

Chairperson's Message

We wish all our readers a very joyous and successful 2005. It is our pleasure to inform you that one of our colleagues, Professor Arnab Kumar Laha won an award for his paper titled "*Change Point Problems for the Mean Direction of the Circular Normal Distribution*" at the International Conference on the Future of Statistical Theory Practice and Education which was held at ISB Hyderabad, during December 29, 2004 – January 1, 2005.

In this paper Professor Laha considered change point problems for the mean direction of the circular normal distribution. He derived the lrt, a test based on the LMP criterion (lmppt), and a test based on NR-test (nrnt), for the situation where at most one change point may be present. The cut-off points and the powers of the lrt and nrnt are obtained through extensive simulations. The asymptotic distributions of some of the proposed test statistics are derived and is seen to be that of the supremum of a time reversed Brownian motion on [0,1]. Two real-life examples, one meteorological (Weijers et al., 1995) and another on flare launches (Lombard, 1986), are presented and analysed using the different tests derived in this paper. The use of the semi-Bayesian and hierarchical Bayes approach are indicated. A modified Bonferroni test procedure for the change point problem is also proposed.

The contest was for young researchers who had submitted their Ph.D. not more than three years ago were eligible to be considered for the above award. The conference was organized by the International Organizing Committee and sponsored by the American Statistical Association, the Institute of Mathematical Statistics, and the International Indian Statistical Association. The award was given by the eminent statistician Professor C.R. Rao. Congratulations to Professor Laha on this achievement.



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Layout & Design
Pratima Desai

For further information,
contact us at

Research & Publications
Indian Institute of Management
Ahmedabad 380 015

*
Phone
91-79-26324821

*
Fax
91-79-26306896

*
Webpage
www.iimahd.ernet.in/publications

*
Email
respub@iimahd.ernet.in



Jayanth R. Varma
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The Role of Resource Access, Market Considerations and the Nature of Innovation in Pursuit of Standards in the New Product Development Process

Arvind Sahay

asahay@iimahd.ernet.in



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Standards influence new product development in hightech markets. However, existing work on standards has focused exclusively on one aspect of standards – compatibility standards – the standard that indicates how various components in a product fit together. For example, Microsoft's APIs on Windows OS enable other application developers to make application software that work on Windows OS through the APIs. Another example is the standard that brings together hydraulic components with other machine tools to make a functioning shake table used in flight simulators and earthquake simulation tables. This is called compatibility standards.

However, there is another standard – the one at the interface of the product with the user that defines the learning and skills that the user develops in using a product. Consider, for example, the skills required to use MATLAB, a math programming software; or the skills required in using Blackberry, a wireless emailing device. Customers spend time and effort to learn to use these products, and then would like their skills to be portable across different units of the product and other platforms and products that deliver similar benefits. We call this the customer interface standard.

In this article, we first delineate the concept of customer interface standards as distinct from compatibility standards. This distinction is important from a product development and technology adoption perspective. Second, we propose and show that antecedent factors may motivate a firm differently about the emphasis that the firm should put on a type of standard (compatibility or customer interface) that it follows. For example, we propose that the strength of intellectual property rights related to the technology that defines the standards (called appropriability

regime) affects pursuit of customer interface standards and compatibility standards differently. We illustrate how resource access and the nature of the innovation also influence a firm's decision to pursue either a customer interface standard or a compatibility standard. Finally, pursuit of different standards (customer interface or compatibility) impacts the NPD process in terms the customer utility for the product.

Analysis of field data supports our contention that compatibility standards and customer interface standards are distinct constructs and that appropriability regime influences compatibility standards and customer interface standards differently. We also find that pursuit of compatibility standards helps a firm to create direct externalities and the pursuit of customer interface standards helps firms to develop indirect network externalities and technological advantage in the market.

Our findings imply that choices made by the firm – as to whether it pursues compatibility standards or customer interface standards will determine the type of advantage that it can gain in the market. Given a firm's situation at a point in time, a greater focus on one standard type rather than the other may be the right approach. Such choices will influence resource allocation in the product development process.



