

Consumer Wait Management Strategies for Negative Service Events: A Coping Approach

ELIZABETH GELFAND MILLER

BARBARA E. KAHN

MARY FRANCES LUCE\*

\*Elizabeth G. Miller is assistant professor of marketing at Boston College, 140 Commonwealth Ave, Chestnut Hill, MA 02467, milleliz@bc.edu. Barbara E. Kahn is professor of marketing and Dean of the School of Business, University of Miami, Coral Gables, FL 33124. Mary Frances Luce is professor of marketing, The Fuqua School of Business, Duke University, Durham, NC 27708, mluce@duke.edu. This research is based on the dissertation of the first author under the supervision of the second and third. The authors thank members of the dissertation committee – Patti Williams, Saul Sternberg, and Maurice Schweitzer – for their helpful comments, as well as the editor, associate editor, and three reviewers.

In negative service environments, waiting time can serve to facilitate consumer coping.

Consequently, the very wait management strategies (such as providing duration information or shortening the wait) that mitigate wait-based stress for non-negative services may interfere with consumers' efforts to cope with an upcoming negative event. We show the effectiveness of wait management strategies is moderated by event valence and further, by the individual's coping orientation. Shortened wait times lead to increased stress for those using approach-oriented strategies (compared to avoidance), and duration information leads to increased stress for those using avoidance-oriented strategies.

There is a natural tendency to associate customer services with pleasant or neutral events such as dining or banking, but, as Morgan and Rao (2006) point out, there is a third category of services – the negative service experience – where consumers have to cope with unwanted or stressful situations. These kinds of experiences can include medical or dental appointments, or in the post-9/11 era, can include more routine services that have become stressful because of potential security risks such as flying or traveling by subway.

By definition, these aversive or negative experiences are ones consumers would prefer to avoid. In fact, if they become routine, as flying might for the business traveler, they might again be defined as neutral services. As such, consumers are inexperienced in dealing with aversive experiences, often feel anxious during them, and as a result are more likely to evaluate the process (i.e., how did it feel to go through this experience?) rather than the outcome of the experience. As Morgan and Rao (2006) conclude, “there is no getting around the reality that many negative services are difficult to evaluate before, during, and after the fact” (74). Therefore, in these circumstances, it is particularly important for marketers to increase customer satisfaction not by focusing on the outcome of the experience, but instead by finding ways to help consumers cope with the anxiety generated as the experience unfolds.

One opportunity for facilitating consumer coping is the waiting time that leads up to the aversive event. Wait management strategies have historically been studied in positive or neutral service environments where consumers are looking to maintain their anticipated positive mood (Isen 1987) and avoid anything that would threaten that, such as a stressful wait (Osama 1985). In contrast, consumers anticipating a stressful service experience may try to cope with that stress by improving or regulating their mood (Atkinson 1957; Bagozzi, Baumgartner, and Pieters 1998). Although there may be stress associated with the waiting period, stress due to the event is

likely to be the predominant concern. Therefore, consumers could use the wait time to help them cope with the impending event. This suggests that historic wait management strategies (e.g., Houston, Bettencourt and Wenger 1998; Taylor 1994) may be ineffective and potentially even harmful if they are mismatched to the specific coping strategies consumers adopt to manage the overall experience.

We are interested in reducing the *total* stress that consumers experience, both from the event and from the waiting period. We show that wait management strategies operate differently for anticipated negative versus more neutral events. We also show that, for negative events, the effectiveness of the wait management strategy at helping consumers cope is dependent on the consumers' personal coping strategies. We illustrate the effectiveness of various wait management strategies in combination with coping by both manipulating and measuring individuals' coping strategies.

## **TYPES OF COPING STRATEGIES**

Coping strategies are defined as “the specific efforts, both behavioral and psychological, that people employ to master, tolerate, reduce or minimize stressful events” (Taylor and Seeman 1999, 216). These strategies are rich and varied. Duhachek (2005) evaluated several competing coping typologies (e.g., Carver, Scheier, and Weintraub 1989; Lazarus and Folkman 1984) and found three main classes of behaviors. First, consumers can engage in active coping, including taking positive action and engaging in rational thinking. Second, consumers can engage in avoidance and denial. Third, consumers can engage in expressive support seeking, by gathering

social support or venting to others. Here, we focus on the two classes of coping behaviors that can occur in solitary waiting, specifically active coping versus avoidance coping.

The active- versus avoidance-coping distinction is central in many of the most cited coping typologies (e.g., Endler and Parker 1990; Lazarus and Folkman 1984). Further, approach-avoidance seems to be one of the most basic distinctions for behavioral tendencies. Work as early as Lewin (1935) categorized the types of conflicts individuals face in terms of approach-avoid. Approach versus avoidance states result in differential effects on scope of attention (Derryberry and Tucker 1994), differential attention to specific emotions in determinants of well-being (Updegraff, Gable, and Taylor 2004), and differential hemispheric activation (Friedman and Forster 2005). Higgins' (1998) well-cited regulatory focus theory has at its most basic level the distinction between regulatory needs to approach desired states (through promotion) versus avoiding undesired states (through prevention). Thus, while coping is extremely varied (Folkman and Lazarus 1980), it seems reasonable to conceptualize an individual's behavioral orientation towards a stressful experience along an approach-avoidance continuum. We argue that if wait management strategies interfere with consumers' current orientations towards approach versus avoidance coping strategies, then wait management strategies are likely to be ineffective at reducing stress, and may even backfire resulting in a more stressful experience.

## **WAIT MANAGEMENT STRATEGIES**

The wait management literature typically views waiting as an obstacle to goal achievement (Hui, Thakor, and Gill 1998; Nie 2000) that causes a broad range of unpleasant responses, such as boredom, irritation, anxiety, tension, and helplessness (Carmon,

Shanthikumar, and Carmon 1995). As such, the literature has focused on ways to minimize actual waiting or at least the perception of waiting (e.g., Baker and Cameron 1996; Dube, Schmitt, and Leclerc 1991; Hui, Dube, and Chebat 1997; Hui and Tse 1996; Hui and Zhou 1996; Katz, Larson, and Larson 1991; Kumar, Kalwani, and Dada 1997; Larson 1987; Nie 2000; Zhou and Soman 2003).

We focus on two specific wait management strategies – the reduction of the actual wait time and the provision of duration information – and show that their effectiveness at reducing total stress is a function of the valence of the waited-for event and the consumers' approach versus avoidance coping orientation. We anticipate that these two wait management strategies can impact the way people cope with aversive events, and consequently, may affect consumers differently depending on the valence of the waited-for event. In addition, these strategies represent practical mechanisms that managers frequently consider to mitigate the negative aspects of waiting.

Given waiting has historically been viewed as negative, and is likely the only stressor during many (positive) service encounters, shorter waits are generally viewed as better than longer waits. However, we propose that the wait itself can facilitate coping with negative events, and thus, longer waits may result in less stress. Further, although duration information has been shown to reduce the negative impact of waiting on satisfaction, service quality judgments, and overall evaluations in positive or neutral service settings (e.g., Carmon 1991; Durande-Moreau 1999; Kumar et al. 1997; Larson 1987), we propose that this strategy may be less effective when the waited-for event is undesirable. This is because the inherent assumption in the previous research on waiting has been that the consumer wants the event to occur, and hence s/he wants to feel progress towards this goal.

## INTERACTION OF COPING AND WAIT MANAGEMENT STRATEGIES

The total stress a consumer experiences is a function of both the stress associated with the wait and the stress associated with the anticipation of a potentially negative service experience. Consumers will choose a coping strategy that addresses the most salient stressor (Roseman 2001). For non-negative service encounters, the most salient stressor is likely the waiting period itself, with the key sources of stress resulting from the uncertainty about time and/or a sense of waste (Osuna 1985). Since longer wait times are more “wasteful,” in these circumstances, shorter waits should lead to less stress.

As service encounters become more aversive, anticipation of the event itself becomes a relatively more salient stressor and reducing the costs associated with waiting becomes relatively less critical. Standard definitions of time discounting (e.g., Samuelson 1937) support this intuition because rational consumers should want to speed-up receipt of positive outcomes and delay receipt of negative outcomes. Negative service events that are undertaken by a consumer presumably have offsetting benefits, but to the degree that the stress associated with these events is salient, consumers’ impatience to receive these services should be tempered. In addition, consumers may prefer extra waiting time to implement coping strategies that may mitigate event-based stress. Thus, consumers may view delay less negatively (and perhaps even positively) as the impending event is less preferred. Therefore, we hypothesize:

**H1a:** The degree to which shortening waiting time reduces stress will be moderated by event valence: Shortened waits will decrease stress for those waiting for neutral events but may increase stress for those waiting for negative events.

