Summer 7-30-2010

Student Leader LMX Relationships as Moderated by Constructive-Developmental Theory

Shelly Mumma
University of Nebraska at Lincoln, s_mumma@yahoo.com

Follow this and additional works at: http://digitalcommons.unl.edu/aglecdiss

Part of the Educational Psychology Commons, Other Public Affairs, Public Policy and Public Administration Commons, and the Social Psychology Commons

Mumma, Shelly, "Student Leader LMX Relationships as Moderated by Constructive-Developmental Theory" (2010). Theses, Dissertations, & Student Scholarship: Agricultural Leadership, Education & Communication Department. 9.
http://digitalcommons.unl.edu/aglecdiss/9

This Article is brought to you for free and open access by the Agricultural Leadership, Education & Communication Department at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Theses, Dissertations, & Student Scholarship: Agricultural Leadership, Education & Communication Department by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.
STUDENT LEADER LMX RELATIONSHIPS AS MODERATED BY
CONSTRUCTIVE-DEVELOPMENTAL THEORY

By

Shelly Morris Mumma

A DISSERTATION

Presented to the Faculty of
The Graduate College at the University of Nebraska
In Partial Fulfillment of Requirements
For the Degree of Doctor of Philosophy

Major: Human Sciences (Leadership Studies)

Under the Supervision of Professor Daniel W. Wheeler

Lincoln, Nebraska
August 2010
This study examined how the quality of Leader-Member Exchange (LMX) relationships was moderated by the Constructive-Developmental stage or Order of Consciousness of both leader and follower. Using student organization presidents and officers on a small, private, liberal arts college campus in the Midwest, the researcher used a sample of 37 students to study the impact developmental stage had on the leadership relationship. Using the Leader Member Exchange-Multi-Dimensional Measure (LMX-MDM), four dimensions of LMX were examined. The four dimensions were Affect, Contribution, Loyalty and Professional Respect. There was no significant relationship between Order of Consciousness and quality of LMX relationship. While there was no significant difference in LMX relationship based on gender of participants, there was a significant difference between how male presidents and officers perceived their relationship in the Loyalty dimension. Directions for further research and implications for practice were discussed.
ACKNOWLEDGEMENTS

Now that this process is complete, I’d like to acknowledge a number of people who assisted me along the way.

First and foremost, I’d like to thank my family, Mark and Maranda, for their support through this entire process. I started courses in Fall 2001, which means that Maranda doesn’t remember a time that her mother had schoolwork to complete. It meant that there were many athletic events, she was playing while I watched and read a book or article. Through this time frame, it meant that Mark had to take on many responsibilities – parenting and household chores. Although, some we hired out and I’m extremely grateful for that assistance as well.

I’d also like to thank the people that I’ve worked with along the way. When I started this journey, those were my colleagues at Nebraska Wesleyan University. At the conclusion, those are my colleagues at St. Norbert College. Although, the two supervisors that inspired me to start my doctoral studies and have mentored me along the way deserve special mention. Dr. Sara Boatman and Kathy Shellogg were incredibly supportive at work and continued to be when I made the decision to take a position elsewhere.

I also have a number of friends that have helped me through this process. Without them I couldn’t have made it and remained halfway sane. Thank you so much to Tiffany, Lance, Kelli, Julie, Corday, and Jennie (without Jennie’s support, Tiffany could not have been so helpful).

Last but not least, I also want to thank the people responsible for assisting me with the actual completion of my dissertation. Tim Gaskill in the NEAR Center did his
part to keep me sane and I couldn’t not have completed the Results section without him.

Tami and Natalee did a wonderful job transcribing my interviews quickly even though it was over the holidays. I really appreciate all their help.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHAPTER I</td>
<td>9</td>
</tr>
<tr>
<td>Introduction and Statement of the Problem</td>
<td>9</td>
</tr>
<tr>
<td>Purpose of the Study</td>
<td>12</td>
</tr>
<tr>
<td>Research Questions</td>
<td>12</td>
</tr>
<tr>
<td>Delimitations of the Study</td>
<td>13</td>
</tr>
<tr>
<td>Significance of the Study</td>
<td>13</td>
</tr>
<tr>
<td>CHAPTER II</td>
<td>15</td>
</tr>
<tr>
<td>Review of Literature</td>
<td>15</td>
</tr>
<tr>
<td>Leader Member Exchange (LMX)</td>
<td>15</td>
</tr>
<tr>
<td>Constructive-Development Theory</td>
<td>20</td>
</tr>
<tr>
<td>Leadership Development on College Campuses</td>
<td>33</td>
</tr>
<tr>
<td>CHAPTER III</td>
<td>41</td>
</tr>
<tr>
<td>Methodology</td>
<td>41</td>
</tr>
<tr>
<td>Data Collection and Method</td>
<td>41</td>
</tr>
<tr>
<td>Reliability and Validity</td>
<td>44</td>
</tr>
<tr>
<td>Ethical Considerations</td>
<td>46</td>
</tr>
<tr>
<td>Researcher Training on the Subject-Object Interview</td>
<td>46</td>
</tr>
<tr>
<td>Variables in the Study</td>
<td>48</td>
</tr>
<tr>
<td>Data Collection</td>
<td>49</td>
</tr>
<tr>
<td>Summary</td>
<td>52</td>
</tr>
<tr>
<td>CHAPTER IV</td>
<td>53</td>
</tr>
<tr>
<td>Results</td>
<td>53</td>
</tr>
<tr>
<td>Leader-Member Exchange</td>
<td>54</td>
</tr>
<tr>
<td>Constructive-Development</td>
<td>55</td>
</tr>
<tr>
<td>Relationship Between LMX and Constructive-Development Order</td>
<td>57</td>
</tr>
<tr>
<td>CHAPTER V</td>
<td>58</td>
</tr>
<tr>
<td>Conclusions</td>
<td>58</td>
</tr>
<tr>
<td>Discussion of Findings and Hypothesis Testing</td>
<td>59</td>
</tr>
<tr>
<td>Strength of Findings</td>
<td>60</td>
</tr>
<tr>
<td>Recommendations</td>
<td>61</td>
</tr>
<tr>
<td>Implications for Further Research</td>
<td>61</td>
</tr>
<tr>
<td>Implications for Practice</td>
<td>62</td>
</tr>
<tr>
<td>Limitations of the Study</td>
<td>62</td>
</tr>
<tr>
<td>Directions for Future Research</td>
<td>64</td>
</tr>
<tr>
<td>Summary</td>
<td>65</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>67</td>
</tr>
</tbody>
</table>
APPENDICES

APPENDIX A 74
Definition of Terms

APPENDIX B 80
Summary of Hypotheses

APPENDIX C 81
LMX-MDM Questionnaire

APPENDIX D 84
Subject-Object Interview Protocol

APPENDIX E 88
Subject-Object Interview Analysis Form

APPENDIX F 89
Subject-Object Interview Overall Formulation Form

APPENDIX G 90
Cover Letter to Participants

APPENDIX H 94
Informed Consent for Participants

APPENDIX I 99
Institutional Review Board Approval of Study Letter from UNL

APPENDIX J 101
Institutional Review Board Support of Study Letter from Research Location

APPENDIX K 102
Confidentiality Agreements - Transcriptionists
### List of Tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Hallmarks &amp; Transition Points of Constructive-Development</td>
<td>30</td>
</tr>
<tr>
<td>2. Description of Transition Along Orders</td>
<td>32</td>
</tr>
<tr>
<td>3. Number of Interviews Conducted, etc.</td>
<td>43</td>
</tr>
<tr>
<td>4. Demographics of participants</td>
<td>44</td>
</tr>
<tr>
<td>5. Subject Object Interview Score Conversion for Statistical Analysis</td>
<td>51</td>
</tr>
<tr>
<td>6. Dependent t-test: LMX Dimensions by Presidents and Officers</td>
<td>54</td>
</tr>
<tr>
<td>7. Independent t-test: LMX Dimensions</td>
<td>55</td>
</tr>
<tr>
<td>8. Loyalty Dimension of LMX-MDM by gender</td>
<td>55</td>
</tr>
<tr>
<td>9. Spearman’s Correlation</td>
<td>56</td>
</tr>
<tr>
<td>10. Independent t-test: Subject-Object Order and Gender</td>
<td>56</td>
</tr>
<tr>
<td>11. Regression: LMX Dimensions and Order</td>
<td>57</td>
</tr>
</tbody>
</table>
List of Figures

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>LMX Dimension Definitions</td>
<td>19</td>
</tr>
<tr>
<td>2.</td>
<td>Helix of Evolutionary Truces – Constructive-Development</td>
<td>24</td>
</tr>
<tr>
<td>3.</td>
<td>Stage 2 or Second Order of Consciousness</td>
<td>25</td>
</tr>
<tr>
<td>4.</td>
<td>Stage 3 or Third Order of Consciousness</td>
<td>27</td>
</tr>
<tr>
<td>5.</td>
<td>Stage 4 or Fourth Order of Consciousness</td>
<td>29</td>
</tr>
<tr>
<td>7.</td>
<td>Relationship between Leader-Member Exchange (LMX) and Constructive-Development</td>
<td>39</td>
</tr>
</tbody>
</table>
CHAPTER 1
Introduction and Statement of the Problem

As demands on student affairs professionals’ time increase, practitioners rely more and more on experienced students to assume leadership and mentoring roles with other students. This allows student affairs professionals to have a greater impact within their campus community by working closely with student mentors that then work with other students with whom they might not have had time to develop such relationships. This approach is supported by Astin’s research where he concluded, “the student’s peer group is the single most potent source of influence on growth and development during the undergraduate years” (Astin, 1993 – page#). He also discovered that student-student interaction has its strongest positive correlations with the leadership personality measure and with self-reported growth in leadership abilities (Astin, 1993). We also know that in employment situations, supervisors and co-workers can assist in the development of individual skills and abilities (Brungardt, 1996). This supports the idea that students are learning from each other. Students in leadership roles are influencing and developing students who work with them.

