
Polychronic tendency analysis: a new approach to understanding women's shopping behaviors

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Abstract

Consumer researchers have long known that some shoppers prefer to combine errands on their shopping trips, while others tend to focus on one errand at a time. However, there was no published evidence that similar behaviors occur within a specific shopping situation. Proposes that polychronic tendency analysis (PTA) can provide insights that explain such behaviors. Self-reports were used to examine adult women's general polychronic tendency and to contrast this with reported polychronic tendencies when shopping for groceries and shopping for clothing to be worn at work. Three strong-fitting, theoretically sound constructs consisting of multiple simultaneous activity and activity-changing items were constructed using a structural equation modeling approach. The general, grocery shopping, and clothing shopping models differed from one another. This showed that women have different time use tendencies in different shopping situations. Also demonstrates how situation-specific survey instruments and the resultant models and measurement scales can be developed using the PTA approach. Offers retail implications.

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Introduction

Retailers have a strong interest in understanding how their customers want to use their time in specific shopping situations. While many customers may make the decision to patronize the same store, different individuals may carry out their in-store tasks in appreciably distinct ways. In our study, we are interested in learning whether certain shoppers prefer to complete one set of shopping tasks before beginning others, whether some shoppers prefer to combine several shopping activities within a shopping trip; or whether still other shoppers prefer to switch back and forth among different types of shopping. In order to investigate such possible differences, we draw on the concepts of polychronicity and monochronicity to provide a foundation for this research.

Studies in cultural anthropology tell us that people carry out the activities in their lives along a continuum from doing one activity at a time, called "monochronic behavior," to doing two or more activities at the same time, named "polychronic behavior" (Hall, 1959). Some prefer to work at one end of this scale and some at the other end with the majority in between. Some persons may even be more or less polychronic in response to the situations they encounter. The usefulness of polychronicity has been demonstrated in studies of the workplace, in homes (Kaufman *et al.*, 1991), and in the adoption of technologies (Kaufman and Lane, 1996). In the present study, we propose that polychronicity can inform us about women's shopping behavior in general and also when specific types of shopping are analyzed. In order to draw connections with the literature, two shopping-specific situations (grocery and clothes to be worn at work) were examined in the current study. These were chosen because of the dominance of women in such activities and because they were seen as distinctly different shopping situations by respondents in a preliminary phase of the present study.

Background

The study of various types of consumer time issues has created a strong foundation for the investigation of shopper behavior (Jacoby *et al.*, 1976). Topics have included time perceptions (Graham, 1981; Hornik, 1984), time scarcity



(Gross, 1987), waiting time (Leclerc *et al.*, 1995), and shopping time (McDonald, 1994). For instance, McDonald (1994) identified three consumer time perception segments, the “Routine Managers”, “Aimless Wanderers”, and the “Purposeful Organizers”. These segments differ in the weekly amounts of time they spend in search, purchase, and post-purchase activities. Additionally, many retail venues frequently involve waiting time, such as delays in airline transportation. In a series of experiments, Leclerc *et al.* (1995) found that people make varied decisions in trading off lost time for increased monetary costs. Finally, today’s consumers are found to make deliberate attempts to meet all the demands with which they are faced. The “juggling lifestyle” was examined by Thompson (1996) to learn how professional working mothers attempt to balance the responsibilities of work and family. We propose that examining polychronic and monochronic tendencies can similarly inform us regarding shoppers’ behavior in the “bricks and mortar” context.

Polychronicity/monochronicity background

Polychronicity was first conceptualized and named by Hall (1959). He used the concept to distinguish between several patterns of behavior in different cultural settings, throughout many years of investigation. In later works, he demonstrated that international business was impacted by the distinctions between polychronic and monochronic time (Hall and Hall, 1987, p. 18). Monochronic people concentrate on one thing at a time, do not like to be interrupted, and emphasize promptness and commitments to schedules. Polychronic people tend to do many things at once, do not mind interruptions, and change their plans often and easily.

However, studies in anthropology and international business did not address the application of such behaviors by consumers in the marketplace, although it is a natural extension. Instead, subsequent researchers investigated time as an economic resource, particularly for homemakers, throughout the early 1970s and into the early 1990s (Hefferan, 1982; Hill, 1985; Oakley, 1974). While polychronic time use was not specifically examined, many instances of multiple activity combinations were found in early data sets. Given the goal of equating time and money, the activity combinations were generally averaged away thereby not properly reflecting the impact of combined activity.

While Hall is generally credited with naming and defining polychronicity, multiple simultaneous activity behaviors have been examined in many research contexts. The

chronological research path may be traced through five significant periods of development:

- (1) Hall’s conceptualization of a monochronic/polychronic continuum as a cultural construct;
- (2) time as an economic resource in time budget studies and the tie to polychronic tendency;
- (3) evidence of polychronicity in studies of time pressure and convenience;
- (4) development of scales measuring various types of time strategies; and
- (5) the current multidisciplinary examination of polychronicity as a key construct.

See Lindquist and Kaufman-Scarborough (2003) for a review of the literature in each of these five areas.