While this prediction is consistent with economic predictions of time discounting, it appears to contradict Loewenstein (1987) who found that people would pay more to avoid a shock delayed by one year than they would to pay to avoid an immediate shock. Loewenstein focused on the experience of dread associated with a long waiting period (e.g., from 3 hours to one year in magnitude). In contrast, we focus on the effect of waits that are shortened to fall below expectations, as compared to waits that are equivalent to or slightly above expectations. We believe that these vastly differing waiting time magnitudes imply differing psychological mechanisms. However, we also believe that our theoretical approach could enrich study of extended waits. Loewenstein suggests that his participants accelerate negative events because they imagine spending their waiting time dwelling on the dreaded event itself. Our perspective suggests that participants' wait-focused coping resources could also be mobilized during an extended wait, potentially mitigating dread. Loewenstein's participants may underestimate these potential coping effects, consistent with work suggesting that people often mispredict the magnitude and duration of hedonic reactions (e.g., Buehler and McFarland 2001; Loewenstein and Schkade 1999) at least in part because they neglect the potential direction and effect of their own coping efforts (Ubell et al. 2005). Nonetheless, Loewenstein's results suggest an important boundary condition in that extremely long waits will likely cause increased dread and this dread may overwhelm benefits associated with allowing for time to cope with the aversive experience.

The effectiveness of using waiting time for coping should vary as a function of consumer coping strategies. We assume that approach-oriented coping typically requires a greater amount of time to implement than avoidance-oriented coping, because it requires more time to plan an action for dealing with an event (approach) than to simply not think about an event or to wish it would not happen (avoidance). Further, implementing an avoidance strategy may become harder

as waiting time gets longer because numerous cues reminding the individual of the impending event may be encountered. For these reasons, we expect the length of the wait to have a greater negative impact on stress for those using approach coping strategies compared to those using avoidance coping strategies. Specifically, we predict:

**H1b:** Coping strategies will moderate the effectiveness of shortening waiting time for negative events: shortened waiting times will be more harmful for those using approach-oriented coping strategies compared to those using avoidance-oriented coping strategies.

The provision of duration information is also expected to have differential effects on stress depending on the valence of the event. For non-aversive events where the key sources of stress relate to waiting and are caused by uncertainty about time and/or a sense of waste, duration information can reduce uncertainty, and therefore should reduce stress (Carmon 1991; Durrande-Moreau 1999; Hui and Tse 1996; Hui and Zhou 1996; Kumar et al. 1997; Larson 1987). For aversive events, where the key sources of stress are linked to the event itself, information that serves as a reminder of the event is likely to exacerbate stress. To the extent that duration information acts as a reminder of the event and/or increases certainty about the event's occurrence, duration information should exacerbate stress. Therefore, we predict:

**H2a:** The effectiveness of duration information for reducing stress will be moderated by event valence: duration information will be less effective for those waiting for negative events compared to those waiting for neutral events.

The impact of duration information on experienced stress in negative service experiences may vary for different types of coping strategies. Prior research suggests that duration information reduces uncertainty and increases one's sense of control through cognitive reappraisal (Hui and Tse 1996; Hui and Zhou 1996; Osuna 1985). If one chooses to cope by avoidance, then any intervention that brings the event to mind is likely to have negative

consequences. Further, when waiting for a threatening event, control may not be desired. Folkman (1984) argues that when exercising control exacts costs in other areas (here for example, stress in thinking about the event), control can be a mixed blessing. To the extent that duration information provides a sense of control when such control is unwanted, duration information may again lead to increased stress.

In contrast, individuals who adopt approach-oriented strategies often do so expressly to gain a greater sense of control over the event. Thus, an increased sense of control may not be inconsistent with the goals of an approach-oriented strategy. In addition, information about the amount of time remaining until the event's occurrence may enable individuals using an approach-oriented strategy to structure their time more effectively. Thus, we predict:

**H2b:** Coping strategies will moderate the effectiveness of duration information for negative events: the provision of duration information will be more harmful for those using avoidance-oriented coping strategies compared to those using approach-oriented coping strategies.

We test these hypotheses across four studies in which we study people while they are actually waiting for events occurring within the laboratory. In studies 1 and 3, we demonstrate that the effectiveness of wait management strategies is moderated by event valence (hypothesis 1a and hypothesis 2a). In studies 2 and 4, we provide evidence to support the proposed process – that individuals' coping strategies moderate the effectiveness of wait management strategies (hypothesis 1b and hypothesis 2b).

## STUDY 1

In this study, we examine the moderating effect of event valence on the effectiveness of wait management for reducing the total stress that participants experience. We investigate two common wait management strategies – providing duration information during the wait and shortening waiting time itself.

## Method

The study used a 2 x 2 x 2 between-subjects design. The first factor was *event valence* (aversive, non-aversive); the second factor was *duration information* (provided, not provided); and the third factor was *waiting time length* (2 minutes, 5 minutes). Five minutes was selected as the standard waiting time based on a pretest (N = 52) showing that to be the modal expectation for the relevant wait. We then used a 2-minute waiting time as our “shorter” waiting condition to test our hypotheses. One hundred and five participants completed the study in partial fulfillment of a class requirement. All instructions were administered via a computer. Two participants had to be deleted because the computer failed to record their data, leaving a sample size of 103 participants.

Respondents were told that they would be participating in a discussion group in another room, informed that the room was not quite ready and asked to wait at their computers until notified. After five (two) minutes, participants were told the room was almost ready and they were then asked to answer several dependent measure questions. After completing these questions, participants proceeded to the discussion group room. The discussion groups typically lasted about ten minutes.

*Event Valence Manipulation.* Those in the aversive scenario condition were told that the discussion group would be about “interview and career skills” and that they would be asked to make a short, impromptu speech in front of the other students in the group in order to aid in the discussion. In addition, participants were told that an expert from Career Services would be on hand to critique their public speaking style and the clothes they were wearing. An impromptu speech was used so that students could not prepare any actual material for the speech or evaluation; the specific topic that they would be asked to speak about was only announced once they were in the seminar room. Those in the non-aversive scenario condition were also told that they would be participating in a discussion group, but they were told they would be listening to (rather than making) a speech.

*Duration Information Manipulation.* In the *no duration information* conditions, after participants were asked to wait, the computer screen went blank, and remained so for five (two) minutes. In the *duration information* conditions, instructions were added informing participants that the wait would be five (two) minutes and a big “5 min” (“2 min”) appeared on the computer screen. This ‘timer’ then counted down each minute one minute at a time. After five (two) minutes, all participants were notified that the room was nearly ready and were asked to respond to dependent measures.

*Dependent Measures.* Participants were first asked to rate their wait using a 0-10 scale where 0 = “not at all stressful” and 10 = “very stressful.” Next, participants were asked how nervous they were about the discussion group event (0 = not at all nervous, 10 = very nervous).

These two measures were positively correlated ( $r = .48, p < .0001$ ), and were added to create a measure of *total stress*.

Next, we assessed whether participants were more likely to use the waiting time to cope with the wait or with the discussion group (event). These two items were measured using 0-10 scales, where 0 = strongly disagree and 10 = strongly agree. The 'wait' item was: "While waiting, I thought about ways I could manage my time." The 'event' item was: "While waiting, I thought about ways to cope with the impending discussion group." The degree participants coped with the event was then subtracted from the degree they coped with the wait to create a measure of *focal source of coping*; higher (more positive) scores indicated participants had coped more with the wait. As expected, these two measures ("cope with wait" and "cope with event") were uncorrelated ( $p > .4$ ).

In addition, we included two measures to examine the role of preparation. Although participants could not actually prepare for the speech (the topic was unknown), they could mentally prepare themselves. Such preparation could be considered a form of problem-focused coping (i.e., an approach strategy) or it could serve other, non-coping functions (e.g., more cognitive impression-management functions such as appearing competent). Thus, we asked participants to what degree they felt they could prepare for the discussion group (0 = unable to prepare at all, 10 = able to prepare a lot) and whether such preparation was specifically used to reduce anxiety ("While waiting, I tried to reduce my anxiety about the discussion group by trying to prepare for it" – 0 = strongly disagree, 10 = strongly agree).

Finally, participants were asked to rate the information they received about the wait on the following 0-10 scales: (1) not at all distracting/ very distracting, (2) not at all helpful/ very

helpful, (3) not at all useful/ very useful, (4) not at all annoying/ very annoying, and (5) not at all stressful/ very stressful; these items did not form a reliable scale ( $\alpha = .01$ ).

