Transparent or Not? Optimal Performance Feedback in Gamified Services

Problem Definition: In many games or gamified services (e.g., fitness), users often receive feedback upon service completion. Such performance feedback, sometimes presented together with a goal and/or other users' scores, shapes their perception of individual performance (through prospect theory) and relative status (through social comparison). How transparent should service providers be in their disclosure of individual performance feedback to enhance user utility?

Methodology/Results: We employ a Bayesian persuasion framework to determine the optimal information disclosure policy, taking into account whether a goal is specified and whether the other users' scores are communicated. We find that when no goal is specified but the other users' scores are communicated, full (resp., no) information is optimal when users are ahead-seeking (resp., behind-averse); that is, the optimal information policy is either fully transparent or fully opaque. When a goal is specified but the other users' scores are not communicated, an upper censorship policy is optimal: the provider should reveal the exact scores to the low-performing users and only tell the high-performing users that they lie in the top range. Moreover, the higher the goal, the higher the cutoff between the two subsets of users. When a goal is specified and the other scores are communicated, the optimal information policy is again only fully transparent for a subset of users. Which subset depends on the nature of social comparison: When users are ahead-seeking, it is optimal to inform users in a range containing the goal that they are in that range; whereas, when they are behind-averse, it is optimal to additionally tell high-performing users their performance is in the top range.

Managerial Implications: Our paper offers guidelines to providers of games or gamified services to enhance user utility, and thus increase the value of their service, by engineering the design of their relative performance feedback.