary Conditions and Moderators

Having established spatial lock-in as a general construct applicable across phenomena, we now derive boundary condition predictions. Drawing on non-price promotion theory (particularly Bombaij et al., 2026), we propose four categories of moderators while carefully distinguishing between theory-derived conjectures and empirically established principles.

CRITICAL METHODOLOGICAL NOTE:

The predictions below are THEORETICAL CONJECTURES, not empirically validated findings. They are derived by analogy from temporal lock-in research (RPPs) but have not been directly tested for spatial lock-in.

Readers should treat these as:
- Hypotheses for future research
- Plausible expectations based on theoretical parallels
- Agenda-setting predictions

NOT as:
- Confirmed effects
- Direct extensions of RPP findings
- Management prescriptions ready for implementation

Prediction Category 1: Competitive Context Moderators

Prediction 1.1 - Category Concentration. Drawing on Bombaij et al.'s (2026) finding that RPPs are more effective in concentrated categories, we conjecture that spatial lock-in should show strongest effects when many similar brands compete intensely. In concentrated markets, consumers engage in deliberate comparison, making visual differentiation more decisive.

Theoretical rationale: When brands are otherwise similar (comparable quality, pricing, positioning), perceptual features become tiebreakers. Spatial lock-in provides visual distinctiveness without communicating inferiority through price discounts. In concentrated competition, this distinctiveness is highly valued.

Supporting pattern (illustrative, not confirmatory): Zhang et al.'s (2026) Study 1c, maximum concentration with two brands displayed side-by-side, showed the strongest spatial lock-in effect (h=0.58). Study 1a, moderate concentration in farmers market, showed medium effect (h=0.46). This progression is consistent with concentration moderation, though alternative explanations exist (forced choice format, visual contrast, etc.).

Required empirical test: Systematic manipulation of competitor number (2, 4, 8, 16 brands) while holding other factors constant would directly test this prediction. We hypothesize inverted-U pattern: some competition enhances spatial lock-in (comparison highlights differences), but extreme clutter may overwhelm visual advantages.

Prediction 1.2 - Brand Similarity. We conjecture spatial lock-in is most valuable when competing brands are perceptually similar. When brands already differ dramatically (luxury vs. budget, different product categories), visual unity may matter less than substantive differences.

Prediction 1.3 - Purchase Involvement. For high-involvement decisions with extensive deliberation, spatial lock-in may matter less than for low-involvement quick choices. Visual unity operates automatically and immediately; extended deliberation may override perceptual influences.

Prediction Category 2: Price and Promotion Interference

Prediction 2.1 - Price Signal Prominence. Following Bombaij et al.'s (2026) finding that price discounts dilute RPP effectiveness through multi-attribute diminishing sensitivity, we conjecture that prominent price signage disrupts spatial lock-in through two mechanisms:

Mechanism A - Visual Disruption: Large price tags, "SALE" stickers, or promotional banners physically break visual continuity across units, destroying the Gestalt unity that defines spatial lock-in.

Mechanism B - Attentional Capture: Price information is highly salient and automatically processed (Chen et al., 2024). Prominent pricing shifts attention from perceptual (visual unity) to economic (price comparison) processing, reducing sensitivity to spatial features.

Supporting pattern: Zhang et al. (2026) held price constant across all studies or presented it subtly. This may explain the large effects observed, price interference was minimized. No study has directly tested price × spatial lock-in interactions.

Required empirical test: 2×2 design crossing spatial lock-in (present/absent) with price information prominence (prominent large tags vs. subtle small print). We predict negative interaction: largest spatial lock-in effect with subtle pricing, reduced or eliminated effect with prominent pricing.

Prediction 2.2 - Promotional Clutter. We conjecture that combining multiple promotional tactics simultaneously (spatial lock-in + price promotion + bonus packs + coupons) dilutes each tool's effectiveness. Consumers have limited attentional capacity; multiple signals compete rather than reinforce.

