AN OPTIMAL QUEUING WAIT FOR VISITORS’ MOST FAVORITE RIDE AT THEME PARKS

Hsin-You Chuo and John L. Heywood

ABSTRACT

Since waiting in a queue may induce both negative and positive effects on customers’ quality perceptions of which the queue is formed, an optimal queuing wait which is long enough but not too long to have positive effects on the pursued service is critical for successful queuing management. This study examined the existence of an optimal queuing wait at theme parks by merging the interpretative approach of institutional norms with the measuring application of the adapted Return Potential Model from crowding studies. Using quota and systematic sampling techniques, survey data were collected from 1,440 visitors to five leading theme parks in Taiwan. An optimal queuing wait represented by an institutional norm among visitors with moderate consensus for the longest acceptable waiting time (LAWT) was revealed in this study. As a critical reversal point of visitors’ quality perception, significant ascent of visitors’ crowding perception did occur when their actual waiting times exceeded their LAWT.

Keywords: Queuing management; institutional norms; perceived crowding; Return Potential Model; theme parks
INTRODUCTION

While waiting in a service queue has been verified to have a negative effect on customer’s quality perception and satisfaction of their pursued services empirically (e.g., Houston, Bettencourt, & Wenger, 1998; Van Riel, Semeijn, Ribbink, & Bomert-Peters, 2012), its positive effect has also been substantially revealed by some experimental studies. For instance, results of the studies show that a required wait can signal quality to interested customers and increase both their purchase intention and actual experienced satisfaction (Giebelhausen, Robinson, & Cronin, 2011); as a queue taking shape, it can induce people’s “herd” behavior (Debo, Parlour, & Rajan, 2012; Kremer & Debo, 2012); value perceptions of the antecedents in the queue can then be further increased when additional consumers join in the waiting queue (Koo & Fischbach, 2010). Since waiting in a queue may induce both negative and positive effects on people’s quality perceptions of which the queue is formed, Giebelhausen et al. (2011) suggest that a better strategy for queuing management practitioners might involve “optimizing” waits. It is definitely a valuable and far-sighted suggestion; however, the existence of an optimal queuing wait for particular services has not been proved yet.

An optimal queuing wait not only means a required wait which is long enough and not too long to have a positive effect on the pursued service but also simply refers to customers’ well-accepted standard of a certain period of waiting time in a queue for a particular service. Since visitors’ well-accepted tolerance standard is the uninvestigated pivot of the nature of crowding phenomena in theme park settings (Yeh, Wai Aliana, & Zhang, 2012), this study attempts to address the issue of the existence of an optimal queuing wait at theme parks by merging the interpretative approach of institutional norms with the measuring application of the adapted Return Potential Model (RPM) from crowding studies.

In the remainder of this study, previous endeavors within the research streams of queuing, waiting, norms, and perceived crowding are summarized and followed by the deduction and construction of the research question and hypothesis of this study. The methodology designed for answering the research question and examining the hypothesis is described subsequently. Accordingly, structural characteristics indicating the convergence of the social standard of theme park visitors’ waiting times are calculated and hypothesis regarding how theme park visitors’ perceived crowding increases across a well-accepted social standard of waiting time for their favorite ride or attraction is examined. Finally,
results of the study are presented and their implications and suggestions are further discussed.

