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Extreme Makeover: Short- and Long-Term Effects of a Remodeled Servicescape

Journal of Marketing
Vol. 75 (September 2011), 71–87

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Thanks to the Marketing Science Institute for their financial support in this study

Servicescape

- Environment where the service is delivered and where the customer and the firm interact

  (Bitner 1992)

- “Physical evidence” = tangible cue to assess the quality of the service provided

Servicescape

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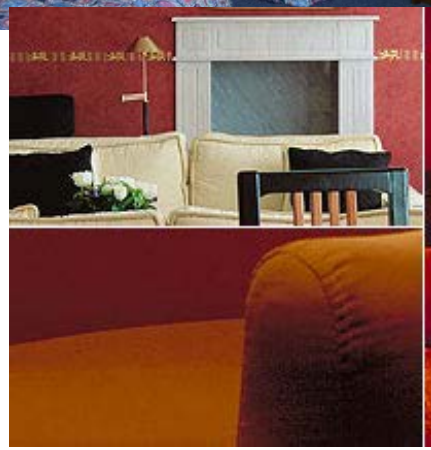

Importance of the Servicescape

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- Service providers spend millions of dollars per year to design, build, and furnish their service establishments:

- Marriott persuaded franchisees to spend more than $1 billion to update all 628,000 bedrooms worldwide

- Red Lobster changed traditional “wharf-side” layout into “coastal home” setting

- Washington Mutual has a patent on the “welcoming and inviting” design it developed for its bank branches

- Disney will spend $1.1 billion on an “extensive makeover” of its California Adventure park, including a redesign of the entrance plaza

- Victoria’s Secret will remodel 80% of its stores within 5 years

BusinessWeek

Cover Story

May 15, 2006

News Analysis & Commentary

FOOD

MICKEY D'S McMAKEOVER

The heavy plastic look is history. A clean, simple design is on the way in

BY PALLAVI GOGOI

A COMFORTABLE ARMchair. Cool hanging lights. Funky graphics and photos on the walls. Wi-Fi access. Premium coffee. Isn't Starbucks great? Except... this is McDonald's. McDonald's? That's right. After 30 years without a major design overhaul, the 51-year-old fast-food giant is adopting a hip new look. The world's largest hamburger chain is redesigning its 30,000 eateries around the globe in a 21st century makeover of unprecedented scale.

The redesign is risky and has many franchisees up in arms over the high costs of a makeover. But company officials believe the overhaul is needed. McDonald's, whose restaurants are visited by more than 40 million people every day, has moved aggressively over the past three years to revamp its menu and attract a new breed of customer. It has added healthier items like premium salads targeted at women, and apple slices and skim milk for children. But as more upscale items like Asian chicken salad show up on its menu, the chain's typical starkly lit, plastic-heavy look is at odds with the contemporary, welcoming image the company wants to present. "McDonald's promises to be a 'forever young' brand," says John Miologos, vice-president of worldwide architecture, design, and construction at McDonald's Corp. "We have to deliver on that promise." The last major change at McDonald's restaurants was the introduction of play places for children in the early 1980s.

NEW COLORS

WHAT WILL THE NEW McDonald's look like? "Think iPod: clean lines, simplicity," says Miologos. The signature mansard roof? History. "The big red roof looks too dated today," says John Bricker, creative director at design firm Gensler's brand-strategy arm, Studio 585. It's being replaced by a flat roof topped by a newly designed, contemporary, golden sloping curve. Ronald appears safe: The mascot was ... sportier look just last year ... golden arches will st...