Prediction Category 3: Product and Category Characteristics

Prediction 3.1 - Visual Appeal. We conjecture spatial lock-in is most effective for visually appealing products where aesthetic presentation matters. Functional products with minimal visual differentiation (batteries, cleaning supplies) may benefit less from spatial coordination.

However, an alternative prediction exists: even visually mundane products might benefit from spatial lock-in through pure attentional capture (larger displays attract notice regardless of content). This represents an open theoretical question requiring empirical resolution.

Prediction 3.2 - Purchase Frequency. For frequently purchased categories (groceries, personal care), spatial lock-in may combine with temporal lock-in: initial visual capture leads to trial, repeated positive experiences build habit. For infrequent purchases (appliances, furniture), spatial lock-in operates in isolation.

Prediction 3.3 - Hedonic vs. Utilitarian. We tentatively predict larger spatial lock-in effects for hedonic products (enjoyed immediately, emotionally gratifying) than utilitarian products (functionally necessary, rationally evaluated). Perceptual fluency and aesthetic unity may resonate more with hedonic purchase motivations.

Prediction Category 4: Implementation and Design Factors

Prediction 4.1 - Degree of Visual Continuity. Not all multi-unit arrangements create equally strong Gestalt unity. We predict spatial lock-in strength increases with:

- Image alignment precision (perfect continuity > approximate continuity)
- Color coordination consistency (matching palettes > mismatched)
- Number of Gestalt cues activated (proximity + continuity + closure > proximity alone)
- Visual complexity reduction (simple unified > complex fragmented)

Prediction 4.2 - Minimum Units Required. Spatial lock-in likely requires minimum threshold of units to create meaningful continuity. A single package cannot exhibit spatial lock-in (no multiple units). Two packages may create weak effect. Three or more packages likely optimize the unity-to-effort ratio.

Required empirical test: Systematic variation of unit number (2, 3, 4, 5, 6+) would identify optimal configuration and diminishing returns threshold.

Prediction 4.3 - Orientation and Spatial Arrangement. Drawing on Deng et al.'s (2016) finding that horizontal displays enhance processing fluency through match with binocular vision, we predict horizontal billboard arrangements outperform vertical arrangements for spatial lock-in.

Summary of Boundary Condition Predictions

Table 3 summarizes predictions by priority for empirical testing:

Prediction	Theoretical Basis	Current Evidence	Testing Priority
Price interference reduces spatial lock-in	RPP multi-attribute diminishing sensitivity	None (never tested)	HIGHEST
Category concentration amplifies spatial lock-in	RPP concentration moderation	Suggestive pattern in Zhang et al.	HIGH
Visual appeal moderates effect magnitude	Processing fluency theory	None (only attractive products tested)	MEDIUM
Horizontal > vertical orientation	Binocular vision match (Deng et al. 2016)	Billboard packaging typically horizontal	MEDIUM
Optimal unit number (3-5 packages)	Gestalt completion	Zhang et al. used 3 units	LOW

	requirements		

These predictions provide specific, falsifiable hypotheses for empirical validation while honestly acknowledging their conjectural status. The framework's value lies not in confirmed effects but in organizing phenomena and generating testable implications.

Theoretical Implications and Contributions

What Spatial Lock-In Explains That Existing Theories Do Not

To justify spatial lock-in as a distinct theoretical construct rather than relabeling existing concepts, we must demonstrate unique explanatory power. What does spatial lock-in explain that visual salience, Gestalt theory, or processing fluency cannot?

Existing visual perception frameworks would predict:

- Larger displays attract more attention (visual salience)
- Unified images are processed more fluently (Gestalt principles)
- Fluent processing generates positive affect (processing fluency)
- Therefore, coordinated displays should increase preference

These predictions are correct but incomplete.

Spatial lock-in adds:

1. STRATEGIC POSITIONING: Connecting visual effects to non-price promotion literature reveals WHY visual coordination matters competitively. It's not just perceptual aesthetics, it's competitive differentiation serving the same strategic function as reward programs.

