

Marketing the Unfamiliar :

The role of context and item-specific information in Electronic agent recommendations

第二組

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Agenda

- Introduction
- Study Purpose
- Hypothesis
- Study 1
- Study 2
- Conclusion

Introduction

- Internet offer consumers access to many alternatives with relatively low search cost and filter and summarize the alternatives.
- Electronic agents are software program that are designed to help consumers sort through available products on the Internet.
- Electronic retailers are incorporating agent to provide personalized recommendations to their customer.

Study Purpose(1/2)

- How recommendation set composition and information about the recommended product affect consumer preferences for unfamiliar product
- Suggesting how agent recommendation sets should be constructed to increase consumer demand for new product

Study Purpose(2/2)

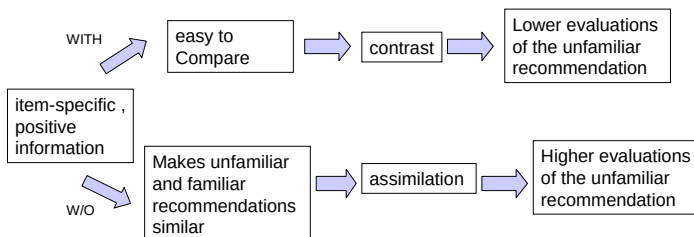
- *Reasons for focusing on recommendations of unfamiliar products :*
 - Unfamiliar recommendations represent an important source of business
 - Behavioral research suggests that consumers view unfamiliar recommendations negatively
 - Consumer don't possess strong preexisting beliefs about unfamiliar alternatives, this alternatives are likely to show the greatest response to managerial strategies that attempt to position the product.

Assimilation and Contrast

- *Assimilation :*
Assimilation is likely when consumer process all recommendations as a group , or believe that all recommendations result from a single algorithm.
- *Contrast :*
Contrast is likely when consumer perceive differences among recommendations. Comparisons tend to focus on the differences that exist between alternatives and magnify ant existing differences.

The Role of Item-Specific Information

- Providing consumers with additional information will benefit the recommending site.
- What's the impact on consumer's evaluation?



Hypothesis(1/2)

- H_1 :
When electronic agent provide a context of familiar , attractive recommendations and present the unfamiliar recommendations without item-specific information , assimilation will occur and result in higher evaluations of the unfamiliar recommendation.
- H_2 :
When electronic agents provide a context of familiar , attractive recommendations and present item-specific information , consumers will contrast unfamiliar and familiar recommendations , which will result in lower evaluations of the unfamiliar recommendation.

Hypothesis(2/2)

- H_3 :
Agent evaluations will be higher when they provide a set of familiar, attractive contextual recommendations than when they do not
- H_4 :
Agent evaluations will be higher when they provide positive item-specific information only in the absence of a context of well-liked, familiar recommendations.

General Method

- Identify 10 CDs they liked very much from a list of 100 popular CDs, and then rate their familiarity and liking.
- Interact with an electronic agent and building a preference profile.
- The subjects are given a set of recommended CDs with two unfamiliar CDs inside.
- Evaluate each of the unfamiliar CDs and the agent's accuracy.

STUDY 1

Item-Specific Information & Recommendation Context

Study 1- Method

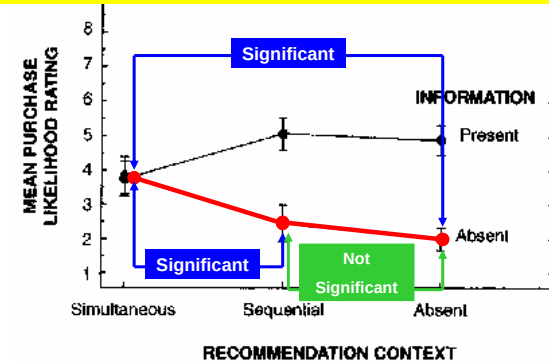
- 3 X 2 between-subjects factorial design
- Context:
 - Absent (only 2 unfamiliar recommendations)
 - Sequential (6 familiar → 2 unfamiliar)
 - Simultaneous (6 familiar & 2 unfamiliar)
- Information:
 - Present (CD clips, selected by pretesting)
 - Absent