LITERATURE REVIEW AND HYPOTHESIS CONSTRUCTION

Queuing and Norms

Theme and amusement parks are built environments structured to accommodate high densities of visitors who are seeking short-term (5–7 hours) emotional experiences (Bigné, Andreu, & Gnoth, 2005) through a variety of rides, attractions, and entertainments (Clavé, 2007). Visitor densities in theme parks are often very high and services have limited capacities which usually require visitors to queue and wait for rides, attractions, and entertainments. Schwartz (1975) recognized, however, that queuing and waiting are not the same things. A queue, “...is a social structure consisting of elements organized in terms of priority” (Schwartz, 1975, pp. 6–7). Queuing is an important process that provides structural solutions to the maintenance of social order, making human relationships predictable and peaceful. As such queuing is governed by social norms that help to ensure the legitimacy of the structure and ensure equity in the allocation of services. In the queuing theory of operations research, various queuing disciplines (e.g., SIRO, service in random order; FIFO, first in first out; LIFO, last in first out, and so on) are available (see the review in Larson, 1987). In the service business domain, one of the most common queuing norms is “first come, first served.” The first come, first served norm is widely recognized and frequently enforced by those waiting in lines sanctioning anyone attempting to violate the norm. “It follows that resentment and anger generated by violations of equitable allocations of place arise ... because the rule by which they [the victims] govern themselves is contravened” (Schwartz, 1975, p. 94). But, as Schwartz goes on to argue, people queue for services not simply because a norm prescribes them to do so. More important he contends is the fear of possible sanction, which would make the violator conspicuous by creating a scene, and could result in the loss of the desired service as a result of having caused a disturbance.

Social norms can be defined as: “Informal rules shared by groups or societies that guide behavior and have positive and/or negative
consequences that help to make the behavior more or less self-correcting” (Heywood, 2011, p. 442). Schwartz’s (1975) contention, that queuing is governed by social norms, is consistent with Heywood’s (2011) definition. The informal rule of “first come, first served” is the cognitive component (Heywood, 2002) of the social norm that is widely shared and understood throughout many societies. But as Schwartz further recognized the power of social norms is derived from the positive and/or negative consequences that result from violating or following the informal rule. The consequences of normative behavior are called sanctions and can be informally imposed by others (Schwartz, 1975), informally imposed by the self by feeling embarrassed (Grasmick, Bursik, & Kinsey, 1991), and internally imposed by the self by feeling guilty (Grasmick et al., 1991). Thus, sanction constitutes the emotional component of the social norm (Heywood, 2002). This is why members of a queue are very likely to informally sanction anyone trying to violate the informal rule by “cutting in line,” and to help maintain the integrity of the queue themselves by following the queuing norms and thus avoiding bad feelings like embarrassment, and/or guilt (Grasmick et al., 1991). Consequently social norms have a high potential to self-correct the non-conforming behaviors of others and of individuals themselves.

Waiting and Institutional Norms

Waiting on the other hand is a psychological problem for those forced to delay the service they desire, whether they wait in a queue or otherwise (e.g., patients usually wait in Doctor’s offices and emergency rooms, but do not form themselves into a queue) (Schwartz, 1975). An individual’s decision to wait depends upon perceptions of and expectations about the waiting experience (Maister, 1988). Probably the most important determinant of the waiting experience is the desirability, attractiveness, or value of the goal or service that is delayed (Maister, 1988; Meyer, 1994). Waiting for a ride or attraction in a theme park then depends initially on how desirable the ride or attraction is to each individual in the queue. To minimize waiting and to make waiting as pleasant as possible, theme and amusement parks plan and design the queue as an integral part of the ride or attraction and its loading structure and loading system (Clavé, 2007). Even though the goal of queue-ride/attraction designs is to minimize the waiting costs for rides and attractions, individuals may still have personal standards for how long a wait is tolerable or acceptable.
These personal standards could be aggregated to determine if there is consensus among theme park visitors about an acceptable social waiting standard. Unlike the queuing norms, however, visitors would find it difficult, if not impossible, to enforce a social waiting standard. They could not keep waiting, and forego the ride or experience, but they would merely deny themselves a desirable activity while having little or no effect on the waiting times in general. Social standards can only be enforced in these types of situations by institutional authorities through external formal sanctions (Blake & Davis, 1964). When organizations and agencies formulate social standards, as for example operational objectives, rules, or regulations, Heywood (2011) calls them institutional norms. His definition of institutional norms is, “Formal rules or standards that are formulated and implemented by administrative authorities and enforced by them through external formal sanctions” (Heywood, 2011, p. 446). Formal sanctions might involve restrictions and limits on park access at popular times or rewards for off-time use through lower fees. Because social standards require management by institutional authorities outside the social situation or context, the term institutional norm provides a way to recognize their inherent normativeness, but to separate them from social norms that have a high potential to be self-correcting. If there is consensus among theme park visitors about an acceptable waiting time an institutional norm can be identified.