2. BOUNDARY CONDITION STRUCTURE: Visual perception theories don't predict category concentration effects or price interference. Spatial lock-in, positioned within promotional strategy, inherits these predictions from temporal lock-in research.

3. CROSS-PHENOMENON UNIFICATION: Existing frameworks treat billboard packaging, store design, product placement, and sequential advertising as separate phenomena. Spatial lock-in reveals common structure: discrete units → visual continuity → perceptual commitment.

4. MECHANISM SPECIFICATION: While Gestalt theory describes WHAT happens (unity perception), spatial lock-in specifies WHY it matters strategically and WHEN it operates most effectively (competitive contexts, price isolation).

5. MANAGERIAL DECISION FRAMEWORK: Visual perception theories guide design but not strategy. Spatial lock-in provides decision principles for WHEN to invest in visual coordination vs. alternative promotional tools.

This is analogous to how temporal lock-in (RPPs) adds value beyond general goal theory: it specifies strategic context, boundary conditions, and competitive functions. Spatial lock-in performs similar organizing role for visual phenomena.

Relationship to Adjacent Theoretical Frameworks

Spatial lock-in intersects with several existing frameworks. Clarifying these relationships prevents theoretical overlap and identifies complementarity:

Relationship to Visual Attention Theory (Pieters & Wedel, 2004): Visual attention research explains HOW displays capture notice through salience, contrast, and size. Spatial lock-in accepts these mechanisms but adds: (1) strategic positioning within competitive contexts, (2) emphasis on multi-unit coordination rather than single-item optimization, (3) connection to non-price promotion functions.

Relationship to Gestalt Psychology (Wertheimer, 1923; Wagemans et al., 2012): Gestalt principles describe perceptual grouping laws. Spatial lock-in applies these principles to strategic merchandising contexts, specifying: (1) when grouping creates competitive advantage, (2) how unity translates to choice, (3) boundary conditions limiting effectiveness.

Relationship to Processing Fluency (Reber et al., 2004): Processing fluency explains preference for easily-processed stimuli. Spatial lock-in specifies: (1) how multi-unit arrangements enhance fluency through visual coordination, (2) when fluency advantages translate to market outcomes, (3) competitive contexts amplifying fluency effects.

Relationship to Mental Accounting and Bundling (Thaler, 1985; Volles et al., 2024): These frameworks address how consumers perceive grouped products. Spatial lock-in extends by: (1) emphasizing VISUAL unity over functional bundling, (2) applying to displays rather than pricing bundles, (3) connecting to non-price strategic functions.

The pattern: spatial lock-in integrates existing perceptual mechanisms within strategic promotional framework, adding boundary conditions and competitive positioning absent from perceptual theories alone.

Advancing Non-Price Promotion Theory

Spatial lock-in contributes to non-price promotion literature by:

1. Revealing Mechanism Diversity: Non-price tools work through varied psychological routes, goal completion (RPPs), perceptual unity (spatial lock-in), social proof (reviews/ratings), expertise cues (certifications), scarcity (limited editions). Understanding this diversity helps managers select appropriate tools for specific contexts.

2. Identifying Common Strategic Functions: Despite mechanistic diversity, non-price tools serve similar strategic ends: competitive differentiation without margin erosion, escape from price wars, category expansion, psychological value creation. This functional similarity suggests substitutability in strategic planning.

3. Specifying Complementarity Conditions: When should tools be combined vs. isolated? RPP research shows price discounts interfere with temporal lock-in. We predict

similar interference with spatial lock-in. But temporal and spatial lock-in might complement each other: visual capture drives trial, collection programs build loyalty.

4. Organizing Promotional Mix Decisions: The temporal-spatial framework provides initial structure for broader promotional categorization. Future work might identify additional lock-in dimensions (social lock-in through network effects? experiential lock-in through customization?).

Scope Limitations and Explicit Non-Claims

WHAT THIS FRAMEWORK DOES NOT CLAIM:

1. Empirical Validation: We have not empirically validated spatial lock-in. The framework organizes existing findings and generates predictions but requires systematic testing.

