DISSERTATION DEFENSE

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"Knowledge Sharing and Creation through Social Media in Organizations"

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Organizations are becoming more creative in incorporating technologies to aid their businesses, for example, by building collaboration networks with customers for innovative ideas and by utilizing online communities to mobilize knowledge among their employees. In my dissertation, I examine how such networks among employees or customers empowered by information technology influence the way organizations learn and innovate. My dissertation consists of the following three essays.

The *first* essay empirically examines whether knowledge flows within or across boundaries and how such tendencies dynamically change as a knowledge provider gains more experiences in an internal online knowledge community. Although the previous literature has suggested that geographic and social boundaries disappear online, I hypothesize that they remain because participants prefer to share knowledge with others who share similar attributes, due to the challenges involved in knowledge sharing in an online community. Further, I propose that as participants acquire experience in exchanging knowledge, they learn to rely more on expertise similarity and less on categorical similarities such as location similarities. As a result, boundaries based on categorical attributes are expected to weaken, and boundaries based on expertise are expected to strengthen, as participants gain experience in the online community. Empirical support for this argument is obtained from analyzing a longitudinal dataset of an internal online knowledge community at a large multinational IT consulting firm.

The *second* essay investigates the complementarity of individuals' activities between two crowdsourcing communities: a customer support community and an innovation crowdsourcing community. A tie formed between a helper and a help-seeker at a customer support crowdsourcing community represents valuable information flow for new product ideation because: (a) it represents a flow of solution information from a helper to a help-seeker, and (b) it represents a flow of a help-seeker's information about his/her needs to a helper. By utilizing a natural language processing technique, I construct each individual's information network based on their helping activities, and examine how the structure of their information network, in terms of breadth and depth, affects their new product ideation outcomes at an innovation crowdsourcing community. My analysis reveals that helping activities at a customer support community help individuals to create better quality ideas at an innovation community. Specifically, generalists, who have provided solutions on diverse problem areas, are likely to create more original ideas. Yet, those generalists who have only shallow knowledge across diverse domain areas do not perform significantly better than non-generalists in their ability to create ideas that are later implemented by a company. Only those generalists who possess expert knowledge in at least one domain area tend to outperform non-generalists.

In the *third* essay, I examine membership dynamics in online knowledge communities. This essay extends the first essay by examining whether individuals' decision of how much to contribute to an online knowledge community is based on the decisions of other participants in her/his ego-network (beyond a dyadic relation studied in the first essay). Humans have intrinsic tendency for consensus: people want to follow what others do. I propose that individuals have stronger motivation to get engaged in online community activities if their virtual neighbors, with whom they have interacted over an online community, are active. In addition, I propose that this herding tendency become stronger if their virtual neighbors are geographically proximate to them. I empirically test this conjecture, and discuss the impact of such herding behavior on the design of an online community and on the evolution of an online community population.