If campus communities are relying on students to have such a great impact on other students and their leadership, it behooves student affairs personnel to understand how to assist them in having the best relationships to foster these outcomes. LMX is the primary theory that examines leadership as a dyad and should always be measured from both the leader and member perspectives (Gerstner & Day, 1997). High-quality LMX relationships are more likely to have an outcome associated with member development, such as increased delegation, empowerment, mentoring and career progression (Gerstner
A high-quality relationship may indicate a transformational leader (Gerstner & Day, 1997). There are studies that show it is possible to train individuals to exhibit aspects of transformational leadership, therefore focusing on the development of high-quality dyadic relationships may be valuable as an addition to current models of leadership training (Gerstner & Day, 1997).

Deluga’s (1992) research data suggested heightened follower performance outcomes associated with transformational leadership result from the individualized dyadic relationship between a given subordinate and a leader. Howell and Hall-Merenda (1999) showed that LMX was a significant predictor of follower performance and transformational leadership was not. These authors also found that transformational leadership was a significant predictor of LMX.

Research being conducted related to the grounded theory of Leadership Identity Development supports that students progress through stages in a process that recognizes leadership in others and developing as a leader. Komives, et al. (2005) discovered that students in the early stages of engaging in groups were dependent on others – adults and older peers. Students could develop through six stages of leadership identity (Komives, et al., 2005). The stages through which a student progresses eventually take the student into a place where he/she wishes to influence what will happen on campus or in a particular organization once he/she has graduated and moved on, which implies mentoring other students becomes important for student leaders in a particular stage (Komives, et al., 2005). The progression through the stages of Leadership Identity Development is supported by the progression through the stages of psychosocial
development identified by Kegan as constructive-development or subject-object structure (Komives, et al., 2005).

The constructive-developmental approach focuses on the balance of subject and object, which is common ground for a number of theories used in the academic preparation of student affairs professionals, i.e. Kohlberg, Erikson (Kegan, 1982, 1994). This approach develops out of the Piagetian tradition that identifies a lifetime of transition through stages in which individuals either focus on the self or the other (Kegan, 1982, 1994). Kegan says that we move back and forth through these stages in our struggles with the lifelong tension between independence and inclusion (1982, 1994). We are able to revisit old issues at different stages but at a whole new level of complexity (Kegan, 1982, 1994).

Constructive-development is based on the theory that individuals develop (construct) understanding from their experiences and these experiences shape (develop) their relationships with others and dictate their behaviors in the world. The ‘lens’ through which the leader views the world is constructed within his/her meaning-making (understanding) gained through their experiences and this determines their way of being in the world and in relationship to others (Kegan, 1994).

Robert Kegan’s work in constructive-development theory may promote the study of leadership with a ‘new lens’ and prove to be a breakthrough in the area of understanding leaders’ capacity and readiness for leader development training (Kuhnert & Lewis, 1987). Student leaders, followers and student affairs professionals need to learn how to support growth and development based upon the student leader’s level of constructive-development. This will encourage student affairs professionals to create
leadership development programs that focus on constructive-developmental levels of students with strategies to support them as they progress through transitions that often can be difficult for them. It will also allow student affairs professionals to help student leaders understand how they can help other students through similar transitions.

**Purpose of the Study**

The purpose of this study was to determine if a student’s constructive-developmental stage had an effect on the quality of LMX relationship he/she had with students within his/her organization. One of the questions included whether a student leader needed to be at a higher constructive-developmental stage to have a high-quality LMX relationship with members of the group and what effect it might have had if the member was at a higher constructive-developmental stage. Interviews were conducted and questionnaires administered in order to collect appropriate data regarding the correlation between this developmental theory and leadership theory.

**Research Questions**

The central question for this study was whether or not a student leader needed to be at a higher constructive-developmental stage to have a high-quality LMX relationship with members of the group. This question led to determining if there was a different effect if the member was at a higher constructive-developmental stage than the student leader. The following sub-questions were utilized:

1. In what constructive-developmental stage did students and student leaders appear to be?

2. Was the constructive-developmental stage of the student leader or the organization member correlated to the quality of their LMX relationship?
The dependent variable in this study was the LMX relationship that exists between the student organization president and student officer of each student organization. The independent variable was each participant’s stage or Order of Consciousness through Kegan’s developmental theory. Moderating variables considered were gender, racial/ethnic background and socio-economic status. Each of these antecedents can affect the rate at which one progresses through the different stages that Kegan describes (Komives, 2005). A mediating variable was the personal friendship that can form between student leaders and the other students in each student organization. The personal friendship that exists between two students can affect their working relationship.

**Delimitations of the Study**

The study sought to document constructive-developmental order and dyadic leadership relationships between college student leaders at a small, private, college in the Upper Midwest.

The study did not seek to create any type of intervention or leadership development training related to constructive-development Order or dyadic leadership relationships.

**Significance of the Study**

This study is significant in a number of ways. First, there is an absence of studies relating constructive-developmental stage with Leader-Member Exchange in any of the current literature. This is a pairing that does not yet exist.

Second, it supports the importance of recognizing the constructive-developmental stage of college students that are in leadership positions. The ability to recognize a
student’s constructive-developmental stage allows a student affairs practitioner to appropriately challenge and support those student leaders in ways that will allow them to grow toward the next stage.

Third, utilizing Leader-Member Exchange (LMX) in order to determine in-group mentoring relationships allows student affairs practitioners to see the existence and importance of the dyadic relationships between student leaders in student organizations.

Fourth, peer influence is a tool that could ultimately be used by student affairs practitioners to assist in the growth and development of student leaders on a college campus. Understanding how to work with those students who could become peer mentors in such way that they understand the importance of their roles, could create a powerful experience for both student mentors and the younger students with whom they work.
CHAPTER II

Review of the Literature

Introduction

This literature review examines how constructive-developmental theory interacts with leadership on a college campus, specifically between student leaders. The review begins with defining and describing constructive-developmental theory, followed by a definition and description of leader-member exchange. The review concludes with a discussion of student leadership on a college campus through these two lenses.

Leader-Member Exchange

Leader-Member Exchange is a leadership model that differs from many of the leadership models that are used by the great majority because it focuses on the relationship between pairs. It comes from the Vertical Dyad Linkage (VDL) Model that was introduced in the 1970’s (Cashman, Dansereau, Graen, & Haga, 1976; Graen & Cashman, 1975). These models propose that a leader has a different relationship or patterns of behavior with each individual he/she supervises. LMX is unique in its adoption of the dyadic relationship as its level of analysis (Gerstner & Day, 1997).

According to LMX, the quality of the relationship that develops between a leader and a follower is predictive of outcomes at the individual, group and organizational levels of analysis (Gerstner & Day, 1997). These relationships are relatively enduring bonds that range from higher to lower quality exchanges and develop due to the supervisor’s limited time and energy because equal attention cannot be given to all subordinates (Cashman, Dansereau, Graen, & Haga, 1976; Dienesch & Liden, 1986; Graen, 1976; Graen & Cashman, 1975; Graen & Scandura, 1987; Zalesny & Kirsch, 1989).
Supervisor-subordinate exchanges that are higher quality are close working relationships characterized by trust and support (Liden & Graen, 1980), interpersonal attraction (Dansereau, Graen, & Haga, 1975; Graen & Cashman, 1975), loyalty, and mutual influence (Dienesch & Liden, 1986). Higher quality exchange subordinates are also referred to as the “in-group” (Deluga & Perry, 1994). Subordinates in this group receive special benefits and opportunities, such as favorable performance appraisals, promotions, support in career development, and satisfying or interesting positions (Deluga & Perry, 1994). The relationship is characterized by high trust, interaction, support, and formal/informal rewards (Dienesch & Liden, 1986). Supervisors in these relationships enjoy committed, competent, and hard-working subordinates (Dansereau et al., 1975; Liden & Graen, 1980; Yukl, 1989) whose actions are consistent with supervisor expectations (Graen & Cashman, 1975).

Lower quality exchanges have less mutual support than higher quality exchanges and are referred to as the “out-group” (Deluga & Perry, 1994). These exchanges are characterized by unidirectional downward influence and the exercise of formal organizational authority (Deluga & Perry, 1994). Lower quality relationships tend to have low trust, interaction, support, and rewards (Dienesch & Liden, 1986). Supervisors obtain routine subordinate performance and lower quality exchange subordinates receive standard organizational benefits (Graen & Cashman, 1975; Yukl, 1989).