2. Psychological Equivalence to Temporal Lock-In: We claim structural analogy and strategic parallelism, NOT mechanistic identity. Processing differs fundamentally.

3. Universal Applicability: Spatial lock-in likely works best for: visually-oriented categories, concentrated competition, low-involvement decisions, absent price interference. Boundaries remain empirically uncertain.

4. Superiority to Alternatives: We do not claim spatial lock-in outperforms price promotions, advertising, or other tools. Effectiveness depends on context and implementation.

5. Managerial Prescriptions: Recommendations are theoretical conjectures requiring validation before implementation. Managers should pilot-test before full deployment.

6. Complete Explanation: Spatial lock-in explains certain patterns but doesn't account for all visual merchandising effects. Many factors influence consumer choice beyond perceptual unity.

These explicit non-claims protect against over-interpretation while preserving the framework's legitimate contributions: theoretical organization, cross-phenomenon application, testable predictions, and research agenda.

Managerial Conjectures: Theoretical Guidance Requiring Empirical Validation

IMPORTANT DISCLAIMER:

The guidance below represents THEORETICAL CONJECTURES derived from the spatial lock-in framework, NOT empirically validated recommendations.
Managers should treat these as:
• Hypotheses worth pilot-testing
• Conceptual frameworks for thinking about visual merchandising
• Starting points for experimentation

NOT as:
• Proven best practices
• Guaranteed effective strategies
• Ready for large-scale implementation without testing

We recommend small-scale pilots with careful measurement before full deployment.

Conjecture 1: Visual Coordination as Competitive Strategy

We theorize that visual merchandising should be treated as competitive strategy, not merely aesthetic design. In concentrated categories where brands compete intensely and price wars threaten margins, spatial lock-in may provide differentiation without discounting.

Hypothesized decision framework:

USE SPATIAL LOCK-IN WHEN (conjecture):
• Category is visually oriented (food, beverage, fashion, cosmetics)
• Competition is intense with many similar brands
• Price wars are damaging margins
• Products are displayed in multiples (not singles)
• Visual coordination is feasible (package design allows)

AVOID SPATIAL LOCK-IN WHEN (conjecture):
• Products are purely functional with no visual appeal
• Competition is minimal (monopoly/oligopoly)
• Products are always sold individually
• Visual complexity is inherently high (cannot simplify)
• Implementation costs exceed expected benefits

These conjectures await empirical testing across categories and competitive contexts.

Conjecture 2: Avoiding Promotional Interference

Drawing on RPP research showing negative synergies between reward programs and price discounts, we hypothesize that spatial lock-in works best when not diluted by competing promotional signals.

Hypothesized implementation principles:

1. Price Signal Management (conjecture):
   • Present pricing subtly (small print, standard location)
   • Avoid large "SALE" stickers disrupting visual continuity
   • Test whether price-off tags reduce spatial lock-in effects

2. Promotional Isolation (conjecture):
   • Execute spatial lock-in OR price promotion, not both simultaneously
   • If combining promotions is necessary, minimize visual interference
   • Track which combination performs best for your category

3. Visual Field Protection (conjecture):
   • Maintain uninterrupted visual continuity across units
   • Remove point-of-sale materials blocking coordinated displays
   • Educate retailers on preserving spatial arrangements

Again, these represent theoretical expectations requiring empirical validation. The 70% of firms combining RPPs with price cuts (Bombaij et al., 2026) may be making similar mistakes with spatial lock-in.

Conjecture 3: Choosing Among Non-Price Tools

We propose a preliminary decision matrix for selecting among promotional strategies as shown in Table 4, though this remains highly speculative:

Strategic Goal	Spatial Lock-In	Temporal Lock-In (RPPs)	Price Promotion
Immediate sales boost	Potentially effective (untested)	Delayed effect (multi-visit)	Highly effective (proven)
Long-term loyalty building	Unlikely (single encounter)	Highly effective (proven)	Ineffective (erodes loyalty)
Margin protection	Yes (no price reduction)	Yes (rewards amortized)	No (direct margin hit)

Table 4: Preliminary decision matrix

This matrix requires substantial refinement through empirical research. The "potentially effective" and "untested" cells highlight uncertainty.