Existing Research

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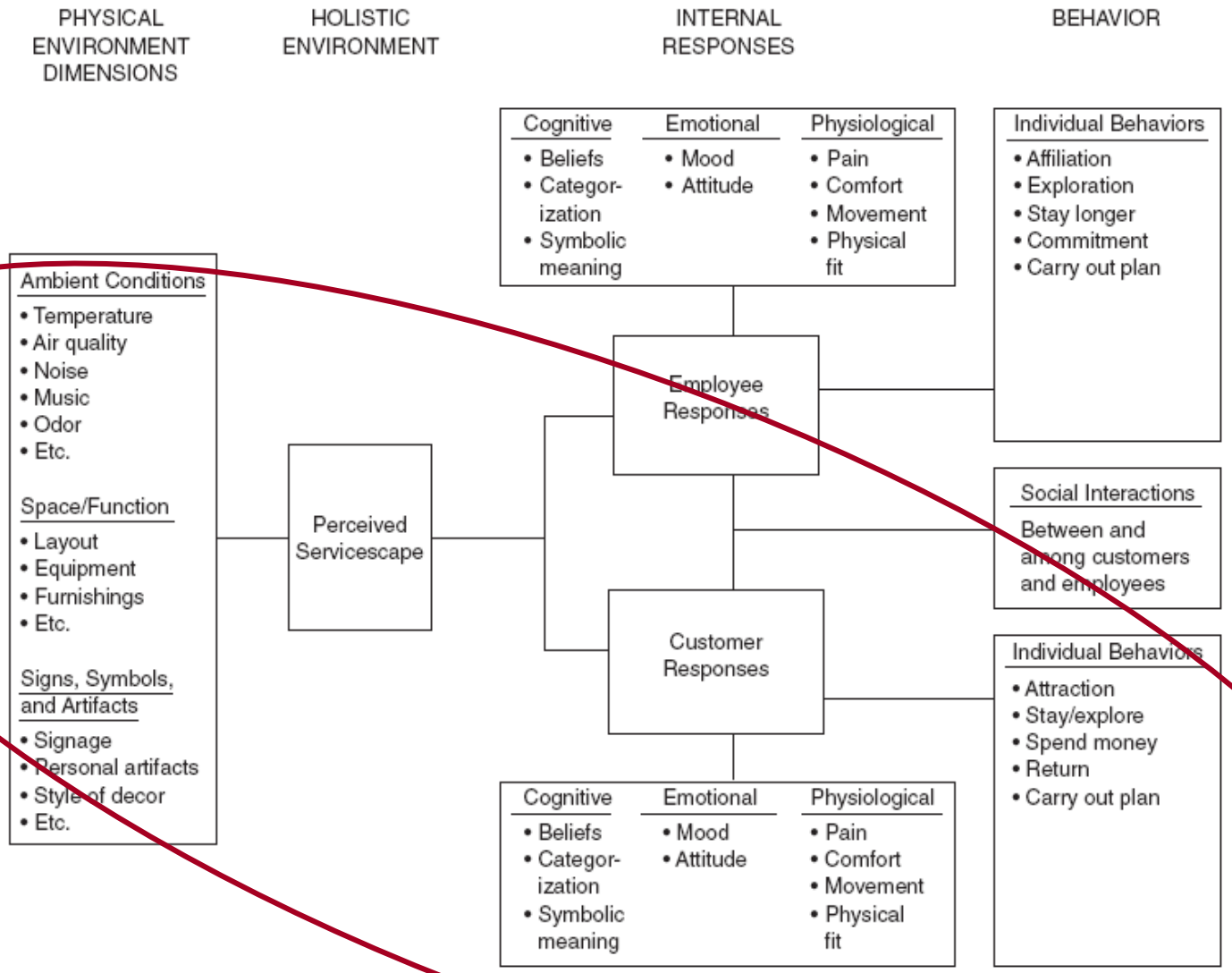
- Servicescape Framework by Mary Jo Bitner (1992)
  - Customers perceive the environment as a **holistic** pattern of ambient, design, and social factors
  - Customers respond cognitively and emotionally to the environment
  - These “internal responses” to the servicescape influence customer behavior of interest to service managers:
    - attraction
    - stay/explore
    - spend money
    - return

Servicescape Model (Bitner 1992)



Existing Research

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- Empirical evidence supports the influence of different (individual) aspects of the servicescape on customer responses
  - lighting
  - music (volume, pace)
  - scent
  - spatial layout (crowding)
  - equipment/furnishings

(e.g., Baker et al. 1992; Baker et al. 1994; Milliman 1982, 1986; Mitchell et al. 1995, Spangenberg et al. 1996)

Existing Research

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- Cross-sectional investigations only
  - impact of changes over time not studied
- Individual servicescape elements examined
  - no research on a major remodeling effort with many elements being changed
- Impact on psychological constructs explored
  - impact on actual sales has not been investigated

Research Objective

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- To examine the short- and long-term impacts of a significant servicescape remodeling of a service environment on:
  - store revenues
  - average customer spending
  - store traffic
  - customers' affective and cognitive responses
  - behavioral intentions

- Note: We assume that the remodeled design is carefully selected by the service provider…

  Thus, we are not investigating *how* to remodel a store, but rather *whether or not a firm should make such an investment.*

Short-term Effects of Remodeling

- Ample conceptual and empirical work suggests that the servicescape provides informational cues that help customers develop beliefs, feelings, and behavioral intentions toward the store's offering.
  - An appealing store environment (either in general or specific dimensions) positively influences cognitive and affective responses (e.g., product and service attitudes, satisfaction, perceived quality and value, and store image).