In-group and out-group memberships tend to develop fairly quickly and remain stable after they have formed (Dienesch & Liden, 1986).

Gerstner and Day (1997) used a meta-analysis to find that LMX is positively related to performance ratings. However, the strength of the relationship depends on the
perspective from which LMX is measured, as well as the type of instrument used (Gerstner & Day, 1997). There also were significant positive correlations between LMX and objective performance, satisfaction with supervision, overall satisfaction, organizational commitment, and role clarity (Gerstner & Day, 1997). The meta-analysis also revealed significant negative correlations between LMX and role conflict and turnover intentions (Gerstner & Day, 1997).

Shriesheim, Neider, and Scandura (1998) concluded that delegation was significantly correlated with both the subordinate and supervisor points of view regarding LMX. Creativity research determined that identification and assignment of employees with appropriate motivational orientation for jobs involving creativity is likely to enhance the emergence of innovative ideas (Therney, Farmer & Graen, 1999). Further, results also suggested that placement of a supervisor or leader with a true appreciation for creative work among employees with the motivation to create may be a promising scenario for the advent of innovation (Therney, Farmer & Graen, 1999).

Gerstner and Day (1997) suggested that future LMX research should always be measured from both leader and member perspectives. They also suggested that more research was needed to clarify the contributions of relational demography, as well as other variables that have been examined as antecedents of LMX (Gerstner & Day, 1997). Some of those antecedents of LMX were leader and member personality traits, leader delegation and leader-member similarity (Gerstner & Day, 1997).

In terms of measuring LMX, the initial investigations by Graen, Dansereau, and Minami (1972), Dansereau, Cashman, and Graen (1973), and Graen, Dansereau, Minami, and Cashman (1973) used 40 Consideration and Initiating Structure items from the Ohio
State University studies’ Leader Behavior Description Questionnaire (LBDQ), with one study that augmented these with 20 additional items (Graen, Dansereau, Minami & Cashman, 1973a) (as cited in Schreisheim, Castro & Cogliser, 1999). Over the years, researchers have integrated measures that were meant to specifically measure LMX. The development of a seven-item scale used in Graen et al. (1982) and reported in Scandura and Graen (1984) (LMX-7) has become the most commonly used measure for LMX operationalization (as cited in Gerstner & Day, 1997).

There is also a 12-item, multidimensional scale, the LMX-MDM (Liden & Maslyn, 1998). LMX-MDM (Leader-Member Exchange – Multi Dimensional Measure) has broader domain coverage and better reflects a subordinate’s evaluation of the relational characteristics and qualities of the leader-subordinate relationship than do unidimensional measures of LMX (Liden & Maslyn, 1998). The LMX-MDM instrument measure four LMX dimensions: affect, loyalty, contribution and professional respect (Liden & Maslyn, 1998).
Figure 1: LMX Dimensions Definitions

| Affect | The mutual affection members of the dyad have for each other based primarily on interpersonal attraction, rather than work or professional values. Such affection may be manifested in the desire for and/or occurrence of a relationship which has personally rewarding components and outcomes (e.g., a friendship). |
| Loyalty | The expression of public support for the goals and the personal character of the other member in the LMX dyad. Loyalty involves a faithfulness to the individual that is generally consistent from situation to situation. |
| Contribution | Perception of the current level of work-oriented activity each member puts forth toward the mutual goals (explicit or implicit) of the dyad. Important in the evaluation of work-oriented activity is the extent to which the subordinate member of the dyad handles responsibility and completes tasks that extend beyond the job description and/or employment contract; and likewise, the extent to which the supervisor provides resources and opportunities for such activity. |
| Professional Respect | Perception of the degree to which each member of the dyad has built a reputation, within and/or outside the organization, of excelling at his or her line of work. This perception may be based on historical data concerning the person, such as: personal experience with the individual; comments made about the person from individuals within or outside the organization; and awards or other professional recognition achieved by the person. Thus it is possible, though not required, to have developed a perception of professional respect before working with or even meeting the person. |

Liden & Maslyn, 1998

Schreisheim, Castro and Cogliser (1999) proposed the level of analysis that worked best with LMX theory was either dyadic or within-group and there was a basic agreement within the field regarding this position. A dyadic approach involves looking at each supervisor-subordinate dyad as a “whole,” the analytic focus being the deviation of each dyad member’s score from this whole (or dyad average) score (Schreisheim, Castro & Cogliser, 1999). A within-group analysis considers the entire unit or work group as
the “whole” with deviations of individual members’ scores from this whole (or group average) as the focus (Schreisheim, Castro & Cogliser, 1999).

Wang, et al. (2005) found that LMX mediates between transformational leadership and performance. They suggested that transformational leader’s impact follower performance by developing stronger social bonds and, that LMX-enhancing transformational leadership strategies should be part of leadership development programs.

Seeing how college students may be in the process of moving from one developmental stage to the next and they have been found to be a powerful influence on each other, it is important to understand how high-quality dyadic relationships can contribute to the holding environment or culture in a way that assists students in moving into a new stage or order of consciousness. This type of research can be used by a number of student affairs professionals across the country to assist them in working with student leaders to understand the impact their mentoring relationships can have on other students.

**Constructive-Developmental Theory**


Piaget’s studies of the first two years of life show the child gradually moving from being subject to its reflexes, movements, and sensations, to having reflexes, movements, and sensations (Kegan, 1982, 1994). Kegan’s constructive-developmental approach, which develops from Piagetian tradition, suggests that human development is a
shift of figure and ground (Kegan, 1982, 1994). This development is best understood in the context of the psychological meaning of evolution, a lifetime activity of differentiating and integrating what is taken as self and what is taken as other (Kegan, 1982, 1994).

The model integrates a number of other theoretical perspectives, including Erikson’s (1963) psychosocial stages, Kohlberg’s (1981) concepts of moral development, Winnicott’s (1965) descriptions of holding environments, and Perry’s (1970) notions of adult meaning-making.

A person’s Order of Consciousness emerges from a lifelong process of development where the stage a person is in alternates between being “subject” and “object.” The individual’s belief and experience in motivation are “subject” to them. These things can’t be seen because they are a part of the individual – taken for granted (Kegan, 1994). Things that are “object” are things that one is aware of, can reflect upon, can tend to, take control of, internalize, and operate on (Kegan, 1994). Things that are “subject” have you, while you have things that are “object” (Kegan, 1994).

Kegan (1994) took the principles of mental organization and extended its “breadth” (beyond thinking to affective, interpersonal, and intrapersonal realms) and its “length” (beyond childhood and adolescence to adulthood). The first of these principles is the principle of independent elements, used by young children (Kegan, 1994). It describes their attachment to the momentary, the immediate, and the atomistic that makes their thinking fantastic and illogical, their feelings impulsive and fluid, their social-relating egocentric (Kegan, 1994). The second of these principles is called the durable category, which children usually evolve in latency, or between the ages of seven and ten.
(Kegan, 1994). A child’s capacity to organize things, others, and the self as possessors of elements or properties enables their thinking to become concrete and logical, their feelings to be made up of time-enduring needs and dispositions instead of momentary impulses, and their social-relating to grant to themselves and to others a separate mind and a distinct point of view (Kegan, 1994). The third principle, *cross-categorical knowing*, is what we expect of adolescents. It is the capacity to subordinate durable categories to the interaction between them and makes their thinking abstract, their feelings a matter of inner states and self-reflexive emotion, and their social-relating capable of loyalty and devotion to a community of people or ideas larger than oneself (Kegan, 1994).

These principles share a number of features (Kegan, 1994). First, they are principles that show how one constructs experience more generally, including thinking, feeling, and social-relating (Kegan, 1994). Second, they are principles for the organization (the form or complexity) of one’s thinking, feeling, and social-relating (Kegan, 1994). They don’t focus on the content of one’s thoughts, feelings, or social-relating.

“Third, a principle of mental organization has an inner logic, or an ‘epistemologic’” (Kegan, 1994 p.29). The root of this principle is the subject-object relationship (Kegan, 1994). “‘Object’ refers to those elements of our knowing or organizing that we can reflect on, handle, look at, be responsible for, relate to each other, take control of, internalize, assimilate, or otherwise operate upon…’Subject’ refers to those elements of our knowing or organizing that we are identified with, tied to, fused with, or embedded in. We have object; we are subject. We cannot be responsible for, in
control of, or reflect upon that which is subject. Subject is immediate; object is mediate. Subject is ultimate or absolute; object is relative” (Kegan, 1994, p. 32).

“Fourth, the different principles of mental organization are intimately related to each other. They are not just different ways of knowing, each with its preferred season. One does not simply replace the other, nor is the relation merely additive or cumulative, an accretion of skills. Rather, the relation is transformative, qualitative, and incorporative. Each successive principle subsumes or encompasses the prior principle” (Kegan, 1994, p.33).