In a number of definitions, polychronicity is described totally or in part as a tendency to carry out “multiple simultaneous activities.” Other definitions suggest that a person engaging in polychronic behavior chooses activities which fit together, so that he or she can switch from one to another based on the level of attention required for an activity at any given moment. More recently, researchers have uncovered many additional nuances of polychronicity and monochronicity that are important to consider in various marketing and management-related situations. These are thought to make up the underlying structure of polychronic tendency that includes attitudes concerning acceptance or rejection of the two behaviors, behavior norms that lean in one or the other directions, behavioral measures of combined activity levels, and beliefs regarding effectiveness. Our interest is whether the underlying structure of activity combinations and activity changes vary systematically across shopping situations. For instance, do shoppers want to combine certain types of errands that they perceive as compatible? Do they differ in the way they combine certain activities while shopping for specific types of goods or services? While on the surface, these possibilities seem logically correct, we may be overlooking those consumers with monochronic tendencies who prefer to shop for distinct product or service types one at a time.

Applications of polychronicity to consumer situations

Researchers such as Oakley (1974) identified numerous household chores that had been performed polychronically, without actually linking the concept directly to the behaviors. For instance, colonial women are described as using a rocking chair specially designed with a removable barrel that could be filled with cream and placed between the “rocker” legs, effectively churning butter while women rocked their children to sleep.

Although the deliberate and specific combination of activities into the same time block were documented, the theory underlying such consumer behavior combinations was not formally developed.

As women entered the workforce, while still managing many domestic tasks, theorists realized that various strategies of time use were becoming a “way of life” among busy homemakers who attempted to get things done with a reduced time allocation. Starting in the early 1980s attention was focused on how women in the workforce were able to juggle work, social, and family responsibilities through strategies such as use of convenience foods and the acquisition of time saving durables (Reilly, 1982; Strober and Weinberg, 1980).

In one of the earliest studies in marketing, a four-item single factor scale, the Polychronic Attitude Index (PAI), was developed and published in 1991 as an initial step in examining polychronicity in a marketing context (Kaufman *et al.*, 1991). The study provided the first empirical evidence that polychronic time use was chosen by a share of consumers as they attempted to use their time more constructively. High-PAI individuals in their sample indicated that they preferred to get all their errands done at once, trying to shop on the way home from other activities. In that work, it was suggested that:

Shoppers who polychronically group several errands at the same time may simultaneously experience different stages in the decision process; they may search for information for one product while evaluating another and purchasing a third, which suggests that multiple decision stages may be operative at the same time across products (Kaufman *et al.*, 1991, p. 397).

The present study moves “inside” the retail “bricks and mortar” store setting, attempting to understand whether some persons shop polychronically within specific shopping situations, while others continue to focus monochronically on the specific task at hand.

New contributions by polychronic tendency analysis (PTA)

Prior studies of polychronicity tended to focus on behaviors, documenting actual combinations of multiple activities, such as reading while eating, that some researchers had reported but not incorporated into their theories. A focus on behaviors presents another limitation since behaviors are only part of a shopper’s time-related tendencies. We argue that individuals have different feelings and preferences about whether activity combinations are desirable, efficient, or effective, and that these feelings may differ within specific shopping situations. For example, some

persons may feel that interruptions while shopping are disturbing, while others may find them to be routine parts of the shopping process.

Additionally, individuals may feel that combining activities is an efficient time use strategy that enables them to accomplish their goals, while others may dislike trying to shop for several different things on the same trip. Some persons may prefer to shop on their way home from work rather than make special trips just for shopping.

In order to examine more fully the underlying structure of polychronicity, a more comprehensive model of the general monochronic/polychronic tendency construct (PT) has been recently proposed and tested (Lindquist and Kaufman-Scarborough, 2003). This expanded model has the potential to inform us more fully how different people think about and want to use time differently.

In that study the authors developed two gender-specific models, based on multiple simultaneous activity and activity changing, two factors that had begun to surface in their studies. The two models were found to be different in that exploratory study, suggesting that time use and activity change patterns may be gender-specific. Table I lists the actual wording of all the original scale items. Those in italics represent the structure of the “General Polychronic Tendency (PT)” model for women. Note there are five simultaneous multiple activity and two activity changing items in the construct. In addition to gender differences that were tentatively confirmed by Lindquist and Kaufman-Scarborough (2003), the early home economics literature and later convenience-working wife literature suggested that time use might also be specific to the situation in which the behaviors take place.

The study

The study focuses on women’s general time use behaviors, feelings, and preferences and contrasts this with their time use behaviors, feelings, and preferences in two distinctly different specific shopping situations. We focus on women since traditional household studies indicate that women are more active in shopping than men (Geerken and Gove, 1983; Hefferan, 1982; Hill, 1985; McGrath, 1988; Pleck, 1985; Oakley, 1974; Schor, 1991). While women enjoy shopping and actively plan on browsing as part of their experience, most men claim to dislike shopping and less than half report making time to shop and browse (Klein, 1998; Otnes and McGrath, 2001). For instance, about 48 percent of women say that they enjoy shopping for clothes (Dholakia, 1994).