Conjecture 4: Implementation Best Practices

If spatial lock-in proves empirically valid, we hypothesize the following implementation principles:

For Package Designers:
• Design packages with billboard potential from inception
• Ensure images align precisely when units are placed adjacently
• Test prototypes in multi-unit configurations, not just single units
• Create modular visual systems working individually or collectively

For Brand Managers:
• Develop visual merchandising guidelines for retailers
• Provide planograms showing optimal spatial arrangements
• Monitor in-store compliance with coordinated displays
• Track sales impact relative to standard displays

For Retailers:
• Allocate shelf space enabling visual coordination for priority brands
• Train staff on maintaining spatial arrangements during restocking
• Test which brands/categories benefit most from spatial lock-in
• Consider spatial lock-in potential in category management decisions

For All Stakeholders:
• Start with small-scale pilots measuring effects carefully
• Compare spatial lock-in performance to price promotions and control
• Document lessons learned for continuous improvement
• Share findings to advance industry understanding

These practices represent informed speculation based on theory rather than validated protocols. Empirical testing will refine or refute them.

Critical Reminder on Managerial Guidance

We reiterate: These managerial conjectures are NOT validated recommendations.

The spatial lock-in framework is theory-building, not theory-confirming. Managers implementing these ideas should:

1. Treat them as hypotheses, not proven strategies
2. Conduct small-scale pilots with careful measurement
3. Compare results to control conditions and alternative promotions
4. Document outcomes to contribute to empirical knowledge
5. Be prepared for null effects or unexpected interactions

The framework's value lies in organizing thinking and generating testable ideas, not in providing ready-to-implement solutions. Academic researchers and industry practitioners must collaborate to empirically validate (or refute) these conjectures before widespread adoption.

Research Agenda: Priorities for Empirical Validation

The spatial lock-in framework generates numerous testable predictions. We prioritize empirical studies by: (1) theoretical importance (addressing core framework assumptions), (2) practical feasibility (ease of implementation), and (3) potential impact (likelihood of advancing knowledge or practice).

Highest Priority Studies (Critical for Framework Validation)

Study 1: Price Interference Test

Design: 2 (spatial arrangement: billboard lock-in vs. regular) × 2 (price information: prominent vs. subtle) between-subjects experiment

Prediction: Negative interaction such that:
• Largest spatial lock-in effect with subtle pricing
• Reduced or eliminated effect with prominent pricing

Rationale: Tests core prediction borrowed from RPP literature about multi-attribute diminishing sensitivity. If price DOESN'T interfere, this questions the temporal-spatial analogy's applicability.

Method: Online or in-store experiment with real products, manipulating price tag size/prominence while controlling actual prices. Measure choice, attention (eye-tracking if possible), and price recall.

Impact: HIGH - directly tests whether spatial lock-in follows RPP patterns

Study 2: Category Concentration Manipulation

Design: Between-subjects with varying competitor numbers (2, 4, 8, 16 brands)

Prediction: Spatial lock-in effect increases with category

concentration, possibly showing inverted-U (some competition optimal, extreme clutter overwhelming)

Rationale: Tests whether competitive context moderates spatial lock-in as it does temporal lock-in

Method: Simulated shopping environment where participants choose among varying numbers of competitors. Manipulate which brand has spatial lock-in while controlling other factors.