Store Choice Behaviour in an Evolving Market

Piyush Kumar Sinha and
Arindam Banerjee

pksinha@iimahd.ernet.in

arindam@iimahd.ernet.in



Piyush Kumar Sinha

Arindam Banerjee

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Although "organized" retailing has been in practice for a long time in some product categories like textiles and shoes, they have been driven by the manufacturer. The changes witnessed in the industry where the retailers are organizing themselves started only in the last decade. The traditional small and unorganized entrepreneurs dominate the sector. India has the highest number of retail outlets (more than 12 million) in the world, though the per capita retail space is the lowest. The industry is estimated to be about \$180 billion. The organized sector represents a mere 2% share of this market (*Business Today*, 1999). It is very low compared to other countries including those in Asia. Up to 80% of all retail sales in the United States is controlled by the organized retail sector. The corresponding number in Western Europe is 70%. The scenario of organized retailing in Asia is lopsided. In Taiwan the share of the organized sector is 81%, followed by Malaysia and Thailand, at 45% and 40% respectively, whereas China and India stand at 15% and 2% respectively.

In India, each of the new retailers is trying different formats. Most of them are yet to find out a successful formula. With the emergence of big players (both local and national), the street corner *kirana* shop has also transformed itself, giving rise to a unique format. A number of traditional *kirana* shops have expanded in size allowing self-service and provided customers with deeper and wider assortments. These "transformed *kirana* stores" have offered always facilities like home delivery, replacements and credit. In such a scenario, this study has researched the store choice behaviour based the broad research questions that formed the basis of this exploratory research as given below:

- 1) Are consumers able to perceive newer service dimensions in retailing given the introduction of new store formats?
- 2) Do these perceived service dimensions differ across the nature of products sold by stores?
- 3) More importantly, are these new perceived service parameters influencing store choice among the current consumers?
- 4) What are the service dimensions that retailers ought to pay attention to as the phenomenon of organized retailing gains momentum in India?

The study involved a field survey conducted across different stores in the city of Ahmedabad, in the western state of Gujarat. The respondents were approached at the shop after they had finished shopping and were leaving the store. It was felt that shop intercept (exit interviews) would capture the recency effect. There was a risk that an interview away from the shop might bring only "visualized perception" and not the real experience. It would also focus on the decision about the choice of store for a specific purchase incidence, since each purchase occasion might actually be a different decision. The bias caused due to the store was addressed by choosing respondents at random at stores that belonged to new as well as old format.

Since in most cases the product defined the stores chosen, the respondents were interviewed after they had shopped at 20 new and old format stores dealing in grocery/fruits and vegetables, durables, medicines, leisure (books and music, cards and gifts, accessories), apparels and paan/cigarette. The respondents were carefully chosen so that they belonged to the higher socio-economic classes (SEC) in order to ensure that the sample had similar representation in terms of respondent profile obtained from old as well as new format stores. This was necessary since prior studies conducted in India have found that the new format stores were visited