## Results and Discussion

*Focal Source of Coping.* The focal source of coping measure was designed to assess our general proposition that consumers need to cope with upcoming negative events and these coping efforts can interact with wait management strategies. As expected, there is a significant effect of valence ( $F(1, 94) = 14.77, p < .0005$ ) on this measure. Participants waiting for a non-aversive event coped primarily with the wait ( $M = 3.1$ ), while participants waiting for an aversive event balanced coping efforts across the wait and the event ( $M = 0.1$ ). Interestingly, this main effect was moderated by a significant valence by waiting time interaction ( $F(1, 94) = 5.70, p < .05$ ). As can be seen in table 1, the duration of the wait did not change the degree to which people coped with the wait in the non-aversive condition, but did change how people coped in the aversive situations. Specifically, those having a short wait for an aversive event were the only group to cope with the discussion group event to a greater extent than they coped with the wait. Note that this measure was taken at the end of the participant's waiting time and hence the effect of waiting time within the aversive event condition could have occurred due to participants shifting from more event-based to more wait-based targets for coping activities as the waiting time wore on. Finally, note that there is a main effect of waiting time ( $F(1, 94) = 4.83, p < .05$ );  $M_{\text{short}} = 0.8, M_{\text{standard}} = 2.5$ ); no other effects were significant ( $p$ 's  $> .1$ ).

There was only a marginal difference between the aversive ( $M = 3.8$ ) and non-aversive ( $M = 2.7$ ) conditions in terms of how much participants felt they could prepare for the event ( $p >$

.05); however, those in the aversive condition ( $M = 3.1$ ) were more likely than those in the non-aversive condition ( $M = 1.4$ ) to indicate that they used such preparation to reduce their anxiety ( $F(1, 94) = 10.52, p < .005$ ). Overall, these results suggest that participants waiting for aversive events are both relatively more concerned with event-based coping and more likely to use preparation as approach-oriented coping. The role of approach coping is more directly investigated in study 2.

*Hypotheses 1a and 2a: Effects of Wait Length, Information, and Valence on Stress.* A 2 x 2 x 2 ANOVA was run with total stress as the dependent variable and waiting time length, event valence, and information as the independent variables. There was a significant effect of valence ( $F(1, 94) = 12.84, p < .001$ ) such that those waiting for a non-aversive event reported less stress ( $M = 2.7$ ) than those waiting for an aversive event ( $M = 4.3$ ). Consistent with hypothesis 1a, this effect was qualified by a significant valence by waiting time interaction ( $F(1, 94) = 4.99, p < .05$ ), such that, as can be seen in table 1, those having a short wait for an aversive event reported the most stress. No other effects were significant ( $p$ 's  $> .1$ ), including the information by valence interaction; thus, hypothesis 2a was not supported.

INSERT TABLE 1 HERE

*Focal Source of Coping as a Mediator.* In developing hypothesis 1, we argued that the deleterious effects of shorter waits for aversive events are caused by event- (versus wait-) based coping strategies. Above, we argued that the valence by waiting time interaction on the focal source of coping measure may indicate less complete, on average, event-based coping in the

aversive, shorter-waiting time group. Together these arguments suggest that focal source of coping may mediate the effect of our valence and waiting time manipulations on total stress. In particular, the combination of aversive events with short wait times may interrupt participants' event-based coping strategies before they run to completion, resulting in higher levels of total stress. In order to test this process explanation, we examined whether the focal source of coping measure mediated the valence by wait time interaction on stress.

As noted above, the valence by wait time interaction influenced the potential mediator variable, focal source of coping, ( $F(1, 94) = 5.70, p < .05$ ). Focal source of coping also significantly influences total stress ( $F(1, 100) = 32.88, p < .0001$ ). Finally, when focal source of coping is included as a predictor in the model, the impact of the valence by wait time interaction on stress is reduced (from ( $F(1, 94) = 4.99, p < .05$ ) to ( $F(1, 93) = 1.94, p > .1$ )). This drop in predictive ability for the manipulations is confirmed by a Sobel test of the role of focal source of coping as a mediator ( $z = -2.08, p < .05$ ). Thus, conditions for full mediation are met (Baron and Kenny 1986).

*Evaluation of Information.* Recall that hypothesis 2a is based on an argument that a negative service environment may erode the beneficial effects of providing wait time information. Consistent with this reasoning, participants waiting for the aversive event were more likely to report that they found information about the wait distracting ( $M = 4.3; F(1, 94) = 7.58, p < .01$ ) and stressful ( $M = 4.4; F(1, 94) = 5.55, p < .05$ ) compared to those waiting for the non-aversive event ( $M = 2.9$  for distracting;  $M = 3.1$  for stressful). There was also a significant valence by waiting time interaction on how stressful participants found information about the wait ( $F(1, 94) = 4.18, p < .05$ ). Specifically, as can be seen in table 1, information itself was seen

as the most stressful when participants had a short wait for an aversive event and the least stressful when participants had a short wait for a non-aversive event. Thus, participants' evaluation of the wait information was consistent with our general argument that waiting may serve a coping function in the context of aversive events.

*Discussion.* In this study, we examined whether the valence of a waited-for event affects the effectiveness of two different wait management strategies – the provision of duration information and the reduction of wait time. Consistent with hypothesis 1a, we find evidence that valence changes the way consumers respond to shortened waiting times. Specifically, as predicted, we find a significant valence by wait time interaction on total stress, such that a longer wait results in higher stress for non-aversive events, but less stress for aversive events. In addition, we find evidence that the focal source of coping depends on the valence of the waited-for event. Further analyses indicate that a relative focus on coping with the event (in addition to the wait) mediates the heightened stress associated with the combination of an aversive event and a short wait. In study 2, we more directly address coping as the underlying process that we propose is driving hypothesis 1a.

In study 1, we did not find evidence that valence affects responses to duration information (hypothesis 2a). We believe this null effect was due to characteristics of the waiting environment – an issue we address in studies 3 and 4. We note here, however, that it is interesting that we find detrimental effects of shorter wait time duration whether or not the passage of time is made salient by duration information.

## **STUDY 2**

In study 2, using a manipulation of coping orientation, we test our proposal that the reason shorter waits increase stress for aversive events is that the shorter wait time does not allow adequate time for coping. If this is so, the reduced wait time should be more problematic for those using approach strategies compared to those using avoidance strategies, as predicted by hypothesis 1b. Since this hypothesis is specific to aversive events, only the negative valence condition from study 1 is used in study 2. We also include duration information as a factor in the current study.

## Method

This study used a 2 x 2 x 2 between-subjects design. The first factor was *waiting time length* (3 minutes, 7 minutes); the second factor was *coping strategy* (approach, avoidance) and the third factor was *duration information* (provided, not provided). Three and seven minutes were chosen as the “short” and “long” wait times, in order to be symmetrical around the modal expected wait time (5 minutes) identified in the pre-test and used in study 1. One hundred and forty three participants completed the study in exchange for \$10.

## Procedure

Participants were told that they would be participating in two unrelated tasks during the lab session. The first task was described as a pre-test for an assessment of coping materials developed for the elderly, but for which a college sample was needed as a comparison group. In

this task, participants read a story about retinitis pigmentosa (RP), a degenerative disorder of the retina that causes progressive vision loss, usually leading to blindness. The story described the impact of RP on afflicted individuals' lives and suggested ways to cope with the adjustment to RP. Depending on the participants' condition, the strategies provided were either *avoidance* coping strategies or *approach* coping strategies. After reading the passage, participants were asked to think about how they would feel if they were diagnosed with RP and how they would cope with the disease/ diagnosis.

The second task was described as a study concerned with how people respond to being critiqued. The directions and procedure for this task were the same as those used in the aversive scenario condition for study 1, except that the wait times were changed and an additional questionnaire was added after the discussion group (as described below).

## Manipulations

*Coping Manipulation.* We adapted a writing task successfully used in prior research to prime emotions (see for example Lerner and Keltner 2001 or Lerner, Small, and Loewenstein 2004) in order to manipulate coping strategies. As described above, participants were asked to read a story about retinitis pigmentosa (RP; blindness) which included information about coping strategies. Specifically, participants in the *avoidance* coping condition read that:

Avoidance coping responses include distraction, passivity, positive reinterpretation, wishful thinking, and venting negative emotion. These kinds of avoidance responses can be helpful because they allow time to integrate information about the impending situation, prevent anxiety from becoming overwhelming, and reduce stress.