    (Baker et al. 2002; Baker, Grewel, and Parasuraman 1994)
  - The servicescape also has a positive impact on behavioral responses (e.g., patronage/purchase intentions, word-of-mouth communication, and loyalty).

    (Hightower, Brady, and Baker 2002)

- H_1: *Store remodeling has a positive short-term effect on (a) cognitions, (b) affect, and (c) behavioral intentions.*

Long-term Effects of Remodeling

- Adaptation-level theory
  - A person perceives stimuli only relative to an adapted standard
  - Changes in stimuli may produce effects, but the new experiences become integrated into the adaptation level and thus become the new frame of reference

    (Helson 1964)
  - Thus, short-term reactions to environmental stimuli lose strength in the long run

    (Russell and Lanius 1984)

- H_2: *Any short-term impact of store remodeling on (a) cognitions, (b) affect, and (c) behavioral intentions loses strength in the long run.*

Moderating Effects

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- Store visit characteristics: spontaneous vs. planned visits
  - Consumers who plan store visits are more likely to generate and activate shopping scripts

    (Block and Morwitz 1999)
  - Consumers who do not plan their shopping trips are more likely to rely on external information and let the store environment shape their purchase trip

    (Bucklin and Lattin 1991)

- H_3: *The effects of store remodeling on (a) cognitions, (b) affect, and (c) behavioral intentions are greater for spontaneous than for planned trips.*

Moderating Effects

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- Store visit characteristics: group vs. single-customer visits
  - The presence of companions during the shopping or consumption process reinforces consumers' responses

    (Tombs and McColl-Kennedy 2003)
  - Interactions with companions can increase appraisals of and emotional responses to the consumption experience

    (Holt 1995)
  - The servicescape forms an essential part of this experience and may prompt customers to exhibit more pronounced behavioral responses

    (Chendenen, Herman, and Polivy 1994)

- H_4: *The effects of store remodeling on (a) cognitions, (b) affect, and (c) behavioral intentions are greater for group than for single-customer trips.*

Effects of Remodeling on Store Performance

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- Two approach behaviors, average customer spending and store traffic (decision to visit the store), should exhibit response patterns similar to H_1 and H_2.
  - However, **customer spending** is likely to be more sensitive to remodeling than is **store traffic**. Why?
    1. Spending takes place in the presence of the store environment
       (Spangenberg et al. 2006)
    2. Store traffic (decision to visit the store) naturally occurs outside of the servicescape and is thus less susceptible to the influence of the store environment
       (Bettman 1979)
    3. Remodeling may actually lead to negative store traffic for some customers
       (Moe and Young 2009)

- H_5: *The percentage impact of store remodeling on store traffic is less than its percentage impact on average customer spending.*

Empirical Study

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- Natural experiment in European branches of an American fast-food chain
- In 2006, several restaurants underwent major remodeling
  - costs of remodeling start at $300,000/store
  - servicescape makeover prototyped in several stores
  - many elements of the servicescape were changed:
    - colors
    - quality of materials
    - paintings
    - lighting
    - spatial layout
    - furnishings
    - and many other elements

Colors and Quality of Materials

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Before

After

Paintings

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Before

After

Lighting

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Before

After

Layout

After

Before

Furnishings

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Before

After

“After” Video

Research Design

- In-depth analysis of two stores
  - one treatment and one control store (carefully selected)
  - for the period January 2006 – September 2007
    - 2997 respondents across four waves of data collection
  - remodeling at treatment store began in September 2006
    - remodeling completed over a three-week period (store remained open for business)
- Survey measuring affective responses, cognitive responses, and behavioral intentions:
  - after respondents have eaten and experienced environment
  - different times of day and days of week
- Survey data collected at four points in time:
  - 2 months before remodeling (599 treatment; 93 control)
  - right after the remodeling (782 treatment; 100 control)
  - 5 months after the remodeling (677 treatment; 103 control)
  - 12 months after the remodeling (421 treatment; 222 control)

