The Psychology Energy Model of Sport Spectatorship

Wonseok (Eric) Jang, University of Florida
Yong Jae Ko (Advisor), University of Florida
Daniel L. Wann (Advisor), Murray State University

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Several studies have highlighted the importance of motive in understanding sport fans’ behavior (e.g., Wann, 1995). Although there is ample evidence of the effects of sport fans’ motives on various types of behaviors (e.g., game attendance), key limitations still exist in the current literature. Prior literature provides limited explanations of how different types of motives influence sport fans’ in-game experiences (e.g., game enjoyment). To assist in bridging this gap, the current study uses mental energy as a metaphor to explain how different types of motives (intrinsic vs. extrinsic) impact sport fans’ in-game experiences.

Experiment 1

The concept of mental energy has received significant attention from multiple disciplines as an effective metaphor for understanding numerous behaviors such as self-regulation tasks (Laran & Janiszewski, 2011) and cognitively oriented tasks (Choi & Fishbach, 2011). As a potentially important aspect of this study, mental energy is often used as an effective metaphor for understanding people’s psychological well-being, such as enjoyment of a certain activity (Nix et al., 1999). The basic assumption is that the amount of mental energy that people increase or decrease during the performance of an activity determines the task enjoyment (Ryan & Frederick, 1997). The most dominant theoretical frameworks that have been used to understand the effects of mental energy are the self-determination theory (SDT; Ryan & Deci, 2000) and the ego-depletion model (EDM; Baumeister et al., 1998). The SDT posits that when people are intrinsically motivated to perform a behavior, they increase their mental energy during the performance and consequently experience a feeling of vitality after the completion of a behavior (Choi & Fishbach, 2011). Meanwhile, the EDM proposes that people consume a certain amount of mental energy to perform any kind of volitional behavior such as a muscle becomes tired after the completion of an activity (Baumeister et al., 1998). People especially deplete their resources after the completion of extrinsically motivated behavior because they construe the behavior as an obligation to work (Laran & Janiszewski, 2011). Therefore, we hypothesized:

H1: Intrinsically motivated spectators (entertainment motive) will experience a greater sense of vitality (energy gain) than extrinsically motivated spectators.

H2: Extrinsically motivated spectators (group affiliation motive) will deplete more resources than intrinsically motivated spectators.

H3: The concept of vitality (resource depletion) will be positively (negatively) correlated with enjoyment of the game.

Experiment 1 employed a 2 (intrinsic vs. extrinsic motive) between-subject design. Subjects were randomly assigned to either of those two conditions. Sixty subjects were recruited from Amazon Mechanical Turk (Mturk). The stimuli (5 minutes of highlight) were developed based on a NCAA FBS (i.e., I-A) college football regular season game. Two different scenarios were created to manipulate motivational-orientation. Subjects were exposed to one of these two scenarios before they watched the game. For the intrinsic (extrinsic) motivation condition, an entertainment (a group affiliation) motive was highlighted by the scenario (Wann, 1995). After subjects watched the highlights of the game, they were asked to complete dependent variables and manipulation items.

The results of the manipulation check confirmed that subjects in the intrinsic motivation condition perceived sport spectating behavior as a more fun-oriented activity than subjects in the extrinsic motivation condition (MIntrinsic = 6.07, MExtrinsic = 5.17; β = .28, p < .05). The results of analysis of variance (ANOVA) indicated that subjects in the intrinsic motivation condition produced a greater level of vitality than subjects in the extrinsic motivation condition (MIntrinsic = 5.36, MExtrinsic = 4.68, F(1, 58) = 5.56, p < .05). Meanwhile, subjects in the extrinsic motivation condition reported a greater level of resource depletion than subjects in the intrinsic motivation condition.
(MIntrinsic = 3.06, MExtrinsic = 3.86, F(1, 58) = 5.56, p < .05). Furthermore, the results of correlation analyses indicated that vitality positively correlated with game enjoyment ($r = .62$, $p < .01$), whereas depletion negatively correlated with game enjoyment ($r = -.29$, $p < .05$). Thus, H1, H2, and H3 were supported.

**Experiment 2**

Experiment 2 was designed to provide several improvements. First, a control group was added to understand how different types of motivated behaviors either increase or decrease mental energy compared to an everyday life situation. Second, experiment 2 was conducted within the context of the National Football League (NFL) to increase the generalizability of the results. Third, experiment 2 examined the effects of mental energy from a dispositional perspective. We proposed that the level of team identification would either increase or decrease sport fans’ mental energy during or after the game. Fourth, experiment 2 explored the specific pattern of vitality and depletion during the game-viewing experience. Choi and Fishbach (2011) found that when people encounter a series of intrinsically- or extrinsically- motivated tasks, the vitalizing effect occurs at the beginning of the experience, whereas the depletion effect occurs at the end of the experience. Therefore, we hypothesized:

H4: For highly identified sport spectators (intrinsic motive), a sense of vitality would increase after the first half of the game and continue to increase until the end of the game. Meanwhile, for lowly identified sport spectators (extrinsic motive), resource depletion would emerge only after the end of the game.

Experiment 2 employed a 2 (Team Identification: high or low) x 2 (Duration of Game: watched first half only or watched entire game) between-subject design and a control group design. We recruited 216 subjects from Mturk. The stimuli (8 minutes videos) were developed based on an NFL game between the Pittsburgh Steelers and the Arizona Cardinals. Subjects were randomly assigned to watch highlights of either “half of the game only (half game condition)” or “the entire game (full game condition)”. Subjects in the control group read a one page news article regarding the same game. Team identification was a measured variable, and a median split was used to categorize subjects into either high- or low- team identification (TID) groups.

The results of the manipulation check confirmed that high TID subjects perceive sport spectating behavior as a more fun-oriented activity than low TID subjects ($M_{High} = 5.93$, $M_{Low} = 5.13$; $\beta = .19$, $p < .05$). Using vitality as a dependent variable, the results of a 2 x 2 between-subjects ANOVA indicated significant two-way interactions, $F(1, 167) = 2.83$, $p < .10$, accompanied by a significant main effect of TID, $F(1, 167) = 40.69$, $p < .001$. Specifically, a series of contrast analyses indicated that a high TID group experiences a greater feeling of vitality after the first half of the game compared to the control condition, $M_{Control} = 4.55$, $M_{First half} = 5.22$, $F(1, 84) = 6.96$, $p < .05$. This vitalizing effect significantly increased as the game progressed to the end, $M_{First half} = 5.22$, $M_{Full game} = 5.76$, $F(1, 84) = 7.35$, $p < .01$. Meanwhile, using resource depletion as a dependent variable, ANOVA results indicated that the two-way interactions, and the main effect of TID and game duration were not significant. Specifically, a series of contrast analyses indicated that a low TID group experienced greater resource depletion after the first half of the game compared to the control condition, $M_{Control} = 3.11$, $M_{First half} = 3.65$, $F(1, 88) = 2.83$, $p < .10$. However, there was no difference between the end of the first half of the game compared to the end of the game, $F(1, 83) = .80$, $p > .10$. Thus, H5 was supported only for highly identified sport fans.

By using mental energy as a metaphor, the current study provides initial evidence for the relationship between spectators’ mental energy (vitality vs. depletion) and their behaviors. Given the significant relationship reported in this study, the concept of mental energy could be further explored in explaining various types of sport fans’ behaviors, such as aggression, impulsive, and information-processing behaviors.