Table I Pool of polychronic-monochronic indicator items

Simultaneous multiple activity (SMA) items

1. *I like to juggle two or more activities at the same time (JUGLTWO)^a*
2. *People should try to do two or more activities at the same time (SHTRYTWO)*
3. *I am comfortable doing two or more activities at the same time (COMFTWO)*
4. I typically try to do two or more activities at the same time (TRYTWO)
5. I typically do two or more activities at the same time (DOTWO)
6. *I enjoy doing two or more activities at the same time (ENJOYTWO)*
7. I feel energized when I do two or more things at the same time (ENERGTWO)
8. *I am efficient doing two or more activities at the same time (EFFICTWO)*
9. I am effective doing two or more activities at the same time (EFFECTWO)
10. I feel more approval from those around me when I am doing two or more activities at the same time rather than a single activity (APROVTWO)

Activity changing (AC) items

1. *I change from one activity to another a lot more than other people (CHGMORE)*
2. I am comfortable changing from one activity to another a lot more than other people (COMFCHG)
3. I enjoy changing from one activity to another a lot more than other people (ENJOYCHG)
4. I feel energized when I change often from one activity to another (ENERGCHG)
5. Changing from one activity to another during the day is an efficient way for me to use my time (EFFICCHG)
6. Changing from one activity to another during the day is an effective way for me to use my time (EFFECCHG)
7. I feel more approval from those around me when I change from one activity to another during the day rather than staying with a single activity (APROVCHG)

Notes: ^a Items in italics are the original general model scale items for polychronic tendency analysis. The variable names and wording were changed when applied to the grocery shopping and shopping for clothing to wear at place of employment situations. TRYTWO becomes: "When shopping for groceries I typically try to do two or more activities at the same time"

Source: This list of 17 items comes from Lindquist and Kaufman-Scarborough (2003)

Recent work indicates that men have increased their participation in "traditional" types of shopping previously thought to be dominated by females, but they are more likely to "grab and go" and not participate in the social aspects of shopping (Otnes and McGrath, 2001).

The two shopping situations selected were: shopping for groceries when a large number of items are purchased and shopping for clothing to be worn at a person's place of employment. These were selected because they apply across education and income levels and are not likely to vary greatly by ethnicity, area of residence, or age. Further, as will be discussed later, we anticipated that individuals perceive these as different types of shopping situations. Women are the primary grocery shoppers and often take the lead in clothing shopping situations.

Our goal, as stated previously, is to determine whether some women prefer to complete one set of shopping tasks before beginning others, whether some prefer to combine several shopping activities within a shopping trip, and whether still others prefer to switch back and forth among different types of shopping. We propose that analyzing their tendencies toward polychronic or monochronic time use in shopping situations will inform us of the possible variations that take place. In order to do so, we adopt the following methodology:

- (1) use PTA to uncover the situation-specific models for women in shopping for groceries

and shopping for clothing to be worn at place of employment;

- (2) compare these models to one another; and
- (3) compare these models to the general PT model previously cited.

While individual shopping activities are often combined into overall shopping when studies are conducted, we suggest that the nature of each type of shopping is likely to stimulate different types of time use behaviors, preferences and feelings. That is, grocery shopping for large numbers of items is likely to follow some plan of replenishment and may require the shopper to refer back to a physical or mental "list" of items that they seek in the store. However, grocery stores have incorporated multiple venues, such as photo processing and pharmacy services, arranged around store perimeters that may interrupt the task at hand. There are also numerous "interruptions", such as free sampling of food products throughout many store venues. We feel that it is likely that shoppers will switch activities or tasks as they encounter such areas.

In contrast, we anticipate that shopping for clothing to be worn in the person's work setting follows a less distractible format, since there is likely the need to meet the norms of the individual's workplace. In addition, accessories or other nonclothing items may be needed or required as well. Hence we anticipated less activity changing and more focus as the consumer engages

in clothing shopping. Thus, an important step in our study was to establish that consumers actually view these two types of shopping as distinctly different.

Although the authors believe that PT is indeed situation-specific, we have chosen to use the classic null hypothesis approach. The following hypotheses are to be tested:

H1. Consumer polychronic tendency is independent of specific types of shopping situations for female shoppers.

The first hypothesis states that women's polychronic tendencies do not vary from situation to situation. This implies that women who are more polychronic or more monochronic will tend to have similar underlying feelings, preferences, and behaviors regardless of the shopping situation that they face. Specifically, the models for our two chosen case examples, grocery shopping for large quantities of items and shopping for clothing to be worn at place of employment, will not have significant differences. The same items (variables) will be part of both models, though the question wording for each model will focus on the shopping situation presented. Also, the same number of items will be part of each model further indicating a stable underlying structure:

H2. There is no difference between the general PT model and the model for specific shopping situations.

Here, although the authors believe that the situation-specific models differ from the general model, the null hypothesis is proposed for testing. If verified, the model designations for these two situations will be: Polychronic Tendency – Grocery Shopping (PTGS) and Polychronic Tendency – Clothing Shopping (PTCS). A discussion of these choices will be presented in the Methodology section.

Methodology

Three phases of study were:

- (1) determine acceptable choices of shopping situations;
- (2) construct and test the actual models; and
- (3) compare the models.