Those in the *approach* coping condition read that:

Approach coping responses include seeking information about the situation, being vigilant about managing the condition, or identifying a plan and putting the plan into action. These kinds of approach responses can be helpful because they help the individual make the best of things by doing as much as they can to mitigate problems.

After reading the story (including the relevant coping passage), participants were asked to report how they would feel if diagnosed with RP, and then to write about either approach or avoidance coping, depending on their condition. Questions first asked for several approach (avoidance) coping strategies and then asked for elaboration of one specific strategy. For this last question, they were also instructed to “try to write about the benefits of this strategy in a way that would motivate others to use it;” this is consistent with the common emotion-prime instruction that participants write stories about emotional events such that a person reading the story would feel the emotion (e.g., Lerner and Keltner 2001).

*Wait Length and Duration Information Manipulations.* Presence or absence of duration information was manipulated as in study 1, although wait times in this study were three or seven minutes. The duration information countdown was adjusted accordingly.

### Dependent Measures

Participants were first asked to rate their wait on a 0-10 scale anchored by “not at all stressful” and “very stressful.” Next, participants were asked how nervous they were about the speech evaluation group (0 = not at all nervous, 10 = very nervous), and how much they expected to enjoy the evaluation activity. The three expected enjoyment questions were: (1) How much do you think you will enjoy the speech evaluation group (0 = will not enjoy, 10 = will

enjoy); (2) Please rate your feelings about the speech evaluation group (0 = dreading it, 10 = looking forward to it); and (3) How much fun do you think the speech evaluation group will be (0 = not at all fun, 10 = a lot of fun). These measures loaded onto two separate factors – a “stress” factor and an “expected enjoyment” factor in a principal components factor analysis (eigenvalues = 1.67 and 2.51, respectively). The two stress measures were again summed to create a measure of *total stress* ( $r = .54, p < .0001$ ), while the three enjoyment factors were averaged to create an *expected enjoyment* scale ( $\alpha = .92$ ).

Following the discussion group, participants completed an additional questionnaire which included manipulation checks for the expected wait, control questions, and checks to rule out demand effects. The expected wait was measured by asking: (1) How long did you expect to wait for the evaluation group to be ready? (2) How long did you wait for the evaluation group to be ready? and (3) Evaluate the wait on the following scale: 1 = very short, 10 = very long.

We also asked participants how much they enjoyed public speaking (1 = dislike a lot, 10 = like a lot), how comfortable they were when being critiqued (1 = very uncomfortable, 10 = very comfortable), and whether they had some place to be immediately after the experiment.

Finally, we asked a series of debrief questions to assess to what extent participants may have guessed the purpose of the task. No subjects correctly guessed what the study was about in response to the question “what do you think this study was about?” Even when respondents were specifically asked whether they thought writing about coping affected their responses to the wait, only 12 participants (8%) said yes, and none of their explanations concerned differences between types of coping strategies and responses to wait manipulations. Note that in comparison, 41 participants (28%) thought moving from the computer to the evaluation room affected their speeches.

## Results and Discussion

*Manipulation Checks.* Although there were no significant effects of information or waiting time on expected wait ( $F$ 's  $< 1$ ), there was a significant effect of waiting time ( $F(1, 122) = 11.57, p < .001$ ) and a marginally significant effect of information ( $F(1, 122) = 3.10, p < .1$ ) on the actual wait. Specifically, those who experienced the longer wait reported a longer actual wait time ( $M = 7.3$ ) than those who experienced the shorter wait time ( $M = 5.4$ ). In addition, those who received duration information were more accurate ( $M = 5.8$ ; recall that half the participants experienced a 7 minute wait and half a 3 minute wait, so the expected mean would be 5 minutes) in reporting their actual wait than those who had not received duration information ( $M = 6.8$ ).

In addition, there were significant effects of waiting time ( $F(1, 133) = 14.73, p < .0003$ ) and information ( $F(1, 133) = 6.02, p < .02$ ), as well as a significant waiting time by information interaction ( $F(1, 133) = 4.06, p < .05$ ) on the perceived wait. Participants in the long wait condition perceived the wait to be longer ( $M = 6.5$ ) than those in the short wait condition ( $M = 5.2$ ). Participants who received information about the wait perceived the wait to be shorter ( $M = 5.4$ ) than those who did not receive information about the wait ( $M = 6.3$ ). These effects were qualified by a significant waiting time by information interaction such that those who received information in the short waiting time condition ( $M = 4.4$ ) perceived the wait to be shorter than participants in any other condition ( $M_{\text{no information-long}} = 6.6, M_{\text{information-long}} = 6.5, M_{\text{no information-short}} = 6.0; p$ 's  $< .005$ ). These results support that the duration and information manipulations were successful and suggest they are functioning as wait management strategies in terms of reducing the perceived wait.

There were no differences by condition in expected enjoyment ( $p$ 's  $> .07$ ) and the mean level of expected enjoyment ( $M = 2.3$ ) was significantly less than the scale mid-point ( $t = 7.28, p < .0001$ ), suggesting the evaluation group was indeed seen as aversive.

*Hypotheses 1b and 2b: Effects of Waiting Time, Information, and Coping on Stress.* A 2 x 2 x 2 ANCOVA was run with total stress as the dependent variable, waiting time, duration information, and coping strategy as the independent variables, and whether participants had some place to be after the experiment as a covariate. The covariate had a main effect ( $F(1, 131) = 3.99, p < .05$ ), with participants who had some place to be after the experiment reporting greater stress ( $M = 10.2$ ) than those who did not ( $M = 8.7$ ). There was a significant effect of information ( $F(1, 131) = 4.74, p < .05$ ) such that those who received duration information ( $M = 8.9$ ) reported less stress than those who did not receive information ( $M = 10.4$ ). There was also a significant waiting time by information interaction ( $F(1, 131) = 3.77, p = .05$ ) such that those who received information in the long wait condition ( $M = 7.5$ ) reported less stress than those in any other condition ( $M_{\text{no information-long}} = 11.1, M_{\text{no information-short}} = 9.8, M_{\text{information-short}} = 10.1; p$ 's  $< .05$ ). Most importantly, as predicted by hypothesis 1b, there was a significant wait time by coping strategy interaction ( $F(1, 131) = 5.14, p < .05$ ) such that shortened wait time led to greater reported stress for those primed with approach strategies. Specifically, waiting time did not affect stress for those using avoidance strategies ( $M_{\text{long}} = 9.9, M_{\text{short}} = 8.9; p > .3$ ), but did affect stress for those using approach strategies, with those experiencing the shorter duration ( $M = 11.1$ ) reporting greater stress than those experiencing the longer wait ( $M = 8.9, p < .05$ ). No other effects, including the information by coping interaction, were significant ( $p$ 's  $> .2$ ).

*Discussion.* Study 2 provides additional evidence that consumers' coping strategies affect responses to waits. Specifically, as predicted by hypothesis 1b, we find a significant waiting time by coping interaction such that shortened waiting times are more harmful for those using approach strategies compared to those using avoidance strategies. In conjunction with the findings from study 1, these results support the notion that wait time can be used to facilitate coping, with longer waits actually resulting in less stress for those awaiting aversive experiences. The benefits of longer waiting times are more pronounced for those using approach strategies compared to those using avoidance strategies.

We again failed to find differential effects of information as predicted by hypothesis 2. In fact, information seemed to reduce stress, particularly if combined with a long wait. We believe this failure to support hypothesis 2 may have occurred because external cues in the particular environment could limit the effectiveness of avoidance strategies. Because of the different waiting times (and also the different paces with which participants completed the dependent measures questionnaire), participants could see other students leaving their computers to go to the discussion group room, which may have made it harder to avoid thinking about the upcoming speech. Such external cues may act similarly to duration information by increasing the certainty the event will occur, thereby contaminating our test of information. In study 3, we hold wait length constant so that participants can be moved to the discussion group room simultaneously. In addition, we use a somewhat different lab configuration (with higher partitions) so that participants will be less aware of one another's movements. We believe this environment provides a cleaner and more powerful test of hypothesis 2a.

### **STUDY 3**

The purpose of study 3 is to provide a cleaner test of whether event valence moderates the effectiveness of duration information in reducing the total stress that participants experience. We control for wait length, as we believe this manipulation may have obscured information effects in the previous two studies. In addition, to make the difference between the aversive event and the non-aversive event stronger, we modify the non-aversive event to be more enjoyable.

## Method

The study used a 2 x 2 between-subjects design. The first factor was *event valence* (non-aversive, aversive) and the second factor was *duration information* (present, absent). A constant wait length of five minutes, the modal expectation revealed in the pre-test reported for study 1, was used. Eighty-five undergraduates participated in the study in partial fulfillment of a class requirement. All instructions were administered via computer.

