

Dynamic Signaling Theory – A New Conceptual Framework:

Voice, Bodily Movements, and Gaze in Entrepreneur–Investor Pitches and Process of Signal Formation

Management Science, Graduate School of Management, Kyoto University

SATOSHI MIYAJIMA

ABSTRACT

This dissertation examines nonverbal signals as a means of reducing information asymmetry in entrepreneurial and intrapreneurial contexts, drawing on signaling theory as its primary theoretical lens. While prior research has emphasized signal types and their outcomes, this dissertation shifts the focus to the role of vocal and bodily nonverbal signals in pitch competitions and in the long-term signal formation of intrapreneurs. Four empirical studies are conducted.

First, an analysis of Japanese-language entrepreneurial pitches reveals that speech rate is a decisive vocal signal influencing investor evaluation. Second, an investigation of English-language pitches and subsequent Q&A sessions demonstrates that pitch winners exhibit vocal stability, showing limited variation in both speech rate and pitch range between the pitch and Q&A phases. Third, a qualitative comparative analysis of pitch Q&A interactions highlights that credibility emerges through six distinct combinations of bodily actions and gaze. Fourth, an exploratory case study of an intrapreneur illustrates how nonverbal signals are gradually acquired and reshaped over time through cross-cultural experiences and interpersonal relationships. This process is closely tied to changes in self-construal, as shifts between independent and interdependent orientations shape the types of signals that are acquired.

The dissertation acknowledges limitations, including reliance on a single pitch competition for empirical data and the intrapreneurial analysis being restricted to a single Japanese case, which constrain generalizability. Nonetheless, the theoretical contributions are fourfold. First, it quantifies voice-based signals to provide a concrete understanding of nonverbal signaling in entrepreneurial contexts. Second, it develops a novel model that integrates signaling theory with Russell's Circumplex Model of Affect, linking vocal signals to emotional dimensions of valence and arousal. Third, it combines social capital theory with signaling theory to demonstrate how bodily and gaze-based signals in short-lived pitch interactions can make information asymmetry visible. Finally, by directing attention to signal formation rather than only signal effects, this dissertation advances the scope of signaling theory and opens avenues for future research on dynamic and processual signaling.

Keywords:

signaling theory, circumplex model of affect, valence-arousal model, social capital theory, signal formation