The fifth principle suggests that an individual may come to organize his/her experience according to a higher order of principle over time (Kegan, 1994). What we take as subject and what we take as object are not necessarily fixed for us (Kegan, 1994). In transforming our epistemologies, we liberate ourselves from that which we were embedded, making what was subject into object so that we can ‘have it’ rather than ‘be had’ by it (Kegan, 1994).

Kegan’s six stages begin in infancy with Stage 1, also called the First Order of Consciousness (Kegan, 1994). Most adolescents are in the Second Order of Consciousness or moving into the Third Order. Many adults are in the Third Order or moving into Fourth Order. However, we move back and forth through stages throughout our lives, so we revisit old issues at a whole new level of complexity (Kegan, 1994). See Figure Two for an illustration of how we evolve through these stages For the purpose of this research, the study focused on Stages 2 through 4. The stages show where an individual is able to make differentiations between self and the world. They show how one makes meaning from their experiences.
Figure 2: Helix of Evolutionary Truces


The second order of consciousness is a durable category. The individual in this stage is able to understand that he/she has a private world that is separate from the parents’ world. He/she begins to have a self-concept, a consistent notion of what he/she is, not just that he/she is. The individual at this stage has taken control of his/her impulses. These impulses are now ‘object.’ They can be reflected upon and taken control of. The individual’s needs and preferences are ‘subject’ – embedded in the individual – so that he/she is unable to reflect on them, only act upon them. The individual’s point of view or role concept is also subject at this point, meaning that he/she cannot reflect on their role or another’s role or point of view. His/her point of view is the only one he/she knows and is unable to see it as one option of many (Kegan, 1994).

In Stage 2, the individual’s frame of reference (subject) is personal goals and agendas and everything is experienced in these terms (Amey, 1991). As a result, low-level transactions are not only what seem appropriate to this individual, but are the only cognitive possibility (Amey, 1991). Individuals in this stage are unable to reflect on
goals. Although leaders in Stage 2 are the least cognitively developed leaders, they may still be effective when organizational goals have already been clearly defined and when rewards are controlled by the leader so that low-level transactions may be perpetuated (Amey, 1991).

This individual’s relationship to others is a self subject to his own needs, wishes, and interests in terms of the possible consequences for his own world view (Eigel, 1998). In other words, he knows the other in knowing whether who or what the other is will help or hinder him in his effort to meet his needs, action oriented goals, plans or interests (Lahey, et al., 1988).

<table>
<thead>
<tr>
<th>Subject</th>
<th>Object</th>
<th>Underlying Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concrete-Actuality</td>
<td>Perceptions</td>
<td>Durable Category</td>
</tr>
<tr>
<td>--Data, Cause-and-Effect</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Point of View</td>
<td>Social Perceptions</td>
<td></td>
</tr>
<tr>
<td>-Role-Concept</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Simple Reciprocity (tit-for-tat)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enduring Dispositions</td>
<td>Impulses</td>
<td></td>
</tr>
<tr>
<td>-Needs, Preferences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Self Concept</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 3**

As an adolescent or adult moves into the third order of consciousness, he/she begins to recognize that he/she has needs, instead of he/she being those needs. By seeing this, he/she is able to coordinate, or integrate, one need system with another creating
mutuality. However, this transition is often experienced as uncomfortable and unwelcome (Kegan, 1994).

An individual that is fully in the third order of consciousness, is able to reflect on his/her own point of view as well as others. There is an interpersonal focus to the third order of consciousness that didn’t exist previously and with the recognition of other points of view comes a desire to please others or at least to avoid conflicts if possible. The self is ‘subject’ again in that there is no self, if other people don’t recognize and like that self. Kegan (1994) focuses on the fact that many adults remain in the third order of consciousness and never progress beyond that stage.

Because connectedness is so important in this order of consciousness, one might sacrifice personal goals in order to maintain connections with others (Amey, 1991). An individual in a leadership position relinquishes the need to constantly monitor and reward followers’ performance because he/she recognizes and understands the value of maintaining a certain level of personal regard instead of a focus on concrete payoffs as seen in the second order of consciousness (Amey, 1991).
## Stage Three or Third Order of Consciousness
(Traditionalism)

<table>
<thead>
<tr>
<th>Subject</th>
<th>Object</th>
<th>Underlying Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstractions - Ideality -- Inference, Generalization -- Hypothesis, Proposition Ideals, Values</td>
<td>Concrete</td>
<td>Cross-Categorical Trans-Categorical</td>
</tr>
<tr>
<td>Mutuality/Interpersonalism - Role Consciousness - Mutual Reciprocity</td>
<td>Point of View</td>
<td></td>
</tr>
<tr>
<td>Inner State - Subjectivity, Self-Consciousness</td>
<td>Enduring Dispositions Needs, Preferences</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 4**

As an adult transitions to the fourth order of consciousness, he/she’s self becomes ‘object’ again as it did in the second order of consciousness. An individual can recognize that he/she is indeed an individual regardless of another’s perception of him/her. In separating oneself from this interpersonal context, meaning-evolution authors a self, which maintains a coherence across a shared psychological space and so achieves an identity (Kegan, 1994). It’s a movement from “I am my relationships” to “I have relationships” (Kegan, 1994).

Individuals are able to take an objective view of goals and commitments and operate from a personal value system that transcends their agendas and loyalties (Amey, 1991). He/she is cognitively able to know the limitations and strengths of different viewpoints (Amey, 1991). Because these individuals achieve a self-determined sense of identity and purpose, they are able to integrate their ideas and values into the work group (Amey, 1991).
A person that is fully in the fourth order of consciousness, sees him/herself as a system and makes the maintenance of his/her integrity more important than the perceptions that others have of him/her. Emotions are more internally controlled in this stage. Individuation and autonomy are ‘subject’ at this stage. Again, not to be reflected on, just to be an individual and autonomous. Kegan (1994) says that only one-third of American adults actually fully reach a fourth order of consciousness, although many adults can be in the transition between stage 3 and stage 4 and never complete the transition.

“From a theoretical grounding, however, unless the leader has experienced and internally constructed the frame of reference (subject) thereby making it the content of experience (object), she or he is unable to fully incorporate and utilize the aspect of transformational leadership implied in Stage 4….According to cognitive development theorists (Kegan included), the integration of subject to object would not become fully part of cognition until the individual is either in transition to the next stage or has completed the transition. Therefore, in a purist sense, a leader in Stage 4 might indeed be transformational as perceived by others but not as an act of leader cognition” (Amey, 1991, p. 7).
Regardless of what order of consciousness an individual may be in at any given time, Kegan (1982) also calls attention to the importance of what he calls a holding culture, a term that is adapted from object relations theory. A holding environment referred to the total environment created and managed by a caregiver for the nurturing and development of a child, according to Winnicott (1965). Kegan suggested (1982) that new holding environments or holding cultures that come later in life might also contribute significantly to the development of the self. These cultures hold us in a particular stage or let us go onto the next stage (Kegan, 1982).

Another important concept is the transition from one stage to another. Most adults spend a majority of their time in transition between the transition points of each Order,
holding on to the former Order, while beginning the transition into the next Order. The cognitive dissonance created in an individual during that transition is often where the most growth occurs.

There are 21 possible placements within the five Orders of constructive-development with 5 hallmarks and 16 transition points. While the numbering of each Order suggests that the span between one stage to the next is of an equal distance, they are not.

**Table 1: Hallmarks and Transition Points**

<table>
<thead>
<tr>
<th>First Order: 1, 1(2), 1/2, 2/1,2(1)</th>
<th>Impulsive Stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Second Order: 2, 2(3), 2/3, 3/2, 3(2)</td>
<td>Instrumental</td>
</tr>
<tr>
<td>Third Order: 3, 3(4), 3/4, 4/3, 4(3)</td>
<td>Interpersonal</td>
</tr>
<tr>
<td>Fifth Order: 5</td>
<td>(Kegan, 1982)</td>
</tr>
</tbody>
</table>

As stated above, the growth of the individual is in the transition between the points along the continuum between being fully in one Order or another. The transition is symbolized by X, X(Y), X/Y, Y/X, Y(X). The growth for the individual finds the current order as ‘ruling’ his/her day-to-day understanding and meaning-making. As an individual has more experiences and increased developmental understanding emerges, the signs of the next Order begin to emerge from outside the individual X(Y). In the next transition along the continuum, the individual begins to experiment and try out aspects of the next Order while firmly holding to the already established Order as dominant X/Y. Here two functioning structures are apparent with the early structure pre-dominant and clearly a transition is starting movement toward the next Order. Once the individual develops more understanding and exposure to more complex ways of making meaning, the next order comes more fully into its own and there are two fully functioning
structures in use by the individual. It is in this transition where there is potential for the greatest struggle. There is not the ability to slip back to the previous Order as dominant, and the struggle of the new complexity can produce growth or surrender to meaning-making that seems both simple and complex (Bugenhagen, 2006).