Perceived Crowding as an Evaluative Standard of Quality

Crowding is one of the most important factors that not only influences visitor’s decision of theme park attendance negatively (McClung, 1991) but also affects the success of theme park management harmfully (Pikkemaat & Schuckert, 2007). To accommodate the large crowds and provide high-quality services and experiences, theme park operators need to assess quality indicators and establish management standards for issues like waiting times (Baker & Fesenmaier, 1997; Milman, 2001). The concept of identifying indicators and establishing standards of quality in outdoor recreation grew out of concerns with finding carrying capacities for wildland recreation areas (Graefe, Kuss, & Vaske, 1990; Manning, 2007; Stankey et al., 1985). An important social condition relevant to the carrying capacity of wildland areas was the number of encounters with other visitors on trails and in camping settings (Manning, 2007). While densities of visitors in wildland areas are typically very low, unacceptable numbers of encounters were
recognized as affecting subjective perceptions of crowding. Crowding studies eventually moved from wildland areas to frontcountry and more developed settings (Hammitt, McDonald, & Noe, 1984; Kuentzel & Heberlein, 2003; Manning, 2007; McConnell, 1977; Roggenbuck, Williams, Bange, & Dean, 1991; Tarrant & English, 1996; Vaske, Donnelly, & Petruzzi, 1996; Westover & Collins, 1986) making crowding “…one of the most frequently studied issues in outdoor recreation” (Manning, 1999). Studying crowding in the very high-density, artificial environments typical of theme parks is a natural extension of this body of research (Westover & Collins, 1986).

Crowding has been used as an evaluative standard for identifying desirable social conditions in parks and outdoor recreation areas since the 1960s (Manning, 1999). Evaluative standards generally developed in this field from the application of Jackson’s (1965, 1966) RPM. While the RPM was developed by Jackson (1966, p. 36) to define a norm, “…in terms of the distribution of approval and disapproval by Others for various alternatives of Actor’s behavior …” its application to parks and outdoor recreation focused on social and environmental conditions of parks and outdoor recreation settings and not on recreationists’ behaviors (Shelby & Vaske, 1991). This shift in focus resulted in vigorous debates about whether evaluative standards were norms or not (Heywood, 1996a, 1996b; Roggenbuck et al., 1991; Shelby & Vaske, 1991; Shelby, Vaske, & Donnelly, 1996). The differences between social norms and institutional norms described above may help to resolve these debates by recognizing that both involve consensus about what should or should not be (either in terms of acceptable behavior or acceptable social or environmental conditions) and that both involve sanctions (although sanctions are informal and internal for social norms and thus to a high degree self-correcting, but external and formal for institutional norms and thus enforced, implemented or managed by outside institutional authorities) (Heywood, 2011).

**Structural Characteristics of Institutional Norms**

An important contribution of the adapted RPM is the methodology that makes it possible to measure and analyze socially relevant indicators, personal evaluative standards and the possibility of institutional norms, and to display these findings in readily understandable outputs. Important outputs are the structural characteristics of institutional norms that include
crystallization, salience, and prevalence. Crystallization is an indication of the degree of social consensus about an institutional norm. Early adaptations of Jackson’s RPM used standard deviation as the measure of crystallization, but others suggested that the coefficient of variation (CoV), and the range of maximum acceptability between the first and third quartiles, were more meaningful crystallization measures (Roggenbuck et al., 1991). More recently measures of potential conflict, PCI2 (Vaske, Beaman, Barreto, & Shelby, 2010), and agreement, Van der Eijk’s A (Krymkowski, Manning, & Valliere, 2009; Van der Eijk, 2001), have been proposed as clearer ways to determine crystallization. Salience is a measure of whether a normative issue is important to or means anything special to the respondents (Donnelly, Vaske, Whittaker, & Shelby, 2000; Manning, 2007; Shelby et al., 1996). The proportion of respondents who do not respond when asked to make a personal evaluative judgment is commonly used as an indication of salience. The higher the proportion of non-responses, the less salient is the evaluative judgment to the population of users studied. The percentage of respondents who make a personal evaluative judgment, on the other hand, contributes to the prevalence of the institutional norm (Donnelly et al., 2000). High norm prevalence indicates broad and general acceptance of an institutional norm. While crystallization represents the strength of agreement about the institutional norm, prevalence represents the percentage of the population that makes a personal evaluation as opposed to salience that represents those who cannot or will not make a personal evaluation.