Respondents were told that they would be participating in a discussion group in another room, informed that the room was not quite ready and asked to wait at their computers until notified. After five minutes, participants were told the room was almost ready and they were then asked to answer several questions about their wait. After completing these questions, participants proceeded to the discussion group room. The discussion groups typically lasted about ten minutes.

*Manipulations.* The aversive “interview and career skill” discussion group from studies 1 and 2 was paired with a new non-aversive condition in order to increase the perceived difference in valence between the two conditions. Those in the non-aversive condition were told that the discussion group would be about “soft drinks” and that they would be given samples of the drinks to taste in order to enable a better discussion. The duration information manipulation was operationalized in the same manner as in the previous studies, with a five-minute wait for all participants.

*Dependent Measures.* Participants were first asked to rate their wait using a 0-10 scale where 0 = “not at all stressful” and 10 = “very stressful.” Next, participants were asked how nervous they were about the discussion group event (0 = not at all nervous, 10 = very nervous). These two measures were positively correlated ( $r = 0.24, p < .05$ ), and were added together to create a measure of *total stress*.

Next, participants were asked about their focal source of stress. Participants were told “While waiting for the discussion group, you may have experienced two sources of stress or anxiety – some anxiety may have been related to the wait itself and some anxiety may have been related to what might happen during the discussion group.” They were then asked, “Which of these two sources of stress was greater for you? 0 = stress due to wait, 10 = stress due to discussion group.” Participants also rated their wait anxiety and event anxiety as part of this question.

## Results and Discussion

*Focal Source of Stress.* As expected, there was a significant effect of valence on the focal source of stress ( $F(1, 81) = 12.12, p < .001$ ). Those waiting for the non-aversive event indicated that the wait was the greater source of stress ( $M = 2.5, sd = 2.4$ ; mean less than mid-point,  $t_{42} = 6.80, p < .0001$ ), while those waiting for the aversive event were more likely to indicate that the two sources of stress were equal ( $M = 4.5, sd = 2.8$ ; 0 = stress due to wait greater, 10 = stress due to discussion group greater). No other effects were significant ( $p$ 's  $> .2$ ).

*Hypothesis 2a: Effect of Information and Valence on Stress.* A 2 x 2 ANOVA was run with total stress as the dependent variable and duration information and event valence as the independent variables. There was a significant effect of valence ( $F(1, 81) = 11.26, p < .005$ ) such that those waiting for a non-aversive event reported less stress ( $M = 5.5$ ) than those waiting for an aversive event ( $M = 8.2$ ). Consistent with hypothesis 2a, this effect was qualified by a significant valence by duration information interaction ( $F(1, 81) = 7.46, p < .01$ ), such that those receiving information in the aversive condition ( $M = 9.7$ ) reported significantly greater stress than those in any other condition ( $M_{\text{non-aversive-no info}} = 6.4, M_{\text{non-aversive-info}} = 4.8, M_{\text{aversive-info}} = 6.9$ ;  $p$ 's  $< .05$ ). The provision of duration information did not significantly affect stress ( $F < 1$ ).

*Discussion.* In this study, we reduce participants' observations of others going into the discussion room at different times by holding waiting time constant, and we observe the valence by duration information interaction predicted in hypothesis 2a. Specifically, providing duration information directionally reduced stress for those awaiting non-aversive events, but significantly increased stress for those awaiting aversive events; indeed, those who received duration

information while waiting for the aversive event reported significantly higher stress than those in any other condition.

We have argued that this effect occurs due to a mismatch between consumers' preferred coping strategies and the wait management strategy. In study 4, we address the coping process proposed in the development of hypothesis 2a and made explicit in hypothesis 2b. We leverage the long tradition in the coping literature of using self-report scales in order to measure stable predispositions towards certain coping strategies (e.g., Carver et al. 1989, Endler and Parker 1990; McCrae and Costa 1986). Predisposition towards certain coping styles that individuals hone over time has been validated as predictive of coping behavior during individual stressors that co-exist with more situational influences on coping (see Carver et al. 1989 for a discussion). If stable coping traits predict responses to wait management strategies along the lines of the prediction in hypothesis 2b, these measures may be one basis for marketing segmentation strategies to help mitigate the stress associated with negative services.

#### **STUDY 4**

In study 4, we reexamine evidence that valence and coping influence the effectiveness of duration information (hypotheses 2a and 2b), focusing solely on this wait management strategy. For generalizability, we also move to a different service event. In this study, participants are told that they will be waiting for aversive or non-aversive film clips to load onto their computers so that they can view them. This context also allows us to investigate coping in a stressful context where it is particularly unlikely that participants will be able to cope through direct preparation for the upcoming event. In the earlier studies, participants may have tried to prepare for their

speeches, either because preparation serves a problem-focused coping function (ultimately reducing emotion) or because preparation serves broader goals such as appearing competent.

We operationalize approach versus avoidance coping orientation by measuring individuals' preferences for approach (task-oriented) versus avoidance-oriented strategies using the Multidimensional Coping Inventory. This self-report measure of coping, devised by Endler and Parker (1990), has been validated as a reliable measure of coping styles (see Endler and Parker 1990) and used in numerous studies (Duhachek 2005).

## Method

The study used a 2 x 2 x 2 design where the first two factors *event valence* (non-aversive, aversive) and *duration information* (present, absent) were manipulated, while the third factor *preferred coping strategy* (approach-oriented, avoidance-oriented) was measured. Pre-test respondents (N = 5) rated films on several scales including 22 emotion items from Edell and Burke's (1987) feeling towards ads scale. Average ratings were used to identify non-aversive (average rating on 0-10 negative/positive scale = 4.5) and aversive films (average rating = 1.3). A wait time of 3 minutes was selected in order to be in line with waiting times that have been used in similar computer experiments involving waiting (e.g., Dellaert and Kahn 1999).

One hundred and one undergraduates participated in the study in partial fulfillment of a class requirement. Because people differ in their views of negative material (e.g., some people enjoy horror movies), we had all participants rank order three films ("please indicate which of the items you would least like to see... so that the choices are ranked from worst to best"), and had them view their lowest-ranked (least preferred) film. Rankings were used rather than ratings

in order to insure a unique ordering of the films. In the aversive condition, this ranking task was designed to insure that participants were really waiting to watch a film they found aversive. The aversive film choices were described as (1) a video of the Twin Towers collapsing on 9-11-01 (37% of participants viewed this film); (2) a video of a flood destroying a community (28%); and (3) a video of a missile hitting a passenger train in Kosovo killing 14 civilians (35%).

Participants were given the option of stopping the film at any time if it made them uncomfortable, and three of the participants (6%) elected to do so.

In the non-aversive condition, we did not expect the ranking task to be particularly meaningful, as participants should have been fairly indifferent between the three choices. The non-aversive condition films were described as (1) a computer simulation of the Shoemaker-Levy comet colliding into Jupiter (38% of participants viewed this film); (2) a series of pictures of abstract art (36%); and (3) an animation of the weather for the US from satellite data (26%).

Following this ranking task, participants were told that they would be watching film “X” (where “X” was their lowest-ranked film). Participants were then asked to wait as the film clip was loaded onto the computer. In the *duration information absent* condition, only the text “Film loading...” appeared at the top-left of the screen and it remained there throughout the three minute wait. In the *duration information present* condition, participants were informed that the expected load time was three minutes and the text “3 min” appeared in the middle of the screen and changed each minute to reflect the remaining time.

After three minutes, participants were told that the film clip was loaded and were asked to answer some questions about the film loading system prior to viewing the film. Participants then viewed the film and completed an unrelated questionnaire as a mood-neutralizing task. Finally, they completed a questionnaire containing a subset of items from the Multidimensional Coping

Inventory (Endler and Parker 1990) designed to assess their propensity for engaging in task-oriented, emotion-oriented, and avoidance-oriented strategies.

*Dependent Measures.* Participants first rated their wait on a 0-10 scale where 0 = not at all stressful and 10 = very stressful. Next, participants were asked how nervous they were about watching the movie (0 = not at all nervous, 10 = very nervous). As in the previous three studies, these measures were added together to create a measure of *total stress* ( $r = .54, p < .0001$ ).

To assess our contention that duration information is inconsistent with desires for delay or avoidance because it acts as a reminder of the event, we next asked participants to indicate how much they agreed or disagreed (11 point scale) with the statement, “As time passed, I felt like the movie was getting closer and closer.” Finally, as a manipulation check of event valence, participants were asked to rate how much they thought they would enjoy the film, how much they were looking forward to the film, and how positive they thought the film was; these items formed a three-item *expected enjoyment* scale ( $\alpha = .84$ ).