Impact: HIGH - establishes boundary condition crucial for strategic application

Study 3: Multi-Phenomenon Validation

Design: Separate experiments testing spatial lock-in across:
- Billboard packaging (replication of Zhang et al., 2026)
- Store layout (coordinated vs. random section themes)
- Product placement (consistent vs. varied visual presentation)
- Sequential advertising (continuous vs. disconnected visual narratives)

Prediction: Consistent positive effects across domains, though magnitudes may vary

Rationale: Establishes spatial lock-in as general construct rather than billboard-specific

Method: Domain-appropriate experiments with common measurement approach (choice probability, attention, preference)

Impact: VERY HIGH - determines framework generalizability

High Priority Studies (Important for Mechanism Understanding)

Study 4: Mechanism Mediation Test

Design: Mediation analysis testing:
- Spatial lock-in → Perceived visual unity → Choice
- Spatial lock-in → Processing fluency → Choice
- Spatial lock-in → Attentional capture → Choice

Prediction: All three pathways partially mediate effects

Method: Manipulate spatial lock-in, measure proposed mediators, and test sequential mediation

Impact: HIGH - validates proposed mechanisms vs. alternatives

Study 5: Temporal Decay Test

Design: Vary time between spatial lock-in exposure and choice (immediate, 1 hour, 1 day, 1 week)

Prediction: Effects decay rapidly (unlike temporal lock-in which builds over time)

Rationale: Tests key difference between spatial and temporal lock-in

Impact: MEDIUM-HIGH - clarifies mechanism distinctiveness

Medium Priority Studies (Refining Boundaries)

Study 6: Visual Appeal Moderator

Design: Test spatial lock-in across product categories varying in visual appeal:
- High visual: food, fashion, cosmetics
- Medium visual: electronics, toys
- Low visual: batteries, cleaning supplies, industrial products

Prediction: Uncertain - could show linear decrease with lower visual appeal OR null moderation if pure attentional capture drives effects

Impact: MEDIUM - determines category applicability

Study 7: Optimal Configuration

Design: Vary number of units (2, 3, 4, 5, 6+) and spatial arrangement (horizontal, vertical, circular, random)

Prediction: 3-5 units optimal, horizontal superior to vertical

Impact: MEDIUM - provides implementation guidance

Study 8: Brand Equity Interaction

Design: Test spatial lock-in for:
- Strong established brands (Coca-Cola, Nike)
- Weak/unknown brands
- Private labels

Prediction: Larger effects for weak brands (stronger brands less dependent on visual advantages)

Impact: MEDIUM - strategic guidance for when to invest

Lower Priority Studies (Extensions and Applications)

Study 9: Long-Term Effects

Design: Longitudinal tracking of consumers exposed to spatial lock-in over multiple shopping occasions

Prediction: Uncertain - could build habit OR habituate and lose effectiveness

Impact: MEDIUM - practical importance but difficult execution

Study 10: Cross-Cultural Validation

Design: Replicate core effects in Western, Asian, African, Latin American contexts

Prediction: Gestalt principles likely universal, but magnitude may vary culturally

Impact: MEDIUM - determines geographic scope

Study 11: Competitive Response Dynamics

Design: Agent-based modeling or game-theoretic analysis of:
- What happens when all brands adopt spatial lock-in?
- Does advantage disappear when competitors respond?

- Equilibrium outcomes

Prediction: First-mover advantage exists but erodes with widespread adoption

Impact: MEDIUM - strategic but difficult to test empirically

Research Agenda Summary

Table 5 prioritizes empirical studies:

Study	Research Question	Priority Level	Feasibility
1. Price Interference	Does prominent pricing disrupt spatial lock-in?	HIGHEST	High
2. Concentration	Does competition intensity moderate effects?	HIGHEST	High
3. Multi-Phenomenon	Does framework apply across domains?	HIGHEST	Medium
4. Mechanism Mediation	What cognitive processes drive effects?	HIGH	High
5. Temporal Decay	How quickly do effects dissipate?	HIGH	Medium
6. Visual Appeal	Does product aesthetics moderate effects?	MEDIUM	High
7. Configuration	What arrangement optimizes effects?	MEDIUM	Medium
8. Brand Equity	When does brand strength matter?	MEDIUM	Medium
9. Long-Term	Do effects persist or habituate?	LOW	Low
10. Cross-Cultural	Are effects universal?	LOW	Medium
11. Competitive Dynamics	What happens when all brands adopt?	LOW	Very Low

This research agenda provides clear direction for empirical validation. We encourage researchers to tackle highest-priority studies first, as these address core framework assumptions. The framework's ultimate value depends on empirical support emerging from these studies.