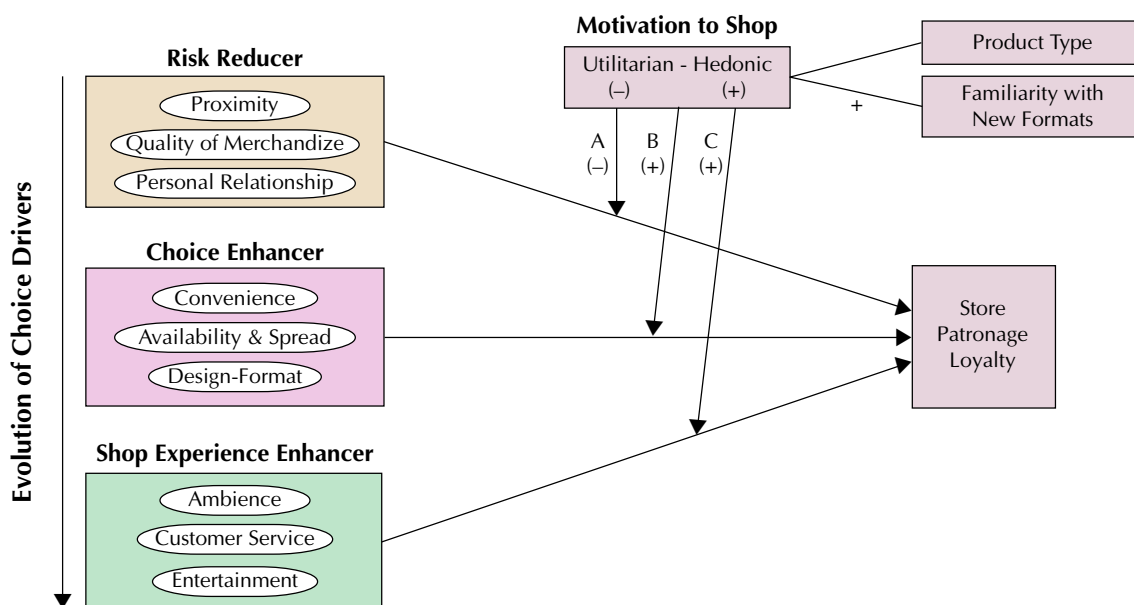
more by the higher SEC customers. The sample constituted of shoppers at the grocery (40%), durables (18%), medicine (11%), apparel (10%), paan/cigarette (10%), and leisure (11%). About 70% of them were regular shoppers at the store. Sixty five per cent of the respondents had visited the store more than once a month and about 36% at least once a week. More than 50% of them lived within three kilometres and about 75% had travelled up to 5 kilometres. About 65% of the respondents were married. Men constituted 65% of the sample. Most of them had a monthly household income of more than Rs. 7,500 per month. It was also expected that they would have adequate exposure to both the formats. This is compatible to the phenomenon of the adoption of new product and service ideas by the premium segment of the shops.

On the whole, these findings are contradictory to the generally accepted view in the retailing trade in India that newer store formats (primarily borrowed from more evolved markets) are likely to kindle demand for better in-store services and format characteristics and pay lesser attention to product-related dimensions. Also, it is not obvious whether the drivers of store choice actually result in substantial increase in purchases. Hence, the return on investments made in newer formats is still quite unclear. Interestingly, the study does indicate that new formats are being chosen based on parameters different from the old format, such as merchandize,

ambience and service. However, in our analysis on an overall basis these did not come out as distinctly clear store choice drivers. It may be due to the evolving nature of the market where the drivers of the choice of old format stores are still dominant. It is possible that as the customers experience the new formats more in future, there might be a change in the set of variables that drive store choices.

A possible framework which may capture this phenomenon is shown in the figure below. While the model remains to be empirically tested, the basic premise is that the drivers of store loyalty (an antecedent of store choice) can be categorized into three broad groups – utilitarian dimensions also termed as “Risk Reducers”, “Choice Enhancers”, and “Shopping Experience Enhancers”. It is hypothesized that the influence of these drivers on store loyalty will be moderated by two factors, 1) the nature of purchase governed primarily by the product type and, 2) the amount of exposure that consumers have to new store formats. The latter dimension captures the supply side issues related to a developing market where respondents may not fully comprehend the benefits of new retailing concepts without a threshold level of experience. This proposed model of adoption of new retailing formats is a significant opportunity for future research in developing markets such as India.

A Framework for Examining Store Preferences in an Evolving Market



FACE Considerations in Upward Influencing in an Indian Workplace

Asha Kaul

Charlotte Brammer

ashakaul@iimahd.ernet.in



Asha Kaul, Indian Institute of Management, Vastrapur, Ahmedabad, India.

Charlotte D. Brammer, Samford University, Birmingham, AL, USA.