The final transition point on the continuum from one fully functioning Order to the next Order, Y(X), finds the individual with signs of the old order remaining, but with strong objection to that way of meaning-making in favor of this new pre-domination of the next fully functioning Order. Table Two illustrates the transitions.
Table 2
Description of Transition Along the Orders

<table>
<thead>
<tr>
<th>Description</th>
<th>X(Y)</th>
<th>X ruling – Signs of Y emerging (look externally)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X/Y</td>
<td>X to Y transition</td>
<td>Two full structures operating at same time in transitional position</td>
</tr>
<tr>
<td></td>
<td>X – early structure as predominant</td>
<td>X – early structure as predominant</td>
</tr>
<tr>
<td>Y/X</td>
<td>Y ruling, signs of X still there</td>
<td>Two different epistemological structures (Subject – Object balances) demonstrating themselves. More developed structure tends to pre-dominate. Not slip back as X/Y, steps beyond a little. Transitional: does not overcome/cancel fully operational previous structure [as in Y(X)]</td>
</tr>
<tr>
<td>Y(X)</td>
<td>Signs of old X remaining – less evident</td>
<td>X present being exercised on behalf of NOT being in early Order any longer. Full higher structure maintained Y without slipping back to (X). New structure Y dominates. Characterized by strong protest against the kind of meaning making evidenced by the X structure. Not protesting “have-to” mentality – but dismisses it as not the point. Mutuality.</td>
</tr>
</tbody>
</table>

(Modified from Kegan, 1982)

In an analysis of transactional and transformational leadership using constructive/developmental theory, Kuhnert & Lewis (1987) proposed some research
questions that are valid for the purposes of this discussion. They point out the importance of the constructive/developmental theory because it emphasizes leaders’ development over the course of their lives (Kuhnert & Lewis, 1987). The research question that Kuhnert & Lewis (1987) highlight that is most pertinent to my question is “what happens when leaders and followers operate at different developmental levels?” Because both leaders and followers can be examined from the same theoretical perspective, we are able to see if developmental fit between leaders and followers explains the successes or failures of leaders (Kuhnert & Lewis, 1987).

Leadership Development on College Campuses

Brungardt (1996) asserted that leadership can be learned and taught and observed that most of the research was categorized in two primary groups: “leadership development theory and learning leadership theory” (p.84). Leadership development theory explored how leadership develops “throughout the span of a lifetime” (p.91). This research clusters into four categories: “early childhood and adolescent development, the role of formal education, adult and on-the-job experiences, and specialized leadership education” (p.84). “Both life span development and leadership education need to be linked to help leadership educators understand educational interventions that make a difference across the life span of leadership development.” (Komives, et al., 2006) Research being done regarding Leadership Identity Development (LID) links development with the process of leadership primarily to assist the leadership development of college students. (Komives, et al., 2006)

Through a grounded theory study that identified a developmental process of how college students situate themselves in the construct of leadership over time, several
influences were identified. (Komives, et al., 2006) Some of those influences were: deepening self-awareness, establishing interpersonal efficacy, engaging in groups, learning from membership continuity, changing perceptions of groups, adult influences, peer influences and meaningful involvement. (Komives, et al., 2006)

Ultimately, six stages of Leadership Identity Development (LID) were identified and much like constructive-development, students needed to progress through one stage before beginning the next. (Komives, et al., 2006) Although the stages are linear, they are also cyclical and development proceeds in circular manner. (Komives, et al., 2006) As early as Stage Two of LID, peers were identified as developmental influences and this continued throughout the additional stages.
### Figure 6: Leadership Identity Development Model  (Taken from Komives, et al., 2006)

<table>
<thead>
<tr>
<th>Stages</th>
<th>1 Awareness</th>
<th>2 Exploration/Engagement</th>
<th>3 Leader Identified</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Transition</td>
<td>Transition</td>
<td>Emerging</td>
</tr>
<tr>
<td>Key categories</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage Descriptions</td>
<td>•Recognizing that leadership is happening around you •Getting exposure to involvements</td>
<td>•Intentional involvements (sports, religious institutions, service, scouts, SGA) •Experiencing groups for the first time •Taking on responsibilities</td>
<td>•Trying on new roles •Identifying skills needed •Taking on individual responsibility •Individual accomplishments important</td>
</tr>
<tr>
<td>Broadening View of Leadership</td>
<td>“Other people are leaders; leaders are out there somewhere”</td>
<td>“I am not a leader”</td>
<td>“I want to be involved”</td>
</tr>
<tr>
<td>Developing Self</td>
<td>•Becomes aware of national leaders and authority figures (e.g. the principal)</td>
<td>•Wants to make friends</td>
<td>•Develop personal skills •Identify personal strengths/weaknesses •Prepare for leadership •Build self-confidence</td>
</tr>
<tr>
<td>Group Influences</td>
<td>•Uninvolved or “inactive” follower</td>
<td>•Want to get involved</td>
<td>• “Active” follower or member •Engage in diverse contexts (e.g., sports, clubs, class projects)</td>
</tr>
<tr>
<td>Developmental Influences</td>
<td>Affirmation by adults (parents, teachers, coaches, scout leaders, religious elders)</td>
<td>•Observation/watching •Recognition •Adult sponsors</td>
<td>•Affirmation of adults •Attributions (others see me as a leader)</td>
</tr>
<tr>
<td>Changing View of Self With Others</td>
<td>Dependent</td>
<td>Dependent</td>
<td></td>
</tr>
</tbody>
</table>

Figure continues
<table>
<thead>
<tr>
<th>The KEY</th>
<th>4 Leadership Differentiated</th>
<th>5 Generativity</th>
<th>6 Integration/Synthesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transition</td>
<td>Emerging</td>
<td>Immersion</td>
<td>Transition</td>
</tr>
<tr>
<td>• Shifting order of consciousness • Take on more complex leadership challenges</td>
<td>• Joining with others in shared tasks/goals from positional or non-positional group roles • Need to learn group skills New belief that leadership can come from anywhere in the group (non-positional)</td>
<td>• Seeks to facilitate a good group process whether in positional or non-positional leader role • Commitment to community of the group Awareness that leadership is a group process</td>
<td>• Active commitment to a personal passion • Accepting responsibility for the development of others • Promotes team learning • Responsible for sustaining organizations</td>
</tr>
<tr>
<td>“Holding a position does not mean I am a leader”</td>
<td>“I need to lead in a participatory way and I can contribute to leadership from anywhere in the organization”; “I am a leader even if I am not the leader”</td>
<td>“Leadership is happening everywhere; leadership is a process; we are doing leadership together; we are all responsible”</td>
<td>“Who’s coming after me?” “I am responsible as a member of my communities to facilitate the development of others as leaders and enrich the life of our groups”</td>
</tr>
<tr>
<td>• Recognition that I cannot do it all myself • Learn to value the importance/talent of others</td>
<td>• Learn to trust and value others &amp; their involvement • Openness to other perspectives • Develop comfort leading as an active member • Let go control</td>
<td>• Focus on passion, vision &amp; commitments • Want to serve society</td>
<td>• Sponsor and develop others • Transforming leadership • Concerned for leadership pipeline • Concerned with sustainability of ideas</td>
</tr>
<tr>
<td>• Meaningfully engage with others • Look to group resources</td>
<td>• Seeing the collective whole; the big picture • Learn group and team skills</td>
<td>• Value teams • Values connectedness to others • Learns how system works</td>
<td>• Sustaining the organization • Ensuring continuity in areas of passion/focus</td>
</tr>
<tr>
<td>• Older peers as sponsors &amp; mentors • Adults as mentors &amp; meaning makers • Learning about leadership</td>
<td>• Practicing leadership in ongoing peer relationships</td>
<td>• Responds to meaning makers (student affairs staff, key faculty, same-age peer mentors)</td>
<td>• Responds to meaning makers (student affairs staff, same-age peer mentors)</td>
</tr>
<tr>
<td>Interdependent</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The LID model’s developmental influences were critical to changing consciousness about self and others and moving into more complex identity stages. (Komives, et al., 2006) “Modeling from peers and adults was particularly important.” (Komives, et al., 2006) And, the interview process of the grounded theory study revealed how college students’ view of leadership in transition evolved from subject to object. (Komives, et al., 2006)

LID stage three, leader identified, corresponded with Kegan’s (1994) third order of consciousness. (Komives, et al., 2006) LID stage four, leadership differentiated, corresponded with Kegan’s fourth order of consciousness. (Komives, et al., 2006) “The key shift in both models was the transition from the third to the fourth stage that involved a shift to recognizing one’s interdependence with others. Aspects of the environment such as the mentoring role of adults and learning the language of leadership were critical to this transition.” (Komives, et al., 2006, pg. 414)

One of the primary recommendations for practice made based on Leadership Identity Development is ensuring that college students have advisors, mentors and peers to provide a safe place from them to reflect and make meaning of their experiences. (Komives, et al, 2006) It is essential to prepare older students to be mentors and peer meaning makers by encouraging them to accept their role model and sponsor roles in all the contexts in which they operate (Komives, et al., 2006). This could encourage older students to understand the importance of creating high-quality LMX relationships with younger students. It’s possible that student affairs professionals may be able to help student mentors understand how they contribute to the holding environment of other students.
For those college students in Stage two of LID, an older peer can be helpful to get them involved in new activities on campus. This should lead to building students’ sense of self confidence and self-efficacy to achieve goals within these new activities. For the older students, sponsoring a student into deeper involvement on campus can be affirming. (Komives, et al., 2006)