Research Design – 3 Stages

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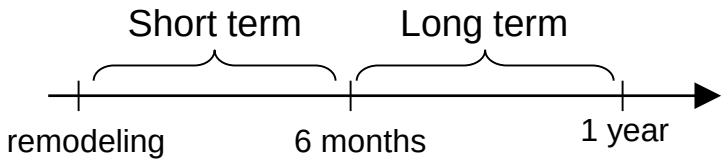
Stage 1

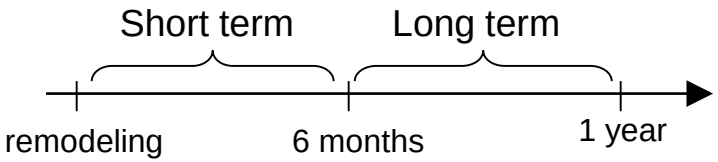
Revenue
weekly revenue data for 18 stores,
6 of which were remodeled (*six treatment stores*)



Stage 2

Store Traffic
weekly number of transactions for 2 stores

Average Customer Spending
weekly average spending per transaction for 2 stores

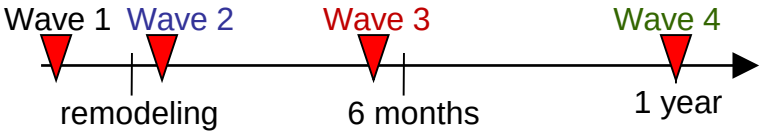


Stage 3

Subjective Measures
customer survey data collected at 4 points in time, in 2 stores (*one treatment store, one control store*)

Behavioral Intentions
desire to stay, loyalty, word-of-mouth communication

Cognition and Affect
overall satisfaction, encounter satisfaction, perceived service quality, perceived value, store image, attitude



Manipulation Check

- Did servicescape perceptions truly **increase** after the remodeling?
- 13-item battery measured respondent perceptions
- Two-way MANCOVA:
  - Factors:
    - store (treatment/control) and wave (1/2/3/4)
  - Co-variates
    - gender, age, store visit characteristics (spontaneous/planned and group/singe customer)
  - The overall interaction between store and wave is highly significant:
    - Wilks' $\Lambda = .895$
    - $F(39, 8031.6) = 7.830$
    - $p < .001$

- Bottom line:
  - The remodeling improved customer perceptions of the servicescape.
    - One exception: in-store lighting perceptions did NOT improve

Analyses & Results – Stage 1

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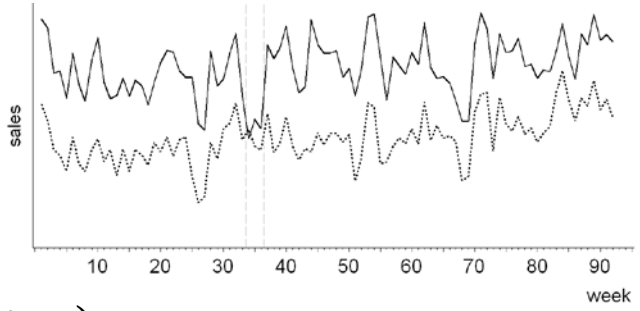
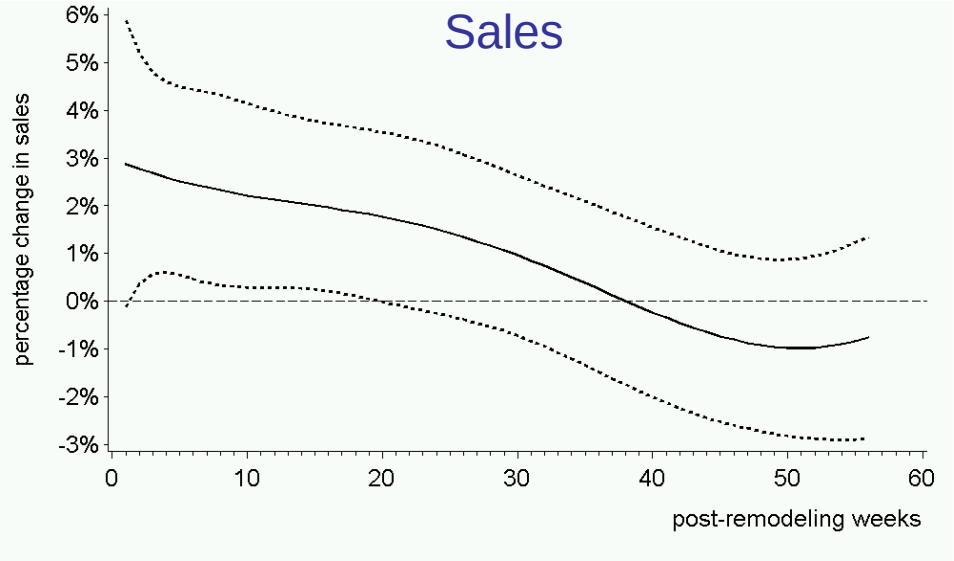
Stage 1: Impact on Revenue