This paper has been published on the web; its URL is <http://pkp.ubc.ca/abc/ojs/viewarticle.php?id=35>

This study borrows from sociolinguistic research, specifically face-threatening acts (FTA) and Speech Act Theory (SAT), as a way to analyze and explain how Upward Influence (UI) is performed in organizations. This performative view of language, with emphasis on linguistic action and relevance to the situation, rather than comprehension, may contribute to greater understanding of how effective UI tactics in organizations are constructed. Based on SAT, we have made a first attempt to provide an explanation for the choice of strategies by members within the organization.

UI is an attempt made by an agent (individual) to sway the target to a mode/manner of thinking that is in sync with the intentions of the agent. Literature on UI has looked at a variety of strategies that use language to influence behavior. Paradoxically, all these strategies assess influence through survey instruments, measures that imply verbalization, but which do not rely on actual linguistic data. Moreover, the studies have focused on the strategies themselves rather than on how the strategies are created and used through language.

The string of utterances used by individuals when interacting with others or accomplishing certain tasks tend to be “polite,” rather than offensive, so as to show their willingness to respect the face of others and to preserve their own face. This may be especially true when they have a vested interest to do so, as for example in a professional context. Face, one’s “public self-image,” has two aspects:

- 1) Positive face, the need to be accepted and

- 2) Negative face, the need for performing acts without negative intervention by others.

Affronts to face or Face Threatening Acts (FTA), however, are unavoidable in some situations. For example, the power differential that is intrinsic to the workplace threatens negative face. The effects of FTA, as felicity conditions for both the speaker and the listener, must be considered in workplace interactions, especially in UI interactions. Failure to mitigate FTA toward superiors could lead to ineffective UI or even dismissal. Politeness, used to demonstrate regard and consideration for others, is sensitive to power distribution in the organization. Authority and equality can be measured in terms of politeness used everyday in face-to-face interaction. Relatively recent emphasis on social construction of organizations highlights the importance of appropriate and polite language use in organizational communication.

A speaker’s ability to create appropriate speech acts for UI, what is here termed, **influencing competence**, can be ascertained only when a desired response is framed. SAT provides a way to analyze how the strategies are enacted. SAT, demonstrates that utterances have the power to do things. Not only do

speech acts represent ideas, but they also accomplish tasks, such as requesting – *Please close the door*; and commanding – *Get out!*, that would not otherwise be done as effectively (if at all). SAT provides a way of talking in terms of the surface grammatical structure; the context in which such structures are made; intentions, attitudes, and expectations of the participants; and the unspoken rules



and conventions that apply when messages are sent and received. Borrowing from the findings of Searle, the paper proposes that UI is a linguistic act of influencing. The subordinate, by making an utterance or series of utterances, performs the act of persuading and securing the approval from the superior without threatening the positive face of the superior.

SAT and its concept of linguistic action can be useful in explicating how UI occurs. In the tradition of ordinary language, as in communication, the intent/motive of the speaker is fundamental in understanding any utterance. Let us consider the utterance *Let's go* made by a subordinate to his superior. Whether it is understood as a request, a command, or some other illocutionary act, the propositional content remains the same; the speaker refers to a present or future action to be undertaken by the hearer, i.e., to go somewhere with the speaker. However, an understanding of the felicity conditions and the intent of the speaker reveal that if the utterance

is made by a subordinate to a superior, it cannot be a command and, hence, must be viewed as a request or possibly as an agreement. What changes the understanding of the utterance is the intent of the speaker and the appropriateness conditions (maintenance of politeness, avoidance of FTAs).

For our purposes here, we restricted the application of face considerations and SAT to six strategies (reason, ingratiation, exchange/bargaining, assertiveness, coalition, and upward appeal) that are frequently used in organizations. Understanding the level of willingness of the respondent to be influenced, and the dictates of the situation help in strategizing. Even the slightest change in the anticipated degree of willingness or receptivity of the receiver necessitates a change in the strategy to be adopted. Violations of sincerity conditions and/or inappropriate threats to face create infelicitous conditions and may lead to failed attempts at UI.

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