The Research Question and Hypothesis Construction

Based on the conceptual framework of institutional norms, the existence of an optimal wait can be revealed by at least two pieces of evidence. First, among the customers waiting in a particular service queue, there should be a certain level of consensus on an accepted time for their waiting. Second, quality perceptions of the customers waiting in queues should be significantly different between those who wait longer than their accepted waiting time and those who do not since the waiting effect go into reverse when their actual waiting times exceed their accepted waiting time.

In order to reveal the existence of an optimal wait in a queue at theme parks, research questions regarding the structure characteristics such as prevalence and crystallization of visitors’ institutional norm for longest
acceptable waiting time (LAWT) in a queue for their favorite ride or attraction were emerged:

- How high the prevalence and the crystallization of theme park visitors’ institutional norm of LAW in a queue for their favorite ride or attraction are?

Crowding can be defined as a negative evaluation of a certain density level in a given area (Fleishman, Feitelson, & Salomon, 2004; Gramann, 1982; Lee & Graefe, 2003; Vaske, Shelby, Graefe, & Heberlein, 1986). The term “perceived crowding” is often used to emphasize the subjective or evaluative nature of the concept. Perceived crowding combines descriptive information, that is, the density experienced by the individual, with evaluative information, that is, the individual’s judgment that a certain density is acceptable or unacceptable (Vaske & Donnelly, 2002). In this context, the density experienced by a visitor in a particular environment is represented by an indicator variable (that could be, e.g., the number of encounters, persons-per-viewscape, vehicles-per-viewscape, persons-at-one-time, or waiting time (Manning, 2007)), and crowding is a negative evaluation of the condition of the indicator. In other words, visitors’ perceived crowding involves a value judgment that the condition of the indicator at some point exceeds their definition of an acceptable standard. Depending on the waiting times and individuals’ personal standards, theme parks may be perceived to be more or less crowded. Therefore, in order to reveal the existence of an optimal wait in a queue at theme parks, hypothesis regarding the phenomena of reversal evaluation occurred when visitors’ actual waiting time exceeded their LAW was proposed.

- Perceived crowding for Theme Park visitors whose actual waiting time for their favorite ride or attraction exceeds their LAW will be greater than perceived crowding for Theme Park visitors whose actual waiting time for their favorite ride or attraction does not exceed their LAW.

**METHODS**

*Data Collection*

Five of Taiwan’s major theme parks gave permission to sample visitors as they were leaving the park to ask about waiting times for favorite rides or
attractions and perceived crowding. Considering the numbers of daily visitors, interviewers waited near the parks’ exit gates on sampling days and every 20th individual was selected and invited to participate in the study when leaving the theme park. A standard questionnaire was used that asked about theme park use, perceptions, and preferences. The questionnaire was distributed in person to each of the selected visitors who agreed to participate in the study and was completed on site. For the purposes of this study three questions from the larger survey were used that asked respondents to give the waiting time for their favorite ride or attraction on the day contacted, an evaluative judgment of the longest waiting time for their favorite ride or attraction that would be acceptable, and about how crowded the theme park was on that visit (from 1 – not at all crowded to 9 – extremely crowded). If the respondent could not give a length of LAWT, they could check “makes no difference to me,” as a way to measure the salience of a possible institutional norm for a tolerable waiting time.