Phase 1 was conducted in order to select two shopping situations for use in testing the situation-specific models. For this purpose, telephone interviews were conducted with a systematic sample of 119 respondents in a large Eastern city. The authors felt that it was essential to look at different, yet related, situations within the types of shopping that are likely to occur. Our goal was to

choose two shopping situations that are considered to be different from each other by a sample of female shoppers. Respondents were simply asked to compare pairs of activities and rate how similar they are on a scale of 1 to 10, where "10" means that they are very similar, and "1" means that they are very different. The initial activities pool considered were: shopping for groceries, shopping for a personal computer, shopping for clothing to wear at work, shopping for a major household appliance, and shopping for a place to live. The results pointed to grocery shopping and shopping for clothing to wear at work as the most appropriate dissimilar pair. The mean similarity score for women on this pair was 3.56 with 64 percent selecting a 4 or less on the scale. Shopping for groceries and shopping for clothing to wear at work were perceived as sufficiently different by respondents to be used in further study.

The Phase 2 sample was composed of 219 female adults with a bit over half (50.7) being 18-44 years of age and the remainder were 45 years of age or older. The sampling goal had been a 50-50 split in these two age groups.

Data were collected using a convenience quota sampling method. It was done in a medium size midwestern city. The participants had to be US citizens. Also, no minority subculture members were to be in the sample. The latter constraint was set because of the authors' previous unpublished findings of differences in time-use tendency by such groups. Also, there were no students in the sample.

The questionnaire was self-administered. Our pool of 17 polychronic-monochronic indicator items, listed in Table I, was developed in earlier work and follows a self-report, seven-point, Likert format ranging from "strongly agree" (7) through "strongly disagree" (1). This pool was used by Lindquist and Kaufman-Scarborough (2003) in their development of the PT model.

In the present study, the PT items were presented to subjects in three groups. The first group consisted of the original seven Likert statements that constituted the PT model developed in the earlier study. These are given in italics in Table I.

It was decided to use the entire set of 17 indicator items, listed in Table I, with wording modified to reflect the two specific shopping situations. The grocery-shopping situation formed the second group of survey items. Here are two examples of the modified wording:

When shopping for groceries I typically try to do two or more activities at the same time.

When shopping for groceries I change from one activity to another a lot more than other people.

Respondents were also given instructions that explained that “shopping for groceries” was to mean “shopping for groceries when you buy a lot of items at one time.” This was done so respondents would focus attention on major grocery shopping trips when answering.

The third situation-specific group of 17 items was the same as the grocery shopping pool except they were modified to reflect the clothing-shopping situation. Examples are:

When shopping for clothing to wear at work I typically try to do two or more activities at the same time.

When shopping for clothing to wear at work I change from one activity to another a lot more than other people.

Again respondents were given instructions that stated that “shopping for clothing to wear at work” was to be interpreted as “shopping for clothing to wear at your place of employment.” That is, we wanted respondents to think of their own specific workplace, rather than some stereotypical concept of “work clothes” that might connote clothing worn for manual labor.

Analysis

The shopping PT models were constructed and tested using first order confirmatory factor analysis (CFA). The Proc Calis approach contained in the SAS statistical package was used. The objective was to develop the most parsimonious, best-fitting solution for each model and to examine whether identical models held from the general to the two specific shopping situations. When doing structural equation modeling, the recommended sample size range is 100 to 200 (Hair *et al.*, 1998). Sample sizes for the general, grocery, and clothing investigations were 198, 177, and 177, respectively. Further, model development must be driven by sound theory and the data set itself.

How the various scales should be used to determine an individual person’s polychronic/monochronic tendency or a group’s position was also to be determined. Since the study models and resulting scales are designed for replication in other situations and among other populations the summated scale approach was chosen over the use of factor scores. The need for replicability over orthogonality was the key (Hair *et al.*, 1998).

Results

Table II contains the summary of the measures of fit for the first order CFA for each of the three models. The models show excellent first order fit across the full range of measurement criteria. Note that the grocery shopping PT model has seven

items as does the general PT model, but the clothing shopping PT model has only five items. Further, the alphas (Cronbach, 1951) for the general, grocery, and clothing models were 0.86, 0.91 and 0.89, respectively. These are all “reflective” models since the overall tendency that a person has result in the behaviors, feelings, and preferences which they report.

Table III is a comparative summary of items that were part of the three polychronic tendency models. Notice that neither the grocery-shopping model nor the clothing-shopping model was identical to the other or to the general polychronic tendency model. Though the number of items is seven for both general and grocery models, that number drops to five for clothing. Also, the combination of items in each of the models is not identical to any others’. Hence, *H1* is rejected. The grocery and clothing shopping PT models are not identical. Consumers approach these two shopping situations with a different focus that we will touch on shortly. *H2* is also rejected. The grocery-shopping and clothing-shopping models do not identically match the general PT model. Here we see that though the respondents in this study had an overall tendency model structure, when given a more specific situation scenario they showed that their tendency shifted.

