

DOCTORAL DISSERTATION

Leadership and Creativity in Research
Investigations of Leadership and Leader-Member Exchange
(LMX) in Research Groups

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Abstract

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This thesis is an examination of leadership and creativity in research. Specifically, it studies leadership and creativity in academic research groups and commercial research groups in the biosciences. Leaders in these research settings face similar challenges, in particular the uncertainty that characterizes such creative work. Moreover, because this work is knowledge intensive, leaders in research lead followers who, with their special expertise and skills, have a propensity for work autonomy. Therefore, the essential goal of this thesis is to understand how leaders in research settings can promote creativity among their followers.

The main theory behind this research is leader-member exchange (LMX) theory, which is a relational leadership theory. By using LMX theory, both leaders and followers are included in the study of leadership. According to LMX theory, a leader and a follower form a dyad. The quality of the relationship in that dyad is predictive of an array of desirable work outcomes. Although LMX has previously been associated with work performance, organizational citizenship behaviour, well-being and creativity, in this research the aim was to study LMX in relation to creativity in research settings.

The thesis contains four related studies. Study I is a qualitative study of how followers perceive leaders to have stimulated creativity in research. Study I concludes that leaders can stimulate creativity by providing expertise and support to their followers. Study II, Study III and Study IV are correlational studies. Study II examines work two behaviours – cognitive support and knowledge resources – as antecedents of LMX. Findings indicate that leaders' provision of cognitive support and knowledge resources are two possible ways for leaders to improve leader-follower relationship quality. Study III and Study IV look at the relationship between LMX and a bibliometrical measure of creative performance (numbers of publications), retrospectively (in Study III and Study IV), and prospectively (in Study IV). Study III proposes that leader-ratings of LMX (rather than follower-ratings) are positively associated with creative performance in academic research settings. In its evidence about the differences in creative performance between the two groups, Study III shows that LMX has negative predictive ability in commercial research settings. Study IV argues that the positive association between leader-rated LMX and creative performance in the academic research groups was sustained over the substantial period of three years. Both Study III and Study IV show that leader-ratings of LMX (rather than follower-ratings) influence creative performance. However, only relationships of the highest quality (relationships where both leader and follower agree on the high quality of the relationship) are associated with followers' greater past creative performance (Study IV). This conclusion is consistent with previously untested theoretical assumptions (Elkins & Keller, 2003).

Historically, psychological research on creativity has emphasized individual traits and abilities in a way that might question whether it is possible to lead creative individuals or creative work. However, the claim of this thesis is that leaders can influence creativity in research and can influence followers' perceptions of the leader-follower relationship quality. Moreover, the claim is that leaders' perceptions of the leader-follower relationship quality, rather than followers' perceptions, are important to followers' creative research performance.

Keywords: LMX, leadership, creativity, research groups, R&D