Study 1- Result

- Music clips had a statistically significant effect on subjects' ratings of the unfamiliar recommendations.
- No statistically significant main effect of context
- A statistically significant interaction between context and information

Support H1

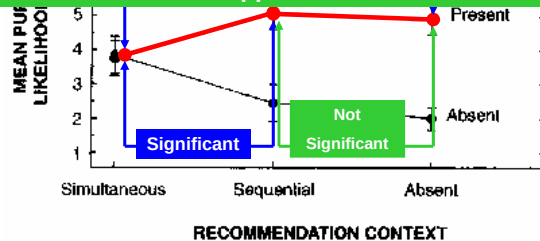
Assimilation was observed when all CDs were presented simultaneously but not when all presented sequentially



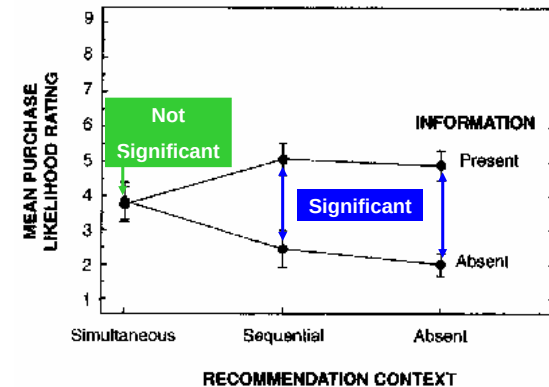
Support H2

When music clips are available, providing a positive & salient recommendation context results in a **contrast** effect (lower ratings of the unfamiliar recommendations)

Separating the familiar & unfamiliar recommendations onto separate pages causes the contrast effect to disappear.

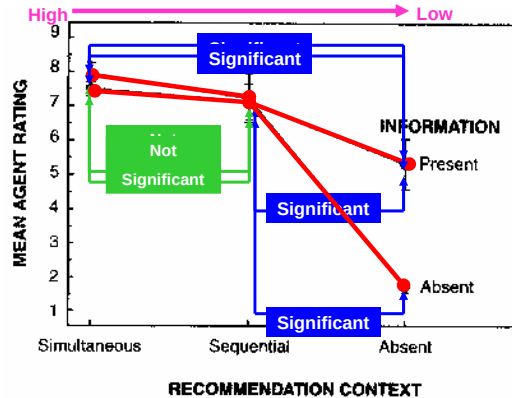


Though recommendation context may be beneficial in particular situations, it may also serve to overshadow any positive experiential information provided



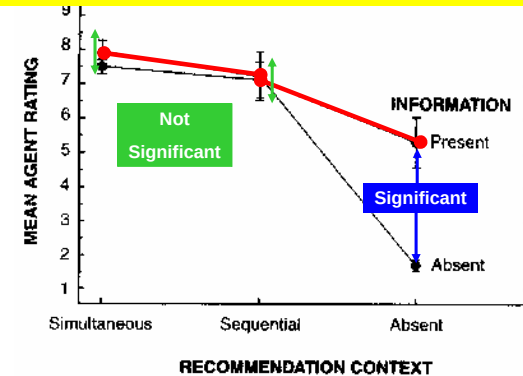
Support H3

Subjects prefer agents that provide attractive recommendations



Support H4

Agent evaluation will be higher when positive item-specific info are provided only in the absence of recommendation context.



STUDY 2

Recommendation Similarity and Contextual Effects

Study 2

Similarity and Recommendation Effect

- Study 1:
 - No direct evidence of mediating effect of **similarity**
- Proposal:
 - Item-specific info
 - Consumers to classify familiar and unfamiliar CDs **differently**
 - Increasing the salience of any difference existing between the items

Study 2

Method

- Evaluation

- Purchase likelihood and reservation price
- Reservation price

- 2*2 experimental research design

- Context:

- *Simultaneous*
- *Absent*

- Information:

- *Absent*: names of artists, titles of CDs
- *Present*: names of artists, titles of CDs, short biography, a picture, music clip

Study 2

- Method (Flow)

- Step 1: Subjects answered their music preference questions as in study 1
- Step 2: A set of recommendations on a single page was shown
- Step 3: Subjects rated *likelihood of purchasing* and *reservation price*
- Step 4: Subjects rated *the agent*

Study 2

- Method Cont.