In Stage three of LID, especially the emerging and immersion phases, older peer sponsors and mentors can connect with entering students and help students find organizations that fit their values and interests. This seems to connect to a student’s commitment to a particular student organization, which is a significant positive correlation with LMX (Gerstner & Day, 1997). Working with older peers can also help younger students reflect upon and understand what they specifically admire about these peers in terms of their leadership ability (Komives, et al., 2006). This could also help younger students learn what helps them to be satisfied with supervision they receive from older student leaders, another LMX correlation (Gerstner & Day, 1997). Student affairs professionals can provide an anchor for students while they transition to the third and fourth stages of both LID and their constructive-developmental process. (Komives, et al., 2006)

In Stage four of LID, peers can develop each other by participating on leadership teams or co-chair/co-presidency roles, as true collaboration is a skill that emerges in this stage. (Komives, et al., 2006) Those students who were committed to a group over time seemed more likely to gain relational skills such as dealing with conflict, handling transition issues, and sustaining organizations. (Komives, et al., 2006) “Upper-division students who made significant contributions to groups expressed a strong desire for those
groups to succeed beyond their graduation.” (Komives, et al., 2006) Seeing the group continue beyond one’s graduation can be the reward for those peer mentors who are encouraged to create and maintain high-quality LMX relationships with the younger students they’re mentoring. This shows a connection to organizational commitment on the part of the student organization president.

Komives, et al., suggests that educators could assist those students in Stage five of LID by teaching them how to mentor younger students or new members and set up structures or processes that builds mentoring into the norming processes of the group (2006). This encourages setting up a way to work with older students that will help them create high-quality LMX relationships with younger students.

**Figure 7**

**Relationship between Leader-Member Exchange (LMX) and Constructive-Developmental Order - Conceptual Model**
Hypotheses

Hypothesis 1. A student organization president needs to be at the same or higher constructive-developmental stage than the other officers in order to have a high-quality LMX relationship with the other officers.

Hypothesis 2a: The quality of the LMX relationship will be greater if the President is the same sex as the officers.

Hypothesis 2b: If one dimension of the LMX relationship is high-quality, then the other three will follow suit.

Hypothesis 3a. Students in the position of president will be at a higher developmental stage than the officers of the organization.

Hypothesis 3b. Older students will be at a higher developmental stage than younger students.
CHAPTER III

Methodology

Data Collection and Method

The sample was gathered by identifying student leaders at a small, private college in the Upper Midwest who worked with a student organization in the 2009-2010 academic year. Eight recognized student organizations at the college were identified. The president and 3-5 members or other officers were asked if they would participate in this research project. A sample size of 40 was the goal for this study. Ultimately, 37 students completed the study.

Participants in this study were identified by asking presidents of student organizations to participate in the research. A particular student organization president was identified as a potential participant based upon the type of organization (Greek, service, student media, etc.) and if it was a type of organization that might exist at other schools. There also was an effort to identify student leaders that did not already have a relationship with the researcher. Twelve presidents were asked to participate in the study. Nine agreed to participate, yielding eight usable interviews.

After a president agreed to participate, a Subject-Object Interview was scheduled. The interview took place in the researcher’s office at various times of the day and evening. The informed consent form was signed at the start of the interview. At the conclusion of the interview, each president was asked to provide the names of their executive board officers (vice president, secretary, treasurer, etc.) in order for the researcher to contact them and invite their participation. Forty-four students in executive
board positions were invited to participate in the study. Thirty-one accepted, yielding 30 usable interviews.

Each participating student was interviewed using the subject-object interview process to determine the constructive-developmental stage where he/she currently resides. Each interview took 60-90 minutes. Every interview was recorded and later transcribed for scoring. Each interview was scored by the appropriate process taught through the Subject-Object Training Workshop by Hammerman and Berger. Every third interview was routed to a colleague who also scored the interview ensuring the validity of the interviews and interpretation, as is standard procedure when working with the subject-object interview. Each student received a score on the interview that indicates his/her constructive-developmental stage.

After the completion of the interview, every student (president and executive board officers) received an email with a link to the Survey Monkey website. Through the website, every participant completed an LMX-MDM questionnaire to determine the relationship that existed between presidents and their officers. In addition to the 12 items on the LMX-MDM questionnaire, there were basic demographic questions (age, gender, year in school, etc.). Of the 40 students interviewed, 39 completed the questionnaire. Between usable interviews and completed questionnaires, 37 participants were included in the study.

The LMX-MDM is newer than the LMX-7 and is a multidimensional scale as opposed to unidimensional. The LMX-MDM has broader domain coverage and better reflects the follower’s evaluation of the relational characteristics and qualities of the dyadic relationship (Wang, et al., 2005). The LMX-MDM has four dimensions: affect,
loyalty, contribution and professional respect. The dimensions of LMX-MDM were significantly correlated with the LMX-7 with scores of .71, .71, .55, and .70 (and .64, .53, .33, and .42 in the student samples) (Liden & Maslyn, 1998).

Table 3: Number of Interviews Conducted, Questionnaires Distributed and Usable

<table>
<thead>
<tr>
<th>Instruments</th>
<th>Distributed</th>
<th>Usable</th>
<th>Return Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Presidents</td>
<td>Officers</td>
<td>Presidents</td>
</tr>
<tr>
<td>Subject-Object</td>
<td>9</td>
<td>31</td>
<td>8</td>
</tr>
<tr>
<td>Interview</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LMX-MDM</td>
<td>9</td>
<td>30</td>
<td>8</td>
</tr>
</tbody>
</table>

Presidents and student organization officers were 63% female and 37% male, which is similar to the male: female ratio at the college. Of the presidents, 75% were seniors and 25% were juniors. Of the officers, 34% were seniors, 41% were juniors and 25% were sophomores. Twenty-five percent of the presidents were 22 years old, 50% were 21 years old and 25% were 20 years old. Twelve percent of the officers were 22 years old, 38% were 21 years old, 22% were 20 years old and 28% were 19 years old. One hundred percent of all participants identified themselves as white, Caucasian (non-Hispanic). Table 4 provides the demographics for the study.
Table 4: Participant Demographics

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>Presidents</th>
<th>Officers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Male</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>5</td>
</tr>
<tr>
<td>Year in College</td>
<td>Freshman</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Sophomore</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Junior</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Senior</td>
<td>6</td>
</tr>
<tr>
<td>Age</td>
<td>19</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>2</td>
</tr>
</tbody>
</table>

The data was grouped according to student organization then analyzed to determine a correlation between constructive-developmental stage and the LMX relationships that exist between the president and each of the other members of the organization.

Reliability and Validity

The Subject-Object interview makes 21 distinctions between stages 1 and 5 and it distinguished 4 transitional points between any two stages (Lahey et al., 1988). Interrater agreement is in the 70-80% range which is acceptable, especially when compared against
the similar but more established Moral Judgment Interview that has an interrater agreement of approximately 60% (Lahey et al., 1988).

The test-retest reliability for the Subject-Object Interview is correlated with a Spearman’s coefficient of .82 and Pearson’s r of .834, which are both significant at the .0001 level (Lahey et al., 1988).

In several studies where the Subject-Object Interview measure was correlated with similar types of measures (i.e., Kohlberg’s Moral Judgment Interview, Loevinger’s Sentence Completion Test, measure of Piagetian stage, etc.) there is a positive correlation (Lahey et al., 1988). Colby-Kohlberg, et al. report 8 different interrater tests that each involve 10-20 interviews and report complete agreement (using 13 possible distinctions) 60% of the time on average (Lahey et al., 1988). They report agreement within 1/3 of a stage 96% of the time. Loevinger and Wessler report an average agreement of 94% of the time, where agreement was within one discrimination (Lahey et al., 1988).

The LMX-MDM instrument, although newer than the LMX-7 instrument, is a reliable assessment tool. The LMX-MDM scales are not susceptible to common response biases (Liden & Maslyn, 1998). The dimensions of LMX-MDM were significantly correlated with the LMX-7 with scores of .71, .71, .55, and .70 (and .64, .53, .33, and .42 in the student samples) (Liden & Maslyn, 1998).

“Support for LMX as a multidimensional construct was provided by a consistent set of results: 1) factor loadings from exploratory factor analysis provided support for four separate factors; 2) the Confirmatory Factor Analysis results showed the four dimensional model to be superior to competing models, including the unidimensional model advocated by Graen and colleagues (Graen & Scandura, 1987; Graen & Uhl-Bien,
1995); 3) the four dimensions correlated with theoretically similar variables such as satisfaction with supervision and showed small or zero correlations with theoretically dissimilar variables such as satisfaction with coworkers and 4) regression results indicated that different LMX dimensions were significant in the explanation of variance in outcome variables” (Liden & Maslyn, 1998, p. 64).

Ethical Considerations

The main ethical considerations with this study are related to the Subject-Object Interview. Students were interviewed in a private setting, and their interview topic or the order of consciousness at which they were assessed was not shared which allowed for confidentiality.