Notice that four of the general model items (JUGLTWO, SHTRYTWO, COMFTWO and EFFICTWO) do not appear in the two situation-specific shopping models. Two of these items, JUGLTWO and COMFTWO, are part of the PAI, the measure of polychronicity published by Kaufman *et al.* (1991). On the other hand, two AC variables (CHGMORE and COMFCHG) are common to all three models. The two shopping models not only share CHGMORE and COMFCHG, but they also have DOTWO, an SMA variable, and ENJOYCHG, an AC variable, in common. Another comparison to be considered is the split between SMA and AC items. For the general model the ratio is 5 to 2, for grocery shopping it is 4 to 3, and for clothing shopping it is 1 to 4. Notice how the dominance shifts from SMA to AC as these women enter the two shopping arenas.

How the three measurement scales resulting from the models should be constructed has already been discussed and the conclusion was that a summated approach was best. A cautionary note is that this is a common approach, however, the summated scale is not an absolute representation of a model. The three scales are not directly comparable because the number of items is different as is the item content. However the scale parameters are instructive. The ranges of scores were: women-general 12 to 49, women-grocery

Table II Confirmatory factor analysis model fit indicators

Measures	Model		
	General	Grocery shopping	Clothing shopping
No. of items	7	7	5
Composite reliability	0.86	0.91	0.89
Variance extracted	0.62	0.73	0.62
AGFI	0.97	0.97	0.97
CFI	1.00	1.00	1.00
NNFI	1.00	1.00	1.00
Number of standardized residuals > 2.58	0	0	0
Chi-sq./df ratio	0.92	0.78	1.01
RMR	0.05	0.05	0.05
Convergent validity > 3.29	All	All	All
Coefficient alpha	0.86	0.91	0.89

Note: Composite reliability and coefficient alpha measure the same qualities of the fit

Table III Items appearing in best fit models

Item	Model		
	General – PT	Grocery shop – PTGS ^b	Clothing shop – PTCS ^c
<i>Simultaneous multiple activity (SMA) items</i>			
JUGLTWO ^a	X		
SHTRYTWO	X		
COMFTWO	X		
TRYTWO		X	
DOTWO		X	X
ENJOYTWO	X	X	
ENERGTWO			
EFFICTWO	X		
EFFECTWO		X	
APROVTWO			
<i>Activity changing (AC) items</i>			
CHGMORE	X	X	X
COMFCHG	X	X	X
ENJOYCHG		X	X
ENERGCHG			
EFFICCHG			
EFFECCHG			X
APROVCHG			

Notes: ^a Variable names are different for each of the three model groups. For example JUGLTWO becomes GRJGLTWO for grocery shopping and WCJGLTWO for work clothing shopping. Notice that ENERGTWO, APROVTWO, ENERGCHG, EFFICCHG, and APROVCHG did not appear in any of the models; ^b Polychronic tendency – grocery shopping (PTGS); ^c Polychronic tendency – clothing shopping (PTCS)

7 to 48, and women-clothing 5 to 35. Recall the scales were 1 to 7 so minimum scores could be either 7 or 5 and maximum scores could be either 49 or 35. We see that most, if not all, types of women from strongly monochronic with scores at the low end of the scale (12, 7, 5 scores) to strongly polychronic at the higher end (49, 48, 35 scores) were in the samples. Mean scores were 36.4, 26.9, and 18.6, respectively. This shows that these women are more polychronic on average in general tendency than they are in the two shopping situations. In fact, in the shopping scenarios they are near neutral, though on average slightly monochronic.

Discussion of findings and research implications

The three models had excellent fits as shown in Table II. In particular, the variances extracted at 62 percent for the PT and PTCS models and 73 percent for the PTGS construct is quite high. Notice that the CFI values are 1.0 across the models. None of the standardized residuals were greater than 2.58, another indication that solid yet parsimonious constructs had been developed. The alphas are quite strong at 0.86-0.91, showing an excellent model fit in all cases. One must realize, however, that there may be other models that fit

the data set tested, but those discussed in this piece are “on target.”

Turning to the variables that were part of the models, here are a few observations. Previously published models (except Lindquist and Kaufman-Scarborough, 2003) do not contain activity-changing (AC) items. Yet changing from one activity to another a lot more than others and being comfortable with change of activities was part of all three models. Further, the two situation-specific models also included a measure of enjoyment with changing activities. As noted earlier, the PT model for shopping for clothing to be worn at work had four out of five items that were AC. These findings point to the need to have questions related to activity changing in any PT model. One other interesting finding is that DOTWO (“I typically do two or more activities at the same time”) showed only in the two shopping models. This confirms that these women are engaging in multiple simultaneous activities in both shopping situations. This, if confirmed, is a significant finding.

It was interesting to confirm that none of the models directly matched any other. Although the null hypothesis was tested, the authors were looking for the difference result. This points to the possibility that PT models are situation-specific. Again, this was an a priori assumption of the authors. Notice that the alpha was lowest for the general model, then increased for the grocery-shopping construct and was highest for the clothing-shopping model. Although not consciously measuring “involvement,” do the results suggest that involvement increase leads to the need for more focused and better fitting models? If so, why is this the case? These are topics for future study.