Data Analysis

Crystallization of an institutional norm for LAWT was determined by categorizing the LAWTs into six 10-minute increments (i.e., 10 or fewer, 11–20, 21–30, 31–40, 41–50, and 51–60 minutes) and calculating a weighted Van der Eijk’s $A$ (Krymkowski et al., 2009; Van der Eijk, 2001) and a potential for conflict index (PCI$_2$) (Vaske et al., 2010) for the decomposed frequency distribution. The scale for Van der Eijk’s weighted $A$ goes from $−1$ (complete disagreement), to zero (uniform distribution), to 1 (complete agreement). The Potential for Conflict Index (PCI) (Manfredo, Vaske, & Teel, 2003) had been considered, but was found to be inappropriate as PCI measures must have a zero anchor midway between equally spaced negative and positive response categories (e.g., $−3$ to 0 to 3). Neither the perceived waiting time nor crowding scales fit this limitation. However, PCI$_2$ (Vaske et al., 2010) — the second generation of the PCI — which addresses and precludes the limitation was applied in this study. The computed value of PCI$_2$ ranges from zero (no conflict) to 1 (maximum conflict). Standard deviations and coefficients of variation were also determined for comparison to earlier techniques.

To determine if there was a relationship between waiting times and perceived crowding, the sample was split into a group that waited less than their personal evaluative standard and those who waited longer than their personal evaluative standard. A $t$-test was used to determine if crowding
perceptions were significantly different for those who waited less than for those who waited longer than their personal evaluative standard. If mean crowding scores were significantly different between the two groups, Pearson’s $r$ was used to determine the magnitude of effect of the relationships between waiting times and perceived crowding.

**RESULTS**

*The Research Sample*

A sample of 1,440 respondents from Taiwan’s five leading theme parks was obtained through the sampling procedures. The 1,440 respondents were almost evenly distributed in four age groups, that is, 334 of them were younger than 20, 390 were aged 20–24, 351 were aged 25–29, and 365 were older than 29. Female participants outnumbered males (789/651) slightly and the majority of them (1,032, 71.4%) were unmarried.

*Structural Characteristics of the Institutional Norm for LAWT*

Actual waiting times for favorite rides or attractions were relatively short, with 72% reporting they waited for 10 minutes or less. The mean waiting time was 9.68 minutes with a relatively large standard deviation of 9.29. Reported waiting times varied considerably with 20% of respondents reporting waiting times of 15 or more minutes, and 8% reporting waiting times from 30 to 60 minutes. When asked to indicate how crowded the theme park was on the day they were sampled, 60% of the respondents rated crowding from slight (3 – 19.6% or 4 – 16.3%) to moderate (5 – 24.2%) (Table 2). Measures of central tendency show that the theme parks were rated as slightly crowded (mean 3.75, median 4) to moderately crowded (mode 5). Mean crowding had a standard deviation of 1.84 and a coefficient of variation of 0.491, indicating some agreement about crowding levels.

When asked about a LAWT for their favorite ride or attraction, 913 respondents (63%) gave a number between 1 and 60 minutes. This indicates that a LAWT is salient (37% did not give a LAWT) to a large majority of theme park visitors. For those who gave actual waiting time a large majority (74%) indicated that the LAWT was no more than 10
minutes (42%) or was between 11 and 20 minutes (32%). A decomposed
distribution of LAWTs by 10-minute increments could also be observed.
The 380 respondents who could accept waiting times of no more than 10
minutes and the 296 respondents who could accept waiting times of
11–20 minutes represented the frequencies of the first two 10-minute
increments, respectively. As a result, the decomposed distribution of the
913 respondents classified in six 10-minute increments representing differ-
et tolerance levels of waiting time for their favorite rides was shown in
Table 1. The mean waiting time of 17.89 minutes had a standard devia-
tion of 11.38 minutes. The median waiting time was 15 minutes, and the
modal waiting time was 10 minutes. The relatively large standard devia-
tion would indicate a lower level of agreement about a LAW T. But this
was affected by the 20% of the respondents who gave waiting times ran-
ging from 20 to 60 minutes. The coefficient of variation (0.636), as a nor-
malized measure of dispersion based on the sample mean, indicates there
is some agreement about an acceptable waiting time. But the level of
agreement is not clearly indicated by the coefficient of variation. The
level of agreement is made clearer by calculating both Van der Eijk’s
weighted $A$ and $PCI_2$ for the decomposed distribution of LAWTs by 10-
minute increments (Table 1). The value of Van der Eijk’s weighted $A$ was
0.521, about half way between a uniform distribution (zero) and complete
agreement (1). The value of $PCI_2$ was 0.425, also about midway between
no conflict (zero) and maximum conflict (1). Consequently, both Van
der Eijk’s weighted $A$ and $PCI_2$ indicate that an institutional norm for
waiting time was moderately crystallized. The institutional norm for
LAWT was moderately prevalent in the total sample (1,440 respondents)
with a near majority (49%) giving LAWTs close to (between 11 and 15
minutes) or slightly below (from 5 to 10 minutes) the median and modal
waiting times.