Finally, participants completed the Multidimensional Coping Inventory, which was then used to construct a variable (tendency to use avoidance-oriented strategies minus tendency to use task-oriented strategies) to measure *preferences for avoidance-oriented strategies* (see appendix).

## Results and Discussion

*Manipulation Check.* As expected, those who saw the neutral films expected to enjoy them more ( $M = 4.1$ ) than those who saw the aversive films ( $M = 3.5$ ), although this difference

was only marginally significant ( $F(1, 97) = 2.26, p < .1$ ). We believe the difference in expected enjoyment between the two valence conditions was weaker than that in the pre-test because in the main experiment, participants were asked to rate their expected enjoyment after a brief wait (3 minutes) during which time coping occurred. As a result, participants were more able to grapple with the films' aversiveness, and hence, rated these films as less aversive than they may have if they had rated the films prior to the wait.

*Hypotheses 2a and 2b: Effects of Duration Information, Event Valence, and Preferred-Coping Strategy on Stress.* We used a generalized linear model to predict total stress based on duration information, event valence, and preferred-coping strategy. There were significant effects of valence ( $F(1, 92) = 6.46, p < .05$ ) and preferred coping strategy ( $F(1, 92) = 5.47, p < .05$ ) on total stress. Those waiting for an aversive event ( $M = 6.6$ ) reported more stress than those waiting for a non-aversive event ( $M = 5.2$ ), and those preferring avoidance strategies ( $M = 7.2$ ) reported greater stress than those preferring approach (task)-oriented strategies ( $M = 5.2$ ). Consistent with hypotheses 2a and 2b, these effects were qualified by information by valence ( $F(1, 92) = 4.78, p < .05$ ) and preferred-coping strategy by information ( $F(1, 92) = 13.93, p < .0005$ ) interactions. Information directionally reduced stress for those awaiting the non-aversive event ( $M_{\text{no information}} = 6.0, M_{\text{information}} = 4.4, p > .1$ ), but directionally increased stress for those awaiting the aversive event ( $M_{\text{no information}} = 6.3, M_{\text{information}} = 6.8, p > .2$ ). In addition, those who received information while waiting for an aversive event reported significantly greater stress than those who received information while waiting for a non-aversive event ( $p < .05$ ); for those who did not receive duration information, there was no difference in stress reported by those waiting for the aversive event and those waiting for the non-aversive event ( $p > .9$ ). As predicted by

hypothesis 2b, information reduced stress for those preferring approach-oriented strategies ( $M_{\text{no information}} = 6.3$ ,  $M_{\text{information}} = 3.9$ ,  $p < .005$ ), but increased stress for those preferring avoidance-oriented strategies ( $M_{\text{no information}} = 5.8$ ,  $M_{\text{information}} = 8.5$ ,  $p = .05$ ). In addition, when duration information was provided, those preferring avoidance-oriented strategies reported significantly more stress than those preferring approach-oriented strategies ( $p < .0005$ ); there were no differences in reported stress by preferred coping strategy when information was not provided ( $p > .5$ ).

Finally, there was a significant three-way information by valence by preferred coping strategy interaction ( $F(1, 92) = 4.96$ ,  $p < .05$ ) such that information increased stress for those awaiting aversive events who preferred avoidance-oriented strategies ( $p < .001$ ), but significantly decreased stress for those awaiting aversive events who preferred approach-oriented strategies ( $p < .01$ ). There were no differences in reported stress levels for any of the cells in the non-aversive conditions. Table 2 displays the mean level of stress for participants who preferred approach-oriented strategies (negative value on the strategy-preference variable) and for those who preferred avoidance-oriented strategies (positive value on the strategy-preference variable). Taken as a whole, these results support hypotheses 2a and 2b.

INSERT TABLE 2 HERE

*Role of Information.* Consistent with the idea that information acts as a reminder or confirmation that the event will occur, those who received information ( $M = 6.7$ ) were more likely to indicate that they felt the film (event) was getting closer as they waited than those who did not receive information ( $M = 4.6$ ;  $F(1, 97) = 10.05$ ,  $p < .005$ ).

*Discussion.* This study provides support for hypotheses 2a and 2b, that the effectiveness of duration information is affected by both the valence of the waited-for event and the types of coping strategies individuals use. Specifically, consistent with hypothesis 2a, we found a significant information by valence interaction on total stress such that the provision of information was more harmful (i.e., resulted in higher stress) for those waiting for an aversive event compared to those waiting for a non-aversive event. In addition, consistent with hypothesis 2b, we found that this negative effect of information only occurred for those who preferred avoidance-oriented strategies. Information reduced stress for those who preferred to cope by approach-oriented strategies, but increased stress for those who preferred to cope by avoidance-oriented strategies. These findings were most evident for those awaiting aversive events.

## **GENERAL DISCUSSION**

### Summary of Results

In this research, we demonstrate that consumer responses to waits for negative service events can cause common wait-management strategies to backfire, resulting in increased consumer stress. We argue that consumer responses to waits in negative service environments are distinguished by a focus on coping with the event itself, in contrast to non-negative services where the wait itself is often the sole source of stress and target of coping. We report four experiments taking the perspective that waits themselves can serve a coping function and demonstrating adverse effects of common wait-management strategies in negative service environments.

When waiting is the consumer's focal source of stress, any mechanism that mitigates this stress (such as information about the remaining waiting time) should be helpful, or at worst have no effect. In contrast, when the consumer is coping with a stressful impending event, strategies to mitigate the wait may actually disrupt such coping efforts. Consistent with our hypotheses, we find that common wait management strategies interact with event valence. Study 1 demonstrates that shortened waits actually lead to increased stress when participants are waiting for a more negative event. Study 3 demonstrates that wait-duration information similarly increases stress in a negative service environment.

Studies 2 and 4 test our process explanation as to why shortened waiting times and information, respectively, interact with event valence to determine the total stress consumers experience. In study 2, looking only at negative events, we demonstrate that shortened wait time increases stress for participants who are primed to engage in approach-oriented coping as opposed to those who are primed to engage in avoidance-oriented coping. This suggests that shortened waiting times are interfering with approach-oriented, and presumably event-focused, coping. These results also suggest that valence-based differences in coping are the mechanism behind the results in study 1. Our findings in study 4 suggest that the information by valence interaction from study 3 is driven by participants with a general tendency towards avoidance-oriented coping. Here, we argue that duration information interferes with the coping efforts of avoidance-prone individuals. Again, this supports our coping-based approach to wait management for negative services. Finally, measures of focal source of coping in study 1 and focal source of stress in study 3 verify our underlying proposition that more negative service environments are characterized by an increase in consumers' desires to cope with the event itself.

## Implications and Extensions

The overall implication of our work is that managers should consider the valence of the awaited event when designing or choosing wait management strategies. More generally, managers should be careful when exporting wait management strategies that have worked in one environment to another environment. Wait management strategies that work for theme parks or even for banks may backfire in some airport or specific hospital settings. For instance, preliminary evidence suggests that desires for delay in a health care setting may differ depending on whether the source of stress is related to the process of a medical test or the outcome of the test (Miller 2003, study 7). Further, if Morgan and Rao (2006) are correct in their conceptualization of negative service encounters as being evaluated in terms of process, then managing waits to reduce stress is likely to be particularly important for satisfaction and repeat purchases in the context of negative service events. More generally, we argue that it is important to understand how consumers' experiences unfold over time, if we are to optimally manage these experiences. Our approach is consistent with a broader call to examine the relationship of different aspects of experiences to each other (e.g., Ariely and Carmon 2000; Bettman, Luce, and Payne 1998; Kahneman, Diener, and Schwarz 1999).

Our studies also point to approach- versus avoidance-oriented event-based coping as an important determinant of wait-management success, and therefore a potential segmentation variable. Pennington and Roese (2003) demonstrate that promotion focus (an orientation towards the attainment of desired end-states) predominates when goals lie in the distant future. However, promotion-focus declines relative to prevention-focus (an orientation towards avoidance of undesired end-states) as goal realization nears. This reasoning suggests that avoidance-oriented

coping may become more prevalent as aversive events draw close, allowing for wait management strategies to be adjusted accordingly. For instance, duration information regarding waiting time might be welcomed by the patient at the beginning of a hospital stay, but this might change as a dreaded procedure draws near.