Researcher Training on the Subject-Object Interview

The researcher received training through the research team at Harvard Graduate School of Education in the Subject-Object interview and interpretation scoring method in July 2007. Follow-up training via conference calls found the researcher to be reliable in overall scoring within the acceptable 1/5 order discrimination. Further, review of the researcher’s interviewing, on several pre-study interviews, resulted in the researcher being deemed capable in the interview method to yield the ‘scorable’ bits of structure required.

Participants were provided with a page of instructions via email for reflection prior to the interview, each containing a word or phrase. This protocol was an enhanced version from the original published in the guide (Lahey, et al. 1988), as evolution from researchers currently utilizing the method.
For this study, the trained researcher used the following five (5) words or phrases with the participants: angry, success, strong stand/conviction/important to me, torn, and change. These words or phrases served to direct the discussion from the beginning of the interview toward ‘ripe’ content areas (as discovered in the initial research conducted by Kegan, 1982). The notes of the participant, under each word or phrase, provided the material for exploration during the interview.

Each participant was provided with a written interview protocol 1 to 3 days prior to interview via email (Appendix D). The protocol introduced the participant to the conduct of the interview and prompted the participant to take the opportunity to write notes about each of the words or phrases. For example, the protocol prompted the participant with a statement related to “angry”:

“If you were to think back over the last several weeks, even the last couple of months, and you had to think about times you felt really angry about something, or times you got really mad or felt a sense of outrage or violation – are there two or three things that come to mind? Take a minute to think about it, if you like, and just jot down on the card whatever you need to remind you of what they were.” (If nothing comes to mind for the interviewee for this particular word, move to the next card) (Lahey, et al. 1988).

The participants were able to jot down notes in preparation for the interview with as many or as few thoughts that came to mind for each of the topics. These notes were kept by the participant and he/she decided whether or not to talk about any particular written notes during the interview.
During the interview, the researcher engaged in combined active listening and probing questions for deeper meaning and understanding of the way the participant had or had not constructed meaning from his/her experiences. For example, if the participant chose to talk about ‘angry,’ the researcher’s job was to ask the right questions to find out not what the participant is angry about, but the how’s and why’s behind the participant’s experience of being angry. This information told the researcher how the participant constructed meaning. The additional task of the researcher during the interview was to form and test hypotheses in order to find the Order achieved by the participant and ‘push’ for the highest Order of meaning-making constructed by the participant. There were 21 possible distinctions within the five Orders. For the purpose of this research, Second through Fifth Orders were considered for the post-adolescent population of 17 years of age and above. This provided the researcher with a range of the meaning-making system over 17 transition places.

Variables in the Study

The dependent variable in this study is the quality of the LMX relationship that exists between president and officer of each student organization as measured by the LMX-MDM. The independent variable in the study was the Order of Consciousness in which each participant was placed through the Subject-Object Interview (Kegan, 1982; Lahey, et al. 1988). Moderating variables to be considered were gender, racial/ethnic background, and socio-economic status. Each of these antecedents can affect the rate at which one progresses through the different stages that Kegan describes (Komives, 2005). A mediating variable could be the personal friendship that can form between student
leaders and the other students in each student organization. The personal friendship that exists between two students can affect their working relationship.

**Data Collection**

Invitations were distributed via an e-mail to participants from the researcher which contained a link to the SurveyMonkey web-based system that included demographic information and the LMX-MDM instrument. Survey information was submitted by the participants to the vendor, SurveyMonkey.com. SurveyMonkey.com provided the researcher direct password coded access to the results. The survey was not utilized by anyone except the researcher and the vendor ensured network security, hardware security and software security.

The choice of using a web-based survey was based on the idea that students would be more likely to participate if their time spent with the researcher in person could be limited to the 60-90 minute interview. It also allowed participants to complete the survey at anytime of the day or night. The SurveyMonkey system had been used in the past by the researcher for different assessment projects and it was known to be easy to use and able to handle the data appropriately.

The researcher uploaded the two versions of the LMX-MDM surveys on SurveyMonkey.com, one for presidents and one for other officers. The questionnaires are basically the same questions, but in different order and addressing the relationship between leader and follower from the perspective of the person responding to the questions. The system offers a variety of question templates that allowed for single multiple choice questions or a matrix of choices. Data was monitored and tracked with ease as participants completed the surveys. Even though names were entered in to the
system, the links provided a way for the participants to not be recorded and linked to their name and email. The researcher provided all participants with a unique ID code to enter into the survey to track responses and to match presidents with their officers. This type of double assurance was necessary in utilizing a web-based system.

Data was downloaded from the SurveyMonkey site, available in several formats, with opportunity to maintain back up of the data. The LMX-MDM data were compiled into two Excel spreadsheets – one for presidents and one for officers. Careful matching of presidents and officers was achieved. Two files were kept, with one including names and the other with names removed before data analysis was performed.

Data results for the quantitative measures were formatted per instructions in SPSS, placing Level 1 and Level 2 variables within a single field so that the value of the Level 2 variables were identical for all cases ‘nested’ within a particular Level 1 unit (by student organization). The data was analyzed using SPSS.

For the qualitative data collection utilizing the Subject-Object interview, upon completion of the audio-taped interviews, recordings were transcribed and interpreted by the researcher for scorable “bits” of meaning-making structure (Appendix E). Each interview must have at least three solid ‘bits’ scored at the same point to produce a score. Each interview was given two scores: the actual transition Order from the formulation sheet and a score the researcher called the SOI (Subject-Object Interview) converted score for use in the statistical analysis. While the assigned score implies an equal distance between each of the Orders in the transition, there is no indication that the transition from one transition point to the next in an Order is an equal transition of time or effort (Bugenhagen, 2006). The scores appear in Table 5.
Table 5: Subject-Object Interview (SOI) Score Conversion for Statistical Analysis

<table>
<thead>
<tr>
<th>SOI Order Score</th>
<th>SOI Converted Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2.0</td>
</tr>
<tr>
<td>2(3)</td>
<td>2.2</td>
</tr>
<tr>
<td>2 / 3</td>
<td>2.4</td>
</tr>
<tr>
<td>3 / 2</td>
<td>2.6</td>
</tr>
<tr>
<td>3(2)</td>
<td>2.8</td>
</tr>
<tr>
<td>3</td>
<td>3.0</td>
</tr>
<tr>
<td>3(4)</td>
<td>3.2</td>
</tr>
<tr>
<td>3 / 4</td>
<td>3.4</td>
</tr>
<tr>
<td>4 / 3</td>
<td>3.6</td>
</tr>
<tr>
<td>4(3)</td>
<td>3.8</td>
</tr>
<tr>
<td>4</td>
<td>4.0</td>
</tr>
<tr>
<td>4(5)</td>
<td>4.2</td>
</tr>
<tr>
<td>4 / 5</td>
<td>4.4</td>
</tr>
<tr>
<td>5 / 4</td>
<td>4.6</td>
</tr>
<tr>
<td>5(4)</td>
<td>4.8</td>
</tr>
<tr>
<td>5</td>
<td>5.0</td>
</tr>
</tbody>
</table>

For inter-rater reliability purposes and as the interview protocol requires, a secondary rater was utilized to score random interviews at a ratio of 1 to 3. The secondary rater was provided with every third transcription in the order of date and time of interview for a true 1 in 3 ratio. The researcher’s initial rating and a second rater rating must score within one transition position, 1 / 5, for reliability. If the researcher and second rater did not agree, a review of the transcript and comparisons were made to determine the final score. Dissertations and projects which used this technique reported complete agreement reliabilities of 70 to 80% range, and most reliabilities at 100% for a 1 / 5 Order discrimination (Lahey, et al. 1988).
Summary

This chapter outlined the research methods utilized to conduct the study. Two methods of data collection were used to satisfy the quantitative and qualitative variables in the study. Web-based surveys were distributed to presidents and officers. Interviews of participants – presidents and officers – were conducted in the researcher’s office while being audio-taped. Data were recorded in the web-based system and interviews were recorded in mp3 format. The quantitative data was downloaded and interview recordings were transcribed, interpreted and analyzed to test hypotheses.
CHAPTER IV

Results

The presidents’ and officers’ constructive-development Orders were tested as predictors of their LMX relationship within the four factors examined by the LMX-MDM – Professional Respect, Affect, Contribution and Loyalty. Their LMX relationship was also examined based on gender and age. Each participant’s constructive-development Order was tested for its’ correlation to the age of the participant. Because of the small sample size, it was determined that it was not necessary to utilize a multi-level model when analyzing the data.