Retail management implications

Retailers in today’s time-pressured society should feel compelled to more closely understand how shoppers’ time use influences their in-store behaviors. It is not enough simply to conclude that shoppers choose retail venues based on convenience in order to spend less time shopping. They may actually choose specific retailers who provide an environment that fits their personal shopping style. Thus, shoppers may be very particular about which specific opportunities designed to save time are actually provided. For instance, some female shoppers may patronize selected venues in order to spend less time shopping. However, it is not fully clear whether such shoppers perceive certain retail venue characteristics as actually saving them time. For

example, self-scanners at checkout are designed to speed the process, but may be perceived by some shoppers as untrustworthy, complicated, confusing, and/or more time consuming to use.

Additionally, we propose that shoppers are likely to patronize retailers who create an environment that matches their time use preferences while shopping. That is, those polychronic time use shoppers who enjoy changing among activities may want the retailer to provide a variety of product presentations, free trials, and demonstrations, while other more monochronic shoppers may simply wish to focus on their desired purchases. It is essential that retailers attempt to better understand how different types of shoppers wish to use their time.

The results of our research point to the fact that time-driven behavior is not necessarily identical in all shopper and retail venue situations. For example, time-pressed consumers may prefer different methods of store layout, display, and checkout than those shoppers who see themselves as being in time surplus.

Recommendations for grocery shopping venues

As this preliminary research demonstrates, shopping for groceries may involve deliberate attempts to do two (or more) activities at a time (TRYTWO) by shoppers who apparently enjoy doing so (ENJOYTWO). In fact, persons who enjoy the stimulation of multiple grocery task activities may choose to patronize a specific retailer who provides a variety of store formats, assortment of items, and breaks in the routine of everyday shopping. This is certainly borne out by the variety of activities available in numerous supermarket and upscale grocery shopping formats. While shopping at Wegmans, for example, patrons can shop for a while, sit down to enjoy a freshly-cooked meal, and resume shopping, all in a setting with gracious ambience. Other grocery stores may provide an assortment of taste tests and demonstrations at various points throughout the store, which may be desirable to some female shoppers, but be viewed as interruptions to those who are not comfortable changing tasks.

The present study demonstrates the importance of distinguishing among shopper populations that include persons who are monochronic, polychronic, and somewhere in between. Some grocery store planners may assume that most customers want to shop somewhat polychronically with numerous opportunities to examine, try, or view various types of merchandise as they move through the store. However, our study indicates the importance of also recognizing that some shoppers are not comfortable changing activities.

Instead they prefer to stay focused on a single purchase activity. It is also important to identify whether there are any merchandise areas that tend to stimulate the desire among shoppers have a single focus. If so, grocery planners may find it desirable to create one or more sections of the store that allow for such undivided attention. For instance, some grocery stores have large pharmacies with areas for health checks, consultations, and waiting for prescriptions. Such areas may be more comfortable for patrons if few interruptions are encountered and the space design provides for more focused attention on the task at hand.

Recommendations for retail clothing venues

In contrast, shopping for clothing to be worn at place of employment does not reflect two of the variables (TRYTWO and ENJOYTWO) included in the grocery shopping models, but includes the variable EFFECCHG, representing the perception that changing from one activity to another may be viewed as adding effectiveness to the shopping trip. The variables included and omitted suggest that shopping for clothing may be viewed as a more deliberate and focused type of shopping. In fact it is likely a higher-involvement experience than grocery shopping is for most people. Women who are shopping for clothing to be worn at place of employment may be comfortable changing tasks and even enjoy doing so, but do not indicate that they try to combine several activities when shopping as they do in the grocery shopping situation. Perhaps some prefer staying focused on the task at hand, preferring to complete their purchases with integrated departments offering matching accessories and other necessary but related items.

It is not likely that female clothing shoppers would appreciate a restaurant or coffee bar format integrated into their wardrobe-shopping environment. They may not want to be interrupted with fashion advice or demonstrations of new products. Such amenities may be considered intrusive and actually interrupt the kind of concentrated attention that seems to be preferred by the women in this specific sample. Retailers who provide a variety of activity options at point of sale may actually have a detrimental affect on the clothing shopping experience expectations that women hold.

Summary

The present study demonstrated that PTA could provide useful information about female shoppers' preferences and desired time use patterns. We looked at two common, yet different, product shopping situations. The analysis revealed that the

study of general time use patterns does not provide us with enough insight to sufficiently understand consumer time preferences, feelings, and behaviors when shopping for different product types in the retail environment. Hence, retail planners should not assume that all women want to shop in the same ways in their stores for all products or services. Instead, female shoppers vary widely in their tolerance of and preference for multiple activities that retailers may choose to provide. Their reaction is also clearly affected by the type of product sought. Typically one could expect that a shopping venue with many activity options may be perfectly acceptable to the more polychronic shopper yet be distracting to those more monochronic women shoppers, who choose to shop in a more structured. Product class and shopping environment go hand in hand.

Such findings also have implications for various store formats, such as warehouse shopping venues that rely heavily on shoppers serving themselves with little assistance from store clerks. Warehouse stores like Sam's Club typically have a mixed merchandise assortment, with the customer moving in and out of food areas in close proximity to hard goods, jewelry, clothing, and home electronics. Female shoppers who have monochronic tendencies are likely to find such formats to be somewhat difficult to deal with since the layout demands activity changes as various types of merchandise categories are encountered. It might be profitable for such retailers to provide some additional signage, maps, distance between product categories, or more logical groupings so that shoppers are able to accomplish their goals.