We offer an initial demonstration that wait-management strategies interact with context, but future research might further investigate wait management strategies by breaking them down into their underlying components (e.g., the information provision versus counting-down aspect of duration information) or into multiple possible mechanisms. For example, provision of duration information may provide certainty about elapsed and remaining time and/or it may increase the consumer's sense of control. These specific effects could differentially interact with coping strategies; while certainty may hamper avoidance-based coping, control could potentially facilitate approach-based coping.

Extension of our coping perspective to the context of positive events is another opportunity for future work. While some research has suggested that adding a wait prior to a positive event can increase enjoyment of that event (e.g., Nowlis, Mandel, and McCabe 2004), in other cases, consumers prefer to have a good outcome sooner rather than later (e.g., Chapman 2000). These differences are consistent with our argument that consumers' preferences for waits can be affected by the characteristics of the waited-for event. Just as coping orientations influence waits for negative events, preferences for positive events may be affected by anticipation, savoring, expectations, and/or whether the event is viewed as an isolated event or part of a sequence of events.

Finally, future research should extend our work to different types of waits. Our research focused on waits at the point of service, but waits may also happen "in-process," for example, at

the table in a restaurant or in the examining room, or “post process,” for example, waiting for test results, to pay, or to retrieve airline luggage. In addition, such waits may be unexpected or expected (e.g., consumers often expect to wait for a server to take their order at a restaurant). Further research could examine how the timing and expectedness of the wait impact coping efforts and consequent response to waits (and attempts to manage them).

In summary, our work provides a new perspective on managing waits. While the waiting literature has historically viewed waits as something negative that should be reduced, we demonstrate that the validity of this assumption is contingent on the situation. By considering the wait as one component of an overall experience, one can identify activities that can be conducted during the wait to improve the customers’ overall evaluation of the experience. As we illustrate, such activities may or may not be consistent with traditional wait management strategies. Thus, our work contributes to the wait management literature by highlighting that the effectiveness of wait management strategies depends on both the valence of the waited-for event and the coping orientation of the individual.

## APPENDIX

Subset of Items from the Multidimensional Coping Inventory (Endler and Parker 1990):

1. Blame myself for procrastinating.
2. Outline my priorities.
3. Treat myself to a favorite food or snack.
4. Become very tense.
5. Blame myself for being too emotional about the situation.
6. Daydream about a better time or place.
7. Work to understand the situation.
8. Think about the event and learn from my mistakes.
9. Visit a friend.
10. Spend time with a special person.
11. Analyze the problem before reacting.
12. Adjust my priorities.
13. See a movie.
14. Take time off and get away from the situation.
15. Fantasize about how things might turn out.

Respondents were instructed to rate each item on a scale from 1-5 (1 = not at all, 5 = very much) to indicate how much they engage in each type of activity when they encounter a difficult, stressful, or upsetting situation.

Items 1, 4, 5, 6, and 15 measure emotion-oriented tendencies; Items 2, 9, 10, 13, and 14 measure avoidance-oriented tendencies; and Items 3, 7, 8, 11, and 12 measure task-oriented tendencies.

Our coping preference measure was constructed by subtracting the sum of the task-oriented items from the sum of the avoidance-oriented items.

## REFERENCES

- Ariely, Dan and Ziv Carmon (2000), "Gestalt characteristics of experiences: The defining features of summarized events," *Journal of Behavioral Decision Making*, 13 (2), 191-201.
- Atkinson, John W (1957), "Motivational determinants of risk-taking behavior," *Psychological Review*, 64 (6), 359-72.
- Bagozzi, Richard, Hans Baumgartner, and Rik Pieters (1998), "Goal-directed emotions," *Cognition and Emotion*, 12 (1), 1-26.
- Baker, Julie and Michaelle Cameron (1996), "The effects of the service environment on affect and consumer perception of waiting time: An integrative review and research propositions," *Journal of the Academy of Marketing Science*, 24 (4), 338-49.
- Baron, Reuben M and David A Kenny (1986), "The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations," *Journal of Personality and Social Psychology*, 51 (December), 1173-82.
- Bettman, James R., Mary Frances Luce, and John W. Payne (1998), "Constructive consumer choice processes," *Journal of Consumer Research*, 25 (December), 187-217.
- Buehler, Roger and Cathy McFarland (2001), "Intensity bias in affective forecasting: The role of temporal focus," *Personality and Social Psychology Bulletin*, 27 (11), 1480-93.
- Carmon, Ziv (1991), "Recent studies of time in consumer-behavior," *Advances in Consumer Research*, 18, 703-5.
- Carmon, Ziv, J. George Shanthikumar, and Tali F. Carmon (1995), "A psychological perspective on service segmentation models: The significance of accounting for consumers' perceptions of waiting and service," *Management Science*, 41 (11), 1806-15.

- Carver, Charles S, Michael F Scheier, and Jagdish K Weintraub (1989), "Assessing coping strategies: A theoretically based approach," *Journal of Personality and Social Psychology*, 56 (2), 267-83.
- Chapman, Gretchen (2000), "Preferences for improving and declining sequences of health outcomes," *Journal of Behavioral Decision Making*, 13 (2), 203-18.
- Dellaert, Benedict GC and Barbara E. Kahn (1999), "How tolerable is delay?: Consumers' evaluations of Internet web sites after waiting," *Journal of Interactive Marketing*, 13 (1), 41-54.
- Derryberry, Douglas and Don M Tucker (1994), "Motivating the focus of attention," in *The Heart's Eye: Emotional Influences in Perception and Attention*, ed. Paula M Niedenthal and Shinobu Kitayama, San Diego, CA: Academic Press, 167-96.
- Dube, Laurette, Bernd H Schmitt, and France Leclerc (1991), "Consumers' affective response to delays at different phases of a service delivery," *Journal of Applied Social Psychology*, 21 (10), 810-20.
- Duhachek, Adam (2005), "Coping: A multidimensional, hierarchical framework of responses to stressful consumption episodes," *Journal of Consumer Research*, 32 (June), 41-53.
- Durrande-Moreau, Agnès (1999), "Waiting for service: ten years of empirical research," *International Journal of Service Industry Management*, 10 (2), 171-89.
- Edell, Julie A and Marian Chapman Burke (1987), "The power of feelings in understanding advertising effects," *Journal of Consumer Research*, 14 (3), 421-33.
- Endler, Norman S and James D. A. Parker (1990), "Multidimensional assessment of coping: A critical evaluation," *Journal of Personality and Social Psychology*, 58 (5), 844-54.

- Folkman, Susan (1984), "Personal control and stress and coping processes: A theoretical analysis," *Journal of Personality and Social Psychology*, 46 (4), 839-52.
- Folkman, Susan and Richard S Lazarus (1980), "An analysis of coping in a middle-aged community sample," *Journal of Health and Social Behavior*, 21 (3), 219-39.
- Friedman, Ronald S and Jens Forster (2005), "Effects of motivational cues on perceptual asymmetry: Implications for creativity and analytical problem solving," *Journal of Personality and Social Psychology*, 88 (2), 263-75.
- Higgins, E. Tory (1998), "Promotion and prevention: Regulatory focus as a motivational principle," in *Advances in Experimental Social Psychology*, Vol. 30, ed. Mark P. Zanna, San Diego, CA: Academic Press, 1-46.
- Houston, Mark B, Lance A. Bettencourt, and Sutha Wenger (1998), "The relationship between waiting in a service queue and evaluations of service quality: A field theory perspective," *Psychology and Marketing*, 15 (8), 735-53.
- Hui, Michael K, Laurette Dube, and Jean-Charles Chebat (1997), "The impact of music on consumers' reactions to waiting for services," *Journal of Retailing*, 73 (1), 87-104.
- Hui, Michael K., Mrugank V. Thakor, and Ravi Gill (1998), "The effect of delay type and service stage on consumers' reactions to waiting," *Journal of Consumer Research*, 24 (4), 469-79.
- Hui, Michael K. and David K. Tse (1996), "What to tell consumers in waits of different lengths: An integrative model of service evaluation," *Journal of Marketing*, 60 (2), 81-90.
- Hui, Michael K. and Lianxi Zhou (1996), "How does waiting duration information influence customers' reactions to waiting for services?" *Journal of Applied Social Psychology*, 26 (19), 1702-17.