- Participants:

- 101 undergraduate students at a large eastern university

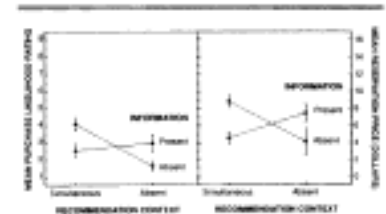
- Subjects:

CONTEXT \ INFO	Simultaneous	Absent
Present	22	10
Absent	21	11

Study 2

Results: Context effects in the **absence** of item-specific information (H_1)

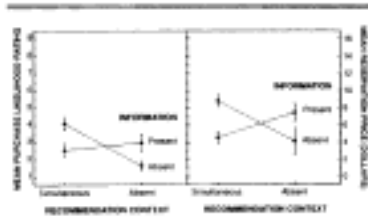
- Purchase likelihood:
 - Significant simultaneous > absent → assimilation
- Reservation price:
 - Significant simultaneous(\$8.83) > absent(\$4.18) → assimilation
- H_1 (O)
- Contextual: the agent understood their personal preferences



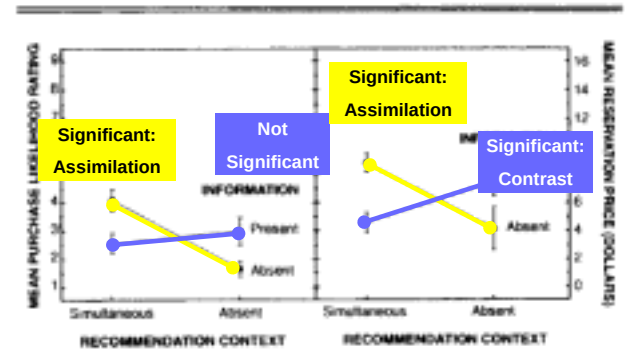
Study 2

Results: Context effects in the **presence** of item-specific information (H_2)

- Purchase likelihood:
 - Not significant: simultaneous < absent
- Reservation price:
 - Significant: simultaneous (\$4.61) < absent (\$7.48)
- H_2 (O)
- Contextual absent, perceived attractiveness $\uparrow$



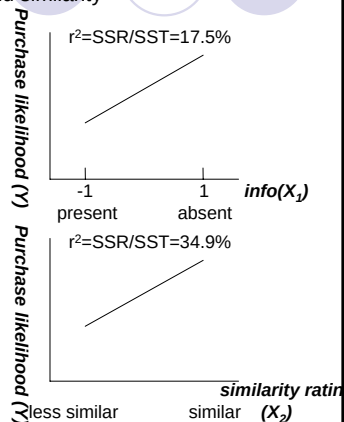
Study 2- Results: Context effects in the absence of item-specific information



Study 2

Results: Item-specific information and similarity

- Prediction:
 - unique info $\rightarrow$ contrast
 - Info $\rightarrow$ perceived recommendations as *less attractive*
- Simple linear regression
 - Both are significant and positive
 - Implication: *info absent, perceived similarity $\uparrow$*



Study 2

Results: Item-specific information and similarity

- Multiple regression
 - $R^2 = 37.6\%$
 - Information(X_1): not significant ($\beta = .18$)
 - Similarity(X_2): significant ($\beta = .50$)
 - Indication: the *similarity* of familiar and unfamiliar recommendations (X_2) *mediates* the relationship between *item-specific info* (X_1) and *purchase likelihood* (Y), consistent with the thesis.
- Repeated analysis
 - Y: Similarity $\xrightarrow{\text{similarity} \quad ?} \text{Purchase likelihood}$
 - X_1 : information condition
 - X_2 : purchase likelihood