CONCLUSION

We developed spatial lock-in as a theoretical framework for understanding how visual continuity across multiple units creates consumer commitment in merchandising contexts. The framework contributes by organizing diverse phenomena under a coherent conceptual structure, generating testable predictions, and providing strategic guidance for non-price competitive differentiation.

Our core theoretical contribution is identifying structural parallels between spatial and temporal lock-in while explicitly acknowledging mechanistic differences. Both create psychological value through incompletion-to-completion dynamics (visual patterns vs. collection goals), both enable competitive advantage without price cuts (visual unity vs. program membership), and both likely suffer from promotional interference (price signals disrupting either visual or motivational lock-in). Yet they operate through fundamentally different cognitive architectures: automatic perceptual processing versus deliberate goal tracking, single-encounter impact versus multi-visit commitment, unconscious Gestalt completion versus conscious collection monitoring.

We demonstrated framework applicability across four merchandising phenomena: billboard packaging (Zhang et al., 2026), store layout design, product placement in media, and sequential advertising. This cross-phenomenon consistency suggests spatial lock-in transcends specific implementations, justifying its development as general theoretical construct. However, we explicitly acknowledge that evidence remains primarily illustrative rather than confirmatory. Systematic empirical validation across domains represents the highest research priority.

The framework generates specific, falsifiable predictions derived from non-price promotion theory: category concentration should amplify spatial lock-in effects, prominent price signals should disrupt spatial lock-in through attentional interference, visual appeal should moderate effect magnitude, and optimal configurations should involve 3-5 horizontally-arranged units. These predictions await empirical testing. We presented them as theoretical conjectures, not validated findings, maintaining honest uncertainty about empirical support.

Practically, the framework suggests treating visual merchandising as competitive strategy rather than merely aesthetic design. In concentrated categories where price wars threaten margins, spatial lock-in may provide

differentiation without discounting. However, we emphasized that managerial recommendations remain speculative pending empirical validation. Managers should pilot-test ideas carefully rather than implementing them at scale based on theoretical conjecture alone.

This paper exemplifies theory-building scholarship: organizing existing findings under novel conceptual frameworks, generating testable implications, and motivating future empirical work. We did not empirically validate spatial lock-in but rather presented a conceptual lens that makes existing patterns coherent and future research directions clear. The framework's ultimate value depends on empirical validation efforts responding to our research agenda.

The temporal-spatial framework opens broader theoretical questions. If lock-in occurs across time (temporal) and space (spatial), might other dimensions exist? Social lock-in through network effects? Experiential lock-in through customization? Identity lock-in through value alignment? The framework provides initial structure for categorizing non-price promotional mechanisms by the dimension along which commitment occurs. Future theoretical work might elaborate this multidimensional space.

In closing, marketing theory advances through iterative cycles: phenomena are documented, patterns are observed, frameworks are proposed, predictions are generated, empirical tests are conducted, theories are refined or rejected. This paper contributes to the framework-proposal stage. We identified patterns across diverse phenomena, proposed spatial lock-in as unifying construct, derived testable predictions, and outlined validation priorities. Empirical researchers must now conduct systematic tests determining whether spatial lock-in withstands scrutiny or requires refinement.

The battle for consumer attention has multiple fronts. Price competition is one, but it erodes margins and damages brands. Temporal lock-in through reward programs is another, but it requires infrastructure and sustained engagement. Spatial lock-in represents a third possibility: capturing consumers through visual unity, differentiating through perceptual processing, competing through psychological value rather than economic value. Whether this possibility proves empirically viable remains to be determined, but the theoretical case warrants serious investigation..

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