**Table 1.** Levels and Crystallization of an Institutional Waiting Norm in
Taiwanese Theme Parks.

<table>
<thead>
<tr>
<th>Longest Acceptable Waiting Time, LAWT (Minutes)</th>
<th>Crystallization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Median</td>
<td>Mode</td>
</tr>
<tr>
<td>15</td>
<td>10</td>
</tr>
<tr>
<td>LAWT (decomposed frequency into six increments)</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>380</td>
<td>296</td>
</tr>
</tbody>
</table>

*Note: $N = 913.$*
Reversal Effect of the Institutional Norm for LAWT on Perceived Crowding

The relationship between actual waiting time and perceived crowding was significantly affected by the institutional norm for waiting time. For those who waited longer than their LAWT (11.8%) their mean crowding score of 4.85 was significantly greater ($t = 6.40$, Sig. $\leq 0.000$) than the mean crowding score of 3.67 for those whose waiting time was shorter than their LAWT (88.2%) (Table 2). The effect size for those whose waiting time was equal to or longer than their LAWT showed a minimal relationship with crowding (Pearson $r = 0.217$) (Vaske, Gliner, & Morgan, 2002). For those whose waiting time was less than their LAWT there was no relationship with crowding (Pearson $r = 0.088$).

CONCLUSION AND DISCUSSION

Beyond the direct implications that the results of this study have for theme park management, the most valuable contribution of the study is the interpretative approach of institutional norms and measuring application of adapted RPM from crowding studies adopted to reveal the existence of an optimal queuing wait empirically in tourism contexts. From the perspective of institutional norms, an optimal wait in queues for visitors’ favorite rides or attractions in theme park settings can be represented by their LAWT. Based on the measuring application of the adapted RPM, a moderate consensus on theme park visitors’ institutional norm for their LAWT in queues for their favorite rides or attractions was found. In addition, visitors’ quality evaluation (perceived crowding) did increase significantly as visitors’ actual wait exceeded their LAWT. Therefore, one of the most important

### Table 2. Relationship between the Institutional Norm for LAWT and Perceived Crowding.

<table>
<thead>
<tr>
<th>Waiting Time</th>
<th>N</th>
<th>Mean Crowding</th>
<th>SD</th>
<th>Pearson $r$</th>
<th>$t$</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceeded LAWT</td>
<td>106</td>
<td>4.85</td>
<td>1.89</td>
<td>0.217</td>
<td>6.40</td>
<td>0.000</td>
</tr>
<tr>
<td>Less than LAWT</td>
<td>789</td>
<td>3.67</td>
<td>1.77</td>
<td>0.088</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: $N = 895$ (18 of the 913 respondents who reported a LAWT did not report their waiting time).
contributions of this study is to constitute one of the first attempts to reveal
the existence of an optimal wait for a particular service queue. Specifically,
this study pioneers a research stream of optimal waits in queues by adopt-
ing the conceptual framework elicited from institutional norms and the
methodology originated from the adapted RPM. Based on the pioneer
endeavor, it is expected that more studies could be carried out to extend
the research stream of optimizing waits in strategies of queuing manage-
ment in various facets of services industry practically, conceptually, theore-
tically, or methodologically.