The summated scales coming from each of the models are working in that respondents show that they vary in polychronic or monochronic tendency by using the whole of each scale. Interestingly respondents seemed to get more monochronic as they are faced with actual, and possibly more significant or meaningful shopping situations. All of the results found in this exploratory study must be confirmed in a more rigorous manner. The models need to be properly validated beyond the content validity demonstrated. Discriminant, nomological, and concurrent validity checks should be carried out in shopping and other marketplace behavior situations and among various demographic, cultural, subcultural, and lifestyle segments. Studies of male shoppers in appropriate product categories and venues would be useful. Also, tests of the applicability of polychronic tendency analysis to the catalog, Internet, and other retail shopping environments and formats beyond "bricks and mortar" are certainly called for. Time use preferences across specific types of merchandise and services can also be explored. This is

increasingly important as retailers with wide assortments incorporate vastly different types of merchandise and services in their stores.

References

- Cronbach, L.J. (1951), "Coefficient alpha and the internal structure of tests", *Psychometrika*, Vol. 16, pp. 297-334.
- Dholakia, R.R. (1994), "Even PC men won't shop by computer", *American Demographics*, Vol. 16 No. 5, May, p. 11.
- Geerken, M. and Gove, W.R. (1983), *At Home and at Work: The Family's Allocation of Labor*, Sage Publications, Beverly Hills, CA.
- Graham, R.J. (1981), "The role of perception of time in consumer research", *Journal of Consumer Research*, Vol. 7, March, pp. 335-42.
- Gross, B. (1987), "Time scarcity: interdisciplinary perspectives and implications for consumer behavior", in Sheth, J.N. and Hirschman, E.C. (Eds), *Research in Consumer Behavior*, Vol. 2, JAI Press, Greenwich, CT, p. 154.
- Hair, J.F. Jr, Anderson, R.E., Tatham, R.L. and Black, W.C. (1998), *Multivariate Data Analysis*, 5th ed., Prentice-Hall, Upper Saddle River, NJ.
- Hall, E.T. (1959), *The Silent Language*, Doubleday, Garden City, NY.
- Hall, E.T. and Hall, M.R. (1987), *Hidden Differences: Doing Business with the Japanese*, Anchor Press/Doubleday, Garden City, NY.
- Hefferan, C. (1982), "Workload of married women", in School, K.K. and Tippett, K.S. (Eds), *Family Economics Review*, Agricultural Research Service, Hyattsville, MD, pp. 10-15.
- Hill, M.S. (1985), "Patterns of time use", in Juster, T.F. and Stafford, F.P. (Eds), *Time, Goods and Wellbeing*, Institute for Social Research, University of Michigan, Ann Arbor, MI.
- Hornik, J. (1984), "Subjective vs objective time measures: a note on the perception of time in consumer behavior", *Journal of Consumer Research*, Vol. 11, pp. 615-18.
- Jacoby, J., Szybillo, G.J. and Berning, C.K. (1976), "Time and consumer behavior: an interdisciplinary overview", *Journal of Consumer Research*, Vol. 2, March, pp. 320-39.
- Kaufman, C.F. and Lane, P.M. (1996), "Time and technology: the growing nexus", in Dholakia, R.R., Mundorf, N. and Dholakia, N. (Eds), *New Infotainment Technologies in the Home: Demand-side Perspectives*, Lawrence Erlbaum Associates, Mahwah, NJ, pp. 128-49.
- Kaufman, C.F., Lane, P.M. and Lindquist, J.D. (1991), "Exploring more than 24 hours a day: a preliminary investigation of polychronic time use", *Journal of Consumer Research*, Vol. 18, December, pp. 392-401.
- Klein, M. (1998), "He shops, she shops", *American Demographics*, Vol. 20 No. 3, March, pp. 34-5.
- Leclerc, F., Schmitt, B.H. and Dube, L. (1995), "Waiting time and decision making: is time like money?", *Journal of Consumer Research*, Vol. 22 No. 1, June, pp. 110-19.
- Lindquist, J.D. and Kaufman-Scarborough, C. (2003), "Polychronic tendency models: a gender contrast study", in Lewin, J. (Ed.), *Proceedings of the 11th Biennial World Marketing Congress*, Vol. 1, one page abstract, CD-ROM, Academy of Marketing Science, Coral Gables, FL.
- McDonald, W.J. (1994), "Time use in shopping: the role of personal characteristics", *Journal of Retailing*, Vol. 70 No. 4, Winter, pp. 345-65.
- McGrath, J.E. (1988), *The Social Psychology of Time*, Sage Publications, Beverly Hills, CA.
- Oakley, A. (1974), *The Sociology of Housework*, Pantheon Books, New York, NY.
- Otnes, C. and McGrath, M.A. (2001), "Perceptions and realities of male shopping behavior", *Journal of Retailing*, Vol. 77 No. 1, Spring, pp. 111-37.
- Pleck, J.H. (1985), *Working Wives/Working Husbands*, Sage Publications, Beverly Hills, CA.
- Reilly, M.D. (1982), "Working wives and convenience consumption", *Journal of Consumer Research*, Vol. 8, March, pp. 407-18.
- Schor, J.B. (1991), *The Overworked American*, Basic Books, New York, NY.
- Strober, M.H. and Weinberg, C.B. (1980), "Strategies used by working and non-working wives to reduce time pressures", *Journal of Consumer Research*, Vol. 6, March, pp. 338-48.
- Thompson, C.J. (1996), "Caring consumers: gendered consumption meanings and the juggling lifestyle", *Journal of Consumer Research*, Vol. 22 No. 4, March, pp. 388-407.