$$S_{it} = \exp(\alpha_i + X_{it}\beta + f_{G(i)}(t) + I_{it}\, g(t) + \varepsilon_{it})$$

6^{th} degree polynomial capturing postremodeling effects



Analyses & Results – Stage 2

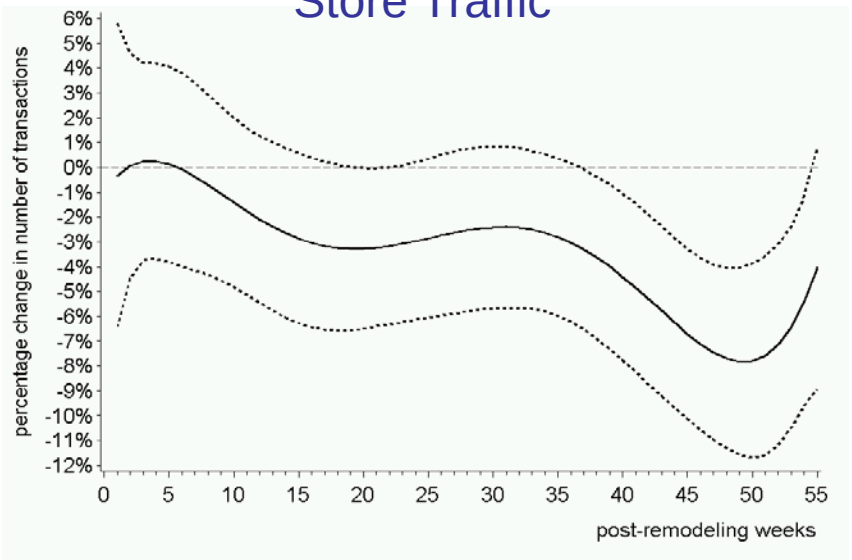
Stage 2: Impact on Store Traffic & Average Spending

$$AS_{it} = \exp(\gamma_i + X_{it}\delta + h(t) + I_{it}\,k(t) + \upsilon_{it})$$

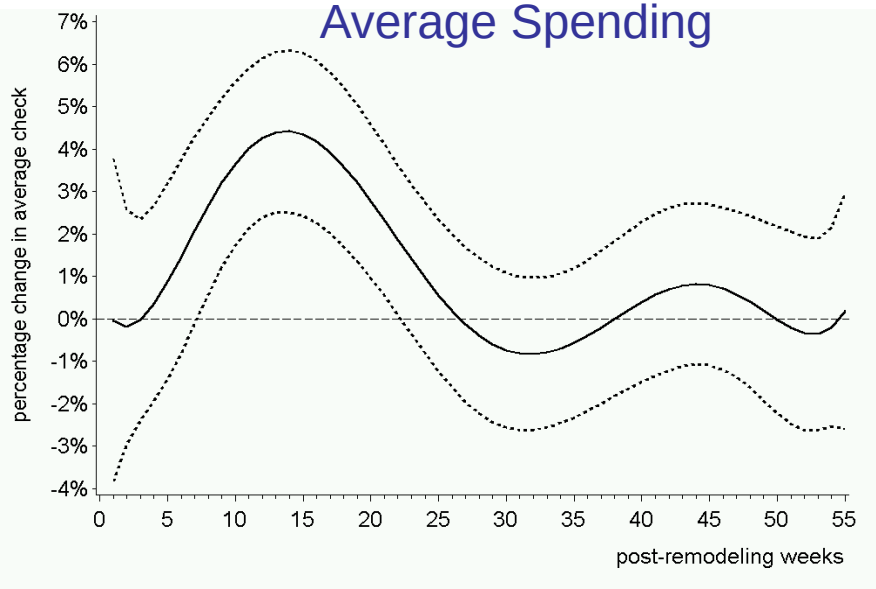
$$ST_{it} = \exp(\lambda_i + X_{it}\varphi + l(t) + I_{it}\,m(t) + \eta_{it})$$

