Playing Games Efficiently: Hedonic Learning and Loyalty

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In this paper we demonstrate that human capital invested in a hedonic product can be an important determinant of consumer loyalty. In addition, we find that a positive attitude towards the product completely mediates the impact of skill acquisition on loyalty. Moreover, and in contrast to previous work on learning and loyalty in utilitarian consumption, additional use of the product had no effect on task completion times, perceived ease of use or loyalty to the product. However, we do find evidence for “hidden efficiencies” that improved significantly with additional play and affected consumers’ intention to use the product again.

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EXTENDED ABSTRACT

Time is saved to be spent doing other things. Less time spent on work means more time for leisure; consumers tend to prefer efficiency in utilitarian tasks, to achieve desired benefits with a minimum investment of time and effort (Payne, Bettman and Johnson 1993; Simon 1955). During hedonic tasks, however, consumers are much less concerned with (even oblivious to) their expenditure of time and effort, which is defined primarily by the quality of the experience (Hirschman and Holbrook 1982; Voss, Spranger and Grohmann 2003).

Consumer behavior on the internet can be utilitarian or hedonic. Consumers are attracted to the internet because it can save them time (Bellman, Lohse, and Johnson 1999) and online shoppers prefer websites that they can use more efficiently (Johnson, Bellman, and Lohse 2003), but longer site visit times are positively correlated with the quality of the users’ internet experience (Novak, Hoffman, and Yung 2000). While efficiency is preferred for utilitarian behavior, experiential factors dominate during hedonic consumption (Hirschman and Holbrook 1982). For example, during a “time-filling” (Rubin and Perse, 1987, p. 59) experiential task such as ‘surfing’ the net, consumers can experience a state of “flow” and be “unaware of the passage of time” (Hoffman and Novak 1996, p. 65); flow applies also to goal-directed tasks where it is associated with, e.g., inhibition of distractions.

The human capital model of consumer choice (Ratchford 2001) contends that both types of consumer behavior can be explained by the efficiency resulting from the accumulation of knowledge, skill or expertise. Specifically, the more human capital a consumer has invested in a particular behavior the higher its utility and the more likely s/he is to repeat that behavior in the future.

The importance of efficiency (i.e., time savings) is intuitive for utilitarian consumption, such as buying a specific book online. The faster the purchase, the greater the return for the time invested. However, it is less clear that efficiency applies to hedonic consumption; in some cases, it is extremely counter-intuitive. For example, will a consumer maximize utility when browsing for a book if the browsing finished faster? Would playing a game be more enjoyable if the game ended sooner? In fact, for many types of hedonic experiences, it would be very surprising if they were more enjoyable the less time they took.

We predict that rather than acquiring skills to achieve maximum value in a minimum amount of time, during hedonic consumption people will acquire skills that allow them to maximize utility within the time available. Hedonic and utilitarian tasks bound a continuum characterized by the increasing importance of the learning component of the task. For hedonic tasks, practice makes this learning component more efficient, increasing the enjoyment of the task (Holbrook, Chestnut, Oliva, and Greenleaf 1984). For example, playing a video game, which is clumsy and slow for a beginner, will be fluid and automatic in a skilled player. But this type of efficiency would not be apparent in task completion time, the typical measure of learning effects (e.g., Johnson et al. 2003; Murray and Häubl 2007). Instead, we expect that efficiency in hedonic tasks will be “hidden” and the power law of practice (see Newell and Rosenbloom 1981 for a review) will be evident only when the learning component is isolated (e.g., game score achieved per second, rather than total score, measures hidden efficiency).

In addition, we predict that the way efficiency affects loyalty is different in hedonic versus utilitarian consumption. Although ease of use (efficiency) is a sufficient explanation of loyalty toward utilitarian tasks (Murray and Häubl 2007), for hedonic consumption we predict that attitude toward the task will completely mediate the already hidden effect of efficiency on loyalty. Specifically, because hedonic consumption is a multi-sensory and emotive experience (Hirschman and Holbrook 1982; Voss, Spranger and Grohmann 2003), we expect that liking and enjoying the task will dominate efficiency in determining loyalty (as it is for most tasks: Sheppard, Hartwick, and Warshaw, 1988).

To test our two primary predictions, we built a fighter jet video game similar in style of play and time to the Flash-based games used as promotion tools on websites such as CandyStand.com and NabiscoWorld.com. The game was played online and we recorded game time and game score for each game played. We used a sample of the general public that varied widely in video game experience (n = 118), who participated for the chance to win one of two Apple iPod minis, awarded via lottery rather than highest score to motivate all players to do their best, even if they were not experienced gamers.

Our results indicate that human capital invested in a hedonic product can be an important determinant of consumer loyalty. In contrast to previous work on learning and loyalty in utilitarian tasks (Johnson et al. 2003; Murray and Häubl 2003, 2007), practice with the product (1 game vs. 10 games) had no effect on overall task completion times. That is, we found “flat” learning curves. Furthermore, practice had no effect on perceived ease of use or loyalty to the product (measured by intention to play the same game again). As predicted, however, we did find evidence for “hidden efficiency” within a hedonic task; people really did get better the more they played the game. With practice, players scored more points per second, which made them more loyal to the game (one standard deviation [28 s] increase in game time to achieve the same score reduced loyalty by .3 on a 7-point scale), but this effect was masked by equal loyalty whether players played one or ten games. Increasing hidden efficiency also made the game more enjoyable. In addition, we found that this positive attitude toward the task completely mediated the impact of human capital on loyal behavior in hedonic tasks (attitude was distinct from loyalty: 95% CI for r = .59 to .78). This was another contrast between hedonic and utilitarian tasks, for which loyalty results solely from improved ease of use (Johnson et al. 2003; Murray and Häubl 2007). [1000 words]

REFERENCES