Study 2

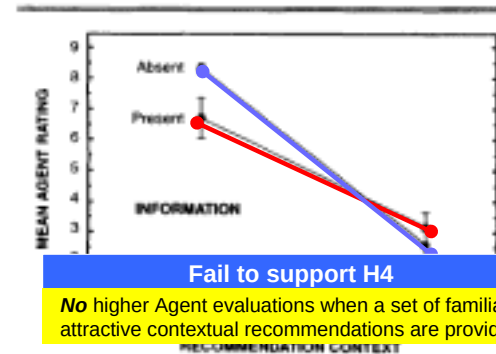
Results: Item-specific information and similarity

- Simple linear regression
 - Similarity (Y) from information (X_1)
 - $r^2 = 21.1\%$
 - Information (X_1): positive and significant ($\beta = .46$)
 - Similarity (Y) from purchase likelihood (X_2)
 - $r^2 = 34.9\%$
 - Purchase likelihood (X_2): positive and significant ($\beta = .59$)
- Multiple regression
 - $R^2 = 40.4\%$
 - Information (X_1): significant ($\beta = .26$)
 - Purchase Likelihood (X_2): significant ($\beta = .48$)
 - Implications:
 - Information significant even in the presence of purchase likelihood.
 - **similarity** ← **X** → **Purchase likelihood**
 - Info → similarity ↑ → contrast ↑

Study 2 – Results :Context, information, and agent evaluations

Support H3

Higher Agent evaluations when a set of familiar , attractive contextual recommendations are provided



Fail to support H4

No higher Agent evaluations when a set of familiar , attractive contextual recommendations are provided

Study 2 – Results :Context, information, and agent evaluations (2/2)

- Study 1
- Study 2
 - Rating of agent = f (context, info)
 - Context, info → agent evaluation → H_3 (O)
 - Info ~~→~~ agent evaluation → H_4 (X)

CONCLUSION

Theoretical Contributions
Agent Design Implications
Directions for Further Research

Theoretical Contributions

- How to overcome negative reaction?
 - Familiar and unfamiliar → positive?
- Study 2
 - $H_1, H_2(0)$
 - Info → purchase likelihood
 - Similarity → purchase likelihood
 - Info, similarity → purchase likelihood
 - $H_3(0)$
 - Context, info → agent evaluation
 - $H_4(x)$
 - Context absent, Info → agent evaluation

Theoretical Contributions

- Study 2
 - $H_3(0)$
 - Context, info → agent evaluation
 - $H_4(x)$
 - Context absent, Info → agent evaluation
- The difference nature of two tasks: likelihood, agent
 - Value of an unfamiliar:
 - Info, context → both important
 - Evaluative implications of Info, descriptive implications of Info
 - Evaluating the agent
 - Unfamiliar → agent
 - Familiar → agent
 - Evaluation of agent → context, info
 - Be able to offset negative attitudes while running risk of damage attitudes toward the agent.

Agent Design Implications (1/2)

- Context matters!
- Providing contextual recommendations may be beneficial when
 - Contextual recommendations are known to be **attractive** to the consumer
 - The contextual recommendations are perceived as **similar** to the target item
 - Make the context salient when consumers first encounter the unfamiliar recommendations.
 - **Little information** is available about the target recommendations.

Agent Design Implications (2/2)

- New recommendations should be presented in isolation when
 - **Little** is known about the shopper
 - The **familiar** recommendations are likely to be perceived as **different** from the **unfamiliar** recommendations
 - Distinguishing information about the target item is made available
 - Strong **positive** about the target item is made available



Directions for Further Research

- Agent assess preferences in an *overt* fashion
- The disassociation between agent's and item evaluation *disappears* with repeated visits to a site
- Except for info *other factors* which lead to context-dependent processing (e.g. sharing product figure, process characteristics)
- The effectiveness of *cross-category* recommendations



Q & A



Thanks for your attention!