6^{th} degree polynomials

Store Traffic



Average Spending



Analyses & Results – Stage 3

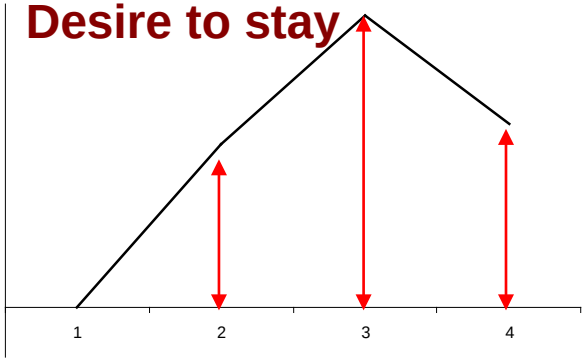
Stage 3: Impact on Affect, Cognition, and Behavioral Responses

MIMIC analysis:

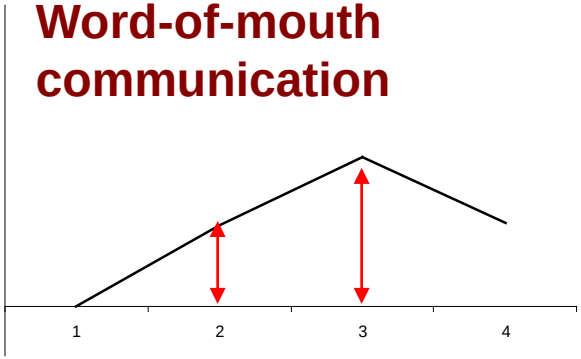
$$latent\ variable_i = a + Y_i \cdot b + c \cdot STORE1 + d \cdot WAVE2 + e \cdot WAVE3 + f \cdot WAVE4 + g \cdot ST1W2 + h \cdot ST1W3 + k \cdot ST1W4$$

Results – Behavioral Responses

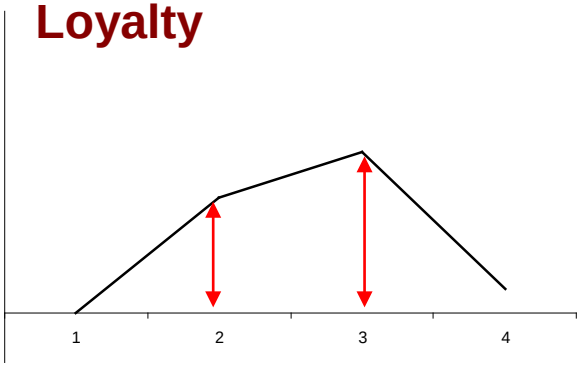
Desire to stay



Word-of-mouth communication



Loyalty



Analyses & Results – Stage 3

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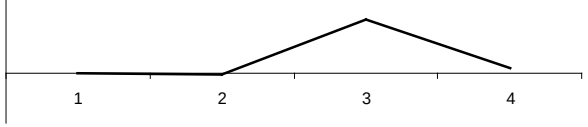
Stage 3: Impact on Affect, Cognition, and Behavioral Responses

MIMIC analysis:

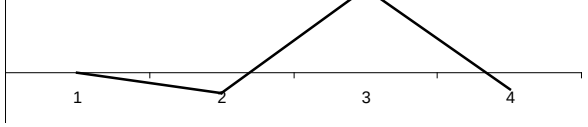
$$latent\ variable_i = a + Y_i \cdot b + c \cdot STORE1 + d \cdot WAVE2 + e \cdot WAVE3 + f \cdot WAVE4 + g \cdot ST1W2 + h \cdot ST1W3 + k \cdot ST1W4$$