- Isen, Alice M (1987), "Positive affect, cognitive processes, and social behavior," in *Advances in Experimental Social Psychology*, Vol. 20, ed. Leonard Berkowitz, New York: Academic Press, 203-53.
- Kahneman, Daniel, Edward Diener, and Norbert Schwarz, Eds. (1999), *Well-Being: The Foundations of Hedonic Psychology*, New York: Russell-Sage.
- Katz, Karen L, Blaire M Larson, and Richard C Larson (1991), "Prescription for the waiting-in-line blues: Entertain, enlighten, and engage," *Sloan Management Review*, 32 (2), 44-53.
- Kumar, Piyush, Manohar Kalwani, and Maqbool Dada (1997), "The impact of waiting time guarantees on customers' waiting experiences," *Marketing Science*, 16 (4), 295-314.
- Larson, Richard C. (1987), "Perspective on queues: Social justice and the psychology of queuing," *Operations Research*, 35 (6), 895-905.
- Lazarus, Richard S. and Susan Folkman (1984), *Stress, Appraisal and Coping*, New York: Springer.
- Lerner, Jennifer S and Dacher Keltner (2001), "Fear, anger, and risk," *Journal of Personality and Social Psychology*, 81 (1), 146-59.
- Lerner, Jennifer S, Deborah A. Small, and George Loewenstein (2004), "Heart strings and purse strings: Carryover effects of emotions on economic decisions," *Psychological Science*, 15 (5), 337-41.
- Lewin, Kurt (1935), *A Dynamic Theory of Personality*, New York: McGraw-Hill.
- Loewenstein, George (1987), "Anticipation and the valuation of delayed consumption," *The Economic Journal*, 97 (September), 666-84.

- Loewenstein, George and David Schkade (1999), "Wouldn't it be nice? Predicting future feelings," in *Well-Being: The Foundations of Hedonic Psychology*, ed. Daniel Kahneman, Edward Diener, and Norbert Schwarz, New York: Russell-Sage, 85-105.
- McCrae Robert R and Paul T. Costa Jr. (1986), "Personality, coping, and coping effectiveness in an adult sample," *Journal of Personality*, 54 (2), 385-405.
- Miller, Elizabeth G (2003), "Interactions of pleasant and unpleasant events: The effect of event valence on wait management strategies," unpublished dissertation, Marketing Department, Wharton School, University of Pennsylvania, Philadelphia, PA 19104.
- Morgan, Ivor and Jay Rao (2006), "Growing negative services," *MIT Sloan Management Review*, 47 (3), 69-74.
- Nie, Winter (2000), "Waiting: Integrating social and psychological perspectives in operations management," *Omega: The International Journal of Management Science*, 28 (6), 611-29.
- Nowlis, Steven M, Naomi Mandel, and Deborah Brown McCabe (2004), "The effect of a delay between choice and consumption on consumption enjoyment," *Journal of Consumer Research*, 31 (December), 502-10.
- Osuna, Edgar Elias (1985), "The psychological cost of waiting," *Journal of Mathematical Psychology*, 29 (1), 82-105.
- Pennington, Ginger and Neal Roese (2003), "Regulatory focus and temporal distance," *Journal of Experimental Social Psychology*, 39 (6), 563-76.
- Roseman, Ira J (2001), "A model of appraisal in the emotion system: Integrating theory, research, and applications," in *Appraisal Processes in Emotion: Theory, Methods,*

- Research*, ed. Klaus R Scherer, Angela Schorr, and Tom Johnstone, New York: Oxford University Press, 68-91.
- Samuelson, Paul A. (1937), "A note on measurement of utility," *Review of Economic Studies*, 4 (2), 155-61.
- Taylor, Shelley and Teresa E. Seeman (1999), "Psychosocial resources and the SES-health relationship," *Annals of the New York Academy of Sciences*, 896, 210-25.
- Taylor, Shirley (1994), "Waiting for service: The relationship between delays and evaluation of service," *Journal of Marketing*, 58 (2), 56-69.
- Ubel, Peter A, George Loewenstein, Norbert Schwarz, and Dylan Smith (2005), "Misimagining the unimaginable: The disability paradox and healthcare decision making," *Health Psychology*, 24 (4), S57-62.
- Updegraff, John A., Shelly L. Gable, and Shelley E. Taylor (2004), "What makes experiences satisfying? The interaction of approach-avoidance motivations and emotions in well-being," *Journal of Personality and Social Psychology*, 86 (3), 496-504.
- Zhou, Rongrong and Dilip Soman (2003), "Looking back: Exploring the psychology of queuing and the effect of the number of people behind," *Journal of Consumer Research*, 29 (March), 517-30.

**TABLE 1. MEAN RATINGS BY CONDITION FOR DEPENDENT VARIABLES IN STUDY 1**

	Non-Aversive		Aversive	
	<i>Standard Wait (5 min)</i>	<i>Short Wait (2 min)</i>	<i>Standard Wait (5 min)</i>	<i>Short Wait (2 min)</i>
<b>Total Stress</b>	5.7 (0.7) <sup>b</sup>	5.0 (0.8) <sup>c</sup>	6.8 (1.0) <sup>a</sup>	10.3 (1.0) <sup>a,b,c</sup>
<b>Relative coping with wait vs. event**</b>	3.0 (0.7) <sup>e</sup>	3.1 (0.7) <sup>d</sup>	1.9 (0.8) <sup>f</sup>	-1.6 (0.8) <sup>d,e,f</sup>
<b>Degree info viewed as stressful</b>	3.7 (0.6)	2.5 (0.5) <sup>g</sup>	3.9 (0.6)	5.0 (0.5) <sup>g</sup>

\*\* Positive numbers = cope with wait more than event

Note: Numbers in parentheses are standard errors.

<sup>a</sup> p<.01

<sup>f,g</sup> p<.005

<sup>b</sup> p<.0005

<sup>c,d,e</sup> p<.0001

**TABLE 2. MEAN RATINGS OF STRESS BY PREFERRED COPING STRATEGY  
(STUDY 4)**

	<i>Non-Aversive Event</i>		<i>Aversive Event</i>	
	<b>Approach</b>	<b>Avoidance</b>	<b>Approach</b>	<b>Avoidance</b>
<b>No Information</b>	5.8 (0.9) <sup>f</sup>	6.3 (1.0) <sup>c</sup>	6.8 (0.9) <sup>a,b</sup>	5.0 (1.1) <sup>d</sup>
<b>Information</b>	4.1 (0.6) <sup>h</sup>	5.1 (1.5) <sup>e</sup>	3.8 (0.8) <sup>a,g</sup>	10.4 (0.7) <sup>b,c,d,e,f,g,h</sup>

Note: Numbers in parentheses are standard errors.

<sup>a</sup>  $p < .05$

<sup>b,c</sup>  $p < .005$

<sup>d,e</sup>  $p < .001$

<sup>f</sup>  $p < .0005$

<sup>g,h</sup>  $p < .0001$

## HEADINGS LIST

### 1) TYPES OF COPING STRATEGIES

### 1) WAIT MANAGEMENT STRATEGIES

### 1) INTERACTION OF COPING AND WAIT MANAGEMENT STRATEGIES

#### 1) STUDY 1

##### 2) Method

##### 3) *Event Valence Manipulation*

##### 3) *Duration Information Manipulation*

##### 3) *Dependent Measures*

##### 2) Results and Discussion

##### 3) *Focal Source of Coping*

##### 3) *Hypotheses 1a and 2a: Effects of Wait Length, Information, and Valence on Stress*

##### 3) *Focal Source of Coping as a Mediator*

##### 3) *Evaluation of Information*

##### 3) *Discussion*

#### 1) STUDY 2

##### 2) Method

##### 2) Procedure

##### 2) Manipulations

##### 3) *Coping Manipulation*

##### 3) *Wait Length and Duration Information Manipulations*

##### 2) Dependent Measures

##### 2) Results and Discussion

##### 3) *Manipulation Checks*

##### 3) *Hypotheses 1b and 2b: Effects of Waiting Time, Information, and Coping on Stress*

##### 3) *Discussion*

#### 1) STUDY 3

##### 2) Method

##### 3) *Manipulations*

##### 3) *Dependent Measures*

##### 2) Results and Discussion

##### 3) *Focal Source of Stress*

##### 3) *Hypothesis 2a: Effect of Information and Valence on Stress*

##### 3) *Discussion*

#### 1) STUDY 4

##### 2) Method

##### 3) *Dependent Measures*

##### 2) Results and Discussion

##### 3) *Manipulation Check*

##### 3) *Hypotheses 2a and 2b: Effects of Duration Information, Event Valence, and Preferred-Coping Strategy on Stress*

##### 3) *Role of Information*

##### 3) *Discussion*

### 1) GENERAL DISCUSSION

##### 2) Summary of Results

2) Implications and Extensions

1) **APPENDIX**

1) **REFERENCES**