As one of the crowding studies from the perspective of institutional
norms, one of the most important contributions of this study is to further
extend the knowledge of the structure characteristics of visitors’ institu-
tional norms which have been investigated for a wide range of the outdoor
recreation settings. Even though most visitors (88%) waited less than their
personal standard, waiting for favorite rides and attractions at Taiwan’s
five major theme parks was salient for a substantial majority of theme park
visitors (37% did not give a waiting time). The resulting institutional norm
was moderately crystallized (Van der Eijk’s weighted $A=0.521$ and
$PCI_2=0.425$), and had relatively strong prevalence (63% gave a waiting
time) within the population of theme park visitors. This compares favor-
ably with institutional norm prevalence in more natural outdoor recreation
areas (Donnelly et al., 2000). In their meta-analysis of backcountry (26
study sites) and frontcountry (30 study sites) recreation settings, Donnelly
et al. (2000) found a mean institutional norm prevalence of 70% overall,
with a significantly higher norm prevalence in backcountry settings (mean =
81%) than frontcountry settings (mean = 61%). That 63% of the visitors
to the high-density, built environments of theme parks gave a waiting time,
compares favorably with the institutional norms found in natural, lower-
density frontcountry settings.

Crowding at favorite rides and attractions was only a slight concern for
most theme park visitors. Even so the results support the waiting time –
crowding hypothesis of significantly higher perceived crowding for those
visitors whose actual waiting time exceeded their LAW T, although the
effect size was only minimal. Consequently, the basic indicators and stan-
dards model, used extensively in more natural outdoor recreation settings
(Graefe et al., 1990; Manning, 2007; Stankey et al., 1985), has been shown
to be applicable to the much higher density, built settings of theme parks.
The minimal effect size of the relationship found in Taiwan’s five major
theme parks may in part be due to a variety of techniques theme park
operators use to minimize and/or enhance the waiting experience. Some
visitor’s waiting experiences might have been minimized to a certain extent by innovative solutions to ride access, such as the FASTPASS or FastLane systems. These types of systems charge an extra-fee for immediate access to the head of a line. The effect of such systems on the relationship between an institutional waiting norm and crowding perceptions is something that should be examined in future research.

The problems of waiting time and perceived crowding addressed in this research provided a basis for reconsidering and hopefully refining the terminology used by normative researchers. The concept of institutional norms has been suggested as a way to distinguish norms for social and environmental conditions from social norms for actions and behaviors. Heywood (1996a) addressed this problem by questioning how trail or river users could sanction any other uses encountered on a trail or river when both had exceeded the preferred encounter standard. Informal sanctions, such as anger, disgust, or contempt, could not self-correct the problem of both exceeding an encounter standard. Internal sanctions of embarrassment and/or guilt might make one or both users feel bad about the encounter, but the encounter has still occurred. Consequently both users will still be there on the trail or river and have no way to avoid the encounter or to make the other user go-away. This is analogous to theme park visitors’ inability to sanction waiting times by leaving the queue or by expressing displeasure with other visitors waiting in the queue. A queue is a social structure, however, and the members of a queue can maintain the integrity of the queue by enforcing queuing norms (Schwartz, 1975). Thus inappropriate behaviors, like cutting in line, can be controlled and self-corrected by queue members sanctioning anyone who would try to cut into the line, and by potential line cutter themselves not cutting in line to avoid potential embarrassment and feelings of guilt. Thus, the members and potential members of a queue can maintain the social integrity of a queue, but an institutional authority outside the queue can only enforce a waiting time norm. The concept of institutional norms seems an appropriate way to describe these latter types of norms for social and environmental conditions.

ACKNOWLEDGMENTS

This study was supported in part by a grant from the National Science Council in Taiwan (NSC 94-2415-H-029-004-SSS). Partial support by the
Ministry of Education, Taiwan, R.O.C., under the ATU plan is also gratefully acknowledged.

REFERENCES