Results – Affect & Cognition

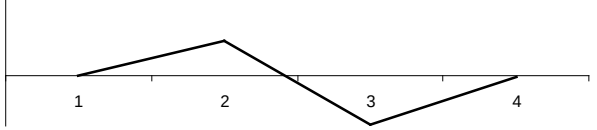
Overall satisfaction



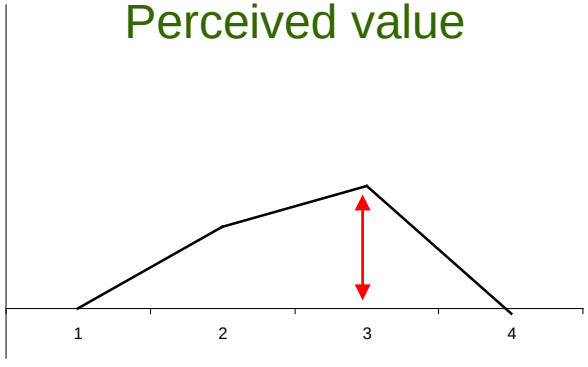
Encounter satisfaction



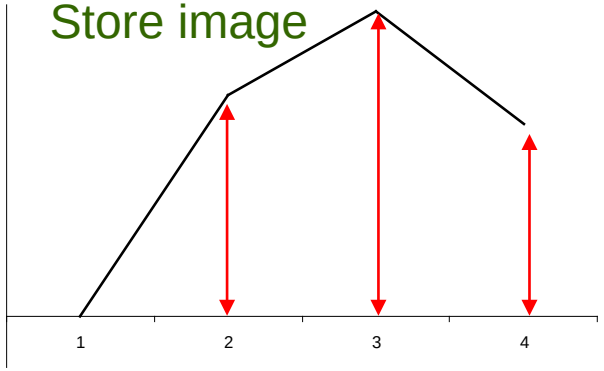
Perceived service quality



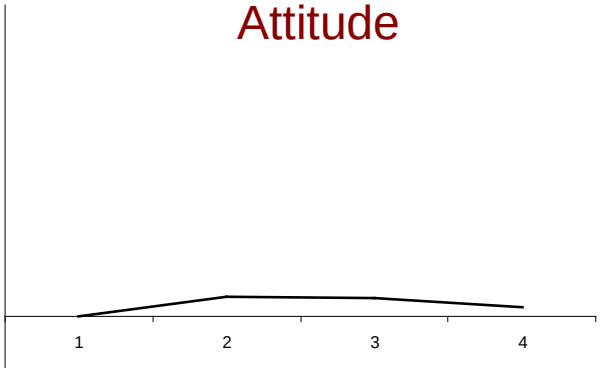
Perceived value



Store image



Attitude



Moderating Effect Findings

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	Estimated Three-Way Interaction Coefficients (STORE × WAVE × STORE VISIT CHARACTERISTIC)*					
	Spontaneous (versus Planned)			Group (versus Single Customer)		
Response Measure	**2nd Wave**	**3rd Wave**	**4th Wave**	**2nd Wave**	**3rd Wave**	**4th Wave**
Cognitive Responses						
Perceived value	.178	.292 [c]	.441 [b]	-.442 [c]	.111	.542
Perceived service quality	.032	.191	.213	.041	.185	.568 [c]
Store image	.070	.042	.061	.042	.072	.072
Affective Responses						
Overall satisfaction	.204 [c]	.211 [c]	.152	.240	.324 [c]	.465 [c]
Encounter satisfaction	.015	.204	.170	.172	-.093	.660
Attitude	.227 [c]	.276 [c]	.038	.065	.121	.603 [c]
Behavioral Intentions						
Loyalty	.177	.098	.230	-.196	.112	.675
Desire to stay	.364 [c]	.524 [a]	.627 [a]	-.017	.390 [c]	.548
Word of mouth	.457 [b]	.555 [a]	.476 [b]	-.187	.240	.697 [c]

Notes: Model fit $\chi^2(516) = 3405.58$ ($p < .01$); CFI = .97; TLI = .94; NFI = .96; RMSEA = .049.

[a] Significant at the $p < .001$ level. [b] Significant at the $p < .01$ level. [c] Significant at the $p < .05$ level. (All tests are one-sided)

* These **(interaction) coefficients** capture the extent to which the remodeling effects increase (+) or decrease (-) in comparing a planned trip to a spontaneous trip and from a single-customer visit to a group visit.