Further reading

- Gronau, R. (1977), "Leisure, home production, and work: the theory of the allocation of time revisited", *Journal of Political Economy*, Vol. 85, December, pp. 1099-123.

Executive summary and implications for managers and executives

This summary has been provided to allow managers and executives a rapid appreciation of the content of this article. Those with a particular interest in the topic covered may then read the article in toto to take advantage of the more comprehensive description of the research undertaken and its results to get the full benefit of the material present.

Multi-tasking, shopping and the chance to relax

As a mere man, I am not entirely sure as to my qualification to comment on the shopping habits of women or, more generally on the subject of multi-tasking (or rather polychronic tendency analysis). However, I will have a shot and look at the significant implications for retailers, retail marketers and brand managers of polychronic behavior. It is especially significant since, in many areas of shopping, women remain dominant – you only have to pay a trip to the supermarket to appreciate this fact.

The idea of multi-tasking and the view that women are far more like to do this and do it better is well established in the popular mind. As Lindquist and Kaufman-Scarborough report the increase in the proportion of women working has led to a need to juggle home life, work and pleasure requiring, in many cases, the combination of tasks

such as shopping, picking up the kids and organizing work schedules. Much has been written and debated about the effects of this complicated nightmare on performance at work, on women's health, as a contributory factor in stress and as a cause of marital breakdown.

However, these issues – while very important – are not of great moment to marketers. We are concerned about the manner in which changing consumer behaviour influences purchasing decisions and the performance of the brands for which we are responsible. And the authors point out that, despite the long track record of studies touching on polychronism, the tendency's impact on marketing has not really been considered.

Not all women multi-task

The first thing to note from the work here is that not all women engage in polychronic behavior – many remain monochronic, engaging in one task followed by another. However, many women do seek to combine shopping tasks and this affects the manner in which they consumer our marketing and distribution efforts.

For the polychronic female shopper, we need to adapt store layout, promotional messages and merchandise mix so as to respond to their requirements. And, in doing this we need to remember that many of our existing shoppers do not respond to this approach since they are monochromic, one task at a time people. Such considerations as changed layout, testing and tasting, in-store promotions can create confusion for some shoppers. Disproportionately these shoppers are focused on a single task – the shopping trip is for a specific purpose.

Retailers therefore have three broad choices in responding to these different behaviours:

- (1) target polychronic shoppers – probably at the expense of monochromic shoppers;
- (2) target monochromic shoppers – with the opposite effect to one above; and
- (3) seek to attract both types of shopper – risking putting off either type or worse both types.

In selecting from these broad strategic options retailers have to consider the type of customer that predominates in the store. Clearly, a retailer with very many polychronic customers would select option one whereas a retailer with a mix of customer will probably adopt a mixed strategy.

Know the customer better

Since the degree to which your customers are engaging in multi-tasking will vary, you need to understand the type of people to which you appeal. A supermarket set in a wealthy suburb will have a different customer profile when compared to a

supermarket in a small rural service center or in a Sunbelt retirement community. For some retailers there will be differences store by store with some dominated by polychronic customers, others by monochromic customers and some with a balanced mix of types.

Since researching our customers is an ongoing marketing function (one hopes), we need to build in assessment of polychronism into our research programs. This activity will sit alongside other relevant and important information about demographics, purchase behavior and promotional responsive and can be applied to the development of strategies. What is clear, however, is that there is not a one size fits all solution in retail marketing.

Multi-tasking is more likely in some types of store

The next important observation from Lindquist and Kaufman-Scarborough is that the degree to which polychronism takes place varies by type of store (actually by type of shopping but this is reflected in the type of store). Weekly convenience shopping is more likely to see polychronic tendencies compared to considered comparison shopping. Perhaps this reflects the fact that comparison shopping (such as buying clothes) represents an escape from the daily grind of home, work and kids. The woman can relax a bit and focus on the pleasurable task of shopping for clothes.

Again, the extent to which our customers engage in multi-tasking in our store must influence the strategies we employ. For many fashion retailers there is a desire to allow women the space and time to relax, make comparisons, try on and arrive at a careful decision unhindered by the bothersome details of normal life. Creating such an ambience may represent a significant strength for some retailers even where the majority of customers fall into the polychronic category – the rest of life may be a madhouse but in my shop you can be selfish and put your self first! The rest of life can wait a bit!

We can see how an understanding of this aspect of female shopping behavior presents new opportunities for retailers who wish to position themselves in a strong position away from the competition. Allowing simple choices to be made will work in some circumstances while in other situations the right approach is to feed the complexity by providing variety and difference within the store.

(A précis of the article “ Polychronic tendency analysis: a new approach to understanding women's shopping behaviors”. Supplied by Marketing Consultants for Emerald.)