The Subject-Object scale was assessed for interrater agreement with an overall reliability at .85. Across a wide range of similar assessment procedures interrater agreement is in the 70-80% range. For the Subject-Object Interview, either complete agreement or agreement within 1/5 stage is acceptable. The Moral Judgment Interview is an assessment with the longest running “track record” that is similar to the Subject-Object Interview theoretically and methodologically (Colby & Kohlberg, 1987). The Subject-Object Interview has higher reliabilities with more finely differentiated scoring points (Colby & Kohlberg, 1987). The Moral Judgment Interview has thirteen distinctions between stages 1 and 5 with two transitional points between each stage, while the Subject-Object Interview makes 21 distinctions between Orders 1 and 5 with four transition points in between each Order. In addition, considering a ‘one discrimination difference’ is smaller for the Subject-Object Interview than the Moral Judgment Interview (1/5 vs. 1/3), the close to 100% reliabilities for the Subject-Object Interview compare favorably with the Moral Judgment Interview’s close to 100% interrater
reliabilities (Eigel, 1998). The researcher achieved six interview scores within the acceptable 1/5 distinction, five scores with 100% agreement and two scores not in agreement of the 13 interviews scored by an additional rater. One rater scored all 13 interviews, attended the same training sessions as the researcher and has one year of active experience.

*Leader Member Exchange*

The LMX-MDM instrument assesses LMX on four factors: Professional Respect, Affect, Contribution and Loyalty. Since it is multi-dimensional, each dimension was examined separately instead of combining everything into one factor.

T-tests were performed for each of the four dimensions to look at the difference between presidents’ and officers’ scores. The t-tests showed a significant difference between three of the four LMX-MDM dimensions in a dependent t-test.

**Table 6: Dependent t-test – LMX dimensions by presidents and officers**

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>p_ProfRespect – o_ProfRespect</td>
<td>-.27586</td>
<td>1.36878</td>
<td>-1.085</td>
</tr>
<tr>
<td>p_Loyalty – o_Loyalty</td>
<td>-.62069</td>
<td>1.46039</td>
<td>-2.289*</td>
</tr>
<tr>
<td>p_Affect – o_Affect</td>
<td>-.60920</td>
<td>1.56111</td>
<td>-2.101*</td>
</tr>
<tr>
<td>p_Contribution – o_Contribution</td>
<td>-.54023</td>
<td>1.39845</td>
<td>-2.080*</td>
</tr>
</tbody>
</table>

* = p<.05

When examining officers’ gender and four dimensions of LMX-MDM in an independent t-test, there are not significant differences in the LMX responses.
Table 7: Independent t-test – LMX dimensions

<table>
<thead>
<tr>
<th></th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>o_Profresport</td>
<td>-.596</td>
<td>27</td>
<td>.556</td>
</tr>
<tr>
<td>o_Loyalty</td>
<td>.529</td>
<td>27</td>
<td>.601</td>
</tr>
<tr>
<td>o_Affect</td>
<td>.431</td>
<td>27</td>
<td>.670</td>
</tr>
<tr>
<td>o_Contribution</td>
<td>-.429</td>
<td>27</td>
<td>.672</td>
</tr>
</tbody>
</table>

Each of the four dimensions of the LMX-MDM measure were run through a general linear model to look at how gender of both presidents and officers mediated their relationships. There were no significant findings for Professional Respect, Affect, and Contribution. There was a significant difference between how male presidents and officers reported the Loyalty dimension of the LMX-MDM.

Table 8: Loyalty Dimension of LMX-MDM by gender

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presidents</td>
<td>4.61 (.40)</td>
<td>5.69 (.31)</td>
</tr>
<tr>
<td>Officers</td>
<td>6.03 (.32)</td>
<td>5.82 (.25)</td>
</tr>
</tbody>
</table>

Constructive-Development

The Order of each president and officer was checked for correlation with the their ages using a Spearman Correlation (r=.45, p<.05). The correlation between age and
Order is significant as we would expect it to be, since developmental level does generally increase as one ages.

**Table 9: Spearman’s Correlation**

<table>
<thead>
<tr>
<th></th>
<th>o_soiscore</th>
<th>o_age</th>
</tr>
</thead>
<tbody>
<tr>
<td>o_soiscore</td>
<td>1.000</td>
<td>.453*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Correlation Coefficient</th>
<th>1.000</th>
<th>.453*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.014</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>29</td>
<td>29</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>o_age</th>
<th>Correlation Coefficient</th>
<th>.453*</th>
<th>1.000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.014</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>29</td>
<td>29</td>
<td></td>
</tr>
</tbody>
</table>

* - Correlation is significant at the 0.05 level (2-tailed)

The Order of each officer was examined in relationship to the officers’ gender to determine if there was a correlation between Order and gender. A t-test found that to be not significant.

**Table 10: Independent t-test – Constructive-Development Order and Gender**

<table>
<thead>
<tr>
<th></th>
<th>t-test for Equality Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>t</td>
</tr>
<tr>
<td>o_soiscore</td>
<td>-.007</td>
</tr>
</tbody>
</table>
Relationship between LMX and Constructive-Development Order

Standard regressions were run for each of the four LMX-MDM dimensions with the Order for each president and officer. All regressions were non-significant.

Table 11: Regression – LMX Dimensions and Order

<table>
<thead>
<tr>
<th></th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affect</td>
<td>.330</td>
<td>.109</td>
<td>.041</td>
<td>1.593</td>
<td>.222</td>
</tr>
<tr>
<td>Contribution</td>
<td>.294</td>
<td>.086</td>
<td>.016</td>
<td>1.227</td>
<td>.310</td>
</tr>
<tr>
<td>Loyalty</td>
<td>.442</td>
<td>.195</td>
<td>.134</td>
<td>3.157</td>
<td>.059</td>
</tr>
<tr>
<td>Professional Respect</td>
<td>.387</td>
<td>.150</td>
<td>.084</td>
<td>2.289</td>
<td>.121</td>
</tr>
</tbody>
</table>
CHAPTER V
Conclusions and Recommendations

This chapter contains conclusions, recommendations, and implications for practice and directions for future research for the study.

Conclusions

This study found the Order of both president and officer of a student organization did not predict their LMX relationship. Eight student organization presidents and 29 student organization officers completed the LMX-MDM measure (Liden & Maslyn, 1998). All 37 were also interviewed using the Subject-Object Interview protocol to assess their level of meaning-making based on constructive-developmental theory (Kegan, 1982, 1994).

Relationships were expected between the levels of leaders’ constructive-development and the LMX relationships between presidents and officers. The grounded theory of Leadership Identity Development has posited that the stages in that model, especially stages 3 & 4, mirror the Third and Fourth Orders of Consciousness (Komives, 2006). Being in stage four of Leadership Identity Development would typically bring leader behaviors that would foster a strong, positive LMX relationship. This study did not provide significant evidence the Fourth Order of Consciousness would automatically bring those sorts of behaviors.
Discussion of Findings and Hypothesis Testing

The major hypothesis of this study was that a president being at a higher constructive-developmental stage than an officer would predict a higher-quality LMX relationship. The results of this study did not support this. However, there were other variables measured that showed significant relationships.

This study did not support Hypothesis 2a or 2b. The LMX relationship was not predicted by the president being the same sex as the officer. Nor, did a high score in one LMX-MDM dimension mean that all four dimensions were a high score.

One finding was related to male presidents and officers on the dimension of Loyalty. On the dimension of Loyalty, male officers significantly rated that relationship with their president higher than their president rated it. Women presidents and officers rated that relationship more similar to each other. The women seem to be more “in tune” with each other’s assessment of their LMX relationship on this dimension. An example of the questions in this dimension is, “My [manager] would defend me to others in the organization if I made an honest mistake.” Are male officers overestimating the support they think they’ll receive if they make a mistake? Or, do male presidents feel that an officer’s mistake is their own responsibility. And, is this an issue that needs to be addressed with male student leaders?

This study shows that there is a significant relationship between age and an individual’s Order of Consciousness. While that might usually be an assumption, especially since that was the research that Kegan writes about (1982, 1994) it is helpful to have that support in continuing to understand college student development. Hypothesis 3b was supported, while Hypothesis 3a was not.
This study used a narrow sample of subjects with similar backgrounds, at the same educational level and approximate age range. A study with a larger sample might yield a different or more significant outcome. Or, if the setting was changed to a different college campus or a place of employment where there was a more diverse population, a different or more significant outcome could be possible.

**Strength of Findings**

The major strength of this study was that it is the first to test the Leader-Member Exchange relationships between student organization presidents and officers and their constructive-developmental stage. While the work of Komives et al. (2006) suggests that some of the high-LMX behaviors fit into the Leadership Identity Development Model and also connect to constructive-developmental stage, this sample did not support the relationship.

Another strength of this study that while the significant results were limited, it still supports the importance of recognizing the constructive-developmental stage of college students that are in leadership positions and the ability to make the assumption that the older a student is, the more sophisticated are his/her ways of making meaning of their experiences.

A third strength of this study is using Leader-Member Exchange to highlight the dyadic relationship between student organization presidents and officers. While student affairs academic preparation programs stress psycho-social development theories, they do not educate about leadership theories and don’t often focus on the dyad of leader and follower.
More research is necessary to truly understand the relationship between constructive-developmental stage and LMX relationships between college students.

Recommendations

**Implications for Further Research**

This study is the first to examine the role of leaders’ constructive-developmental stage and LMX leadership relationships. While the findings were limited, the results provide opportunity for others to replicate and test the hypothesized model. Additional studies with a greater sample size could have had different results or at least significant results. While previous studies have suggested creating more segmented populations, it would be helpful to at least have a bigger sample size (Bugenhagen, 2006). Using this study