Summary of Findings

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Short versus long term effects (H_1 and H_2) H_1: *Store remodeling has a positive short-term effect on (a) cognitions, (b) affect, and (c) behavioral intentions).* H_2: *Any short-term impact of store remodeling on (a) cognitions, (b) affect, and (c) behavioral intentions loses strength in the long run.*	-	Store remodeling has a **short-term impact** on cognitive (perceived value, store image) and behavioral measures (loyalty, desire to stay, word-of-mouth), but not on affective measures. - Short-term remodeling effects **lose strength in the long run**, in line with adaptation-level theory.
Moderating effects (H_3 and H_4) H_3: *The effects of store remodeling on (a) cognitions, (b) affect, and (c) behavioral intentions are greater for spontaneous than for planned trips.* H_4: *The effects of store remodeling on (a) cognitions, (b) affect, and (c) behavioral intentions are greater for group than for single-customer trips.*	-	Spontaneous visits tend to lead to **greater remodeling effects** than planned visits, especially in the short term (e.g., perceived value, overall satisfaction, word-of-mouth communication). - Customers in a group tend to **respond more positively** to a store remodeling than do single customers, especially in the long term (e.g., perceived service quality, overall satisfaction, word-of-mouth communication).
Effects on customer spending versus store traffic (H_5) H_5: *The percentage impact of store remodeling on store traffic is less than its percentage impact on average customer spending.*	-	The remodeling effect on store traffic is **less** than that on average spending. - In line with H_1 and H_2, average spending increases in the short run but returns to the baseline in the long run. - Store traffic does not change in the short term and even shows a dip in the long run.

Discussion – Main Findings

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- Revenues:
  - increase modestly in the short term but revert to their base level in the long term (consistent with adaptation-level theory)
  - general effect validated through revenue data from 18 restaurants
- Revenue decomposition:
  - the short term revenue gains result from increases in average customer spending, not in store traffic
    - average customer spending increases by 4.4% but returns to baseline
    - store traffic does not change in short term, negative dip in long term
- Increases in customer spending receive support from (mostly) short-term improvements in:
  - Cognitive responses:
    - perceived value and store image increase shortly after store remodeling but decline in long term
  - Behavioral responses:
    - desire to stay, loyalty, and word-of-mouth communication increase shortly after store remodeling but decline in long term
  - Affective responses (and perceived service quality) not affected

Theoretical Contributions

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1. Servicescape literature provides limited assessment of temporal effects of changes in the servicescape
   - we disentangle short- and long-term effects of remodeling
     - short-term results provide empirical validation of previous laboratory experiments
     - long-term results suggest short-term effects lose their strength (consistent with adaptation-level theory)
2. We identify interactions between servicescape effects and store visit characteristics
   - customer who visit a store spontaneously are typically more receptive to the influences of remodeling than are customers who planned their visit
   - customers who visit in groups respond more favorably to a remodeled servicescape than those who visit alone
3. Singular reliance on in-store reactions to the servicescape may generate an incomplete picture of the likely effects on store performance
   - we observed customer spending exhibits a pattern similar to most of the psychological measures
   - however, the decision to visit the store (i.e., store traffic) is less prone to the influence of the servicescape
     - store traffic is unaffected in the short run and indicates a negative trend over time
       - perhaps due to negative reactance effects among certain customers who deliberately stay away?

Managerial Implications

- At least in the short run:
  - managers can use store remodeling to improve store image and value perceptions
  - behavioral responses (longer store visits, increased spending, greater loyalty, more word-of-mouth communication) may result
- However:
  - managers should not be myopic—customer reactions to servicescape changes lose strength in the long run
  - companies need to consider long-term effects of remodeling
    - if consumer reactions lost strength in the long run, firms may be overstating the total monetary impact of the remodeling investment
      - remodeling effects should be tested over time before any roll-out
- The impact of remodeling may vary
  - across industries
  - spontaneous vs. planned purchases
  - individual vs. group purchases
- Customers appear to spend more after remodeling
  - however, remodeling may not improve store traffic
  - perhaps other marketing tactics (e.g., price promotions, coupons) are needed to increase store traffic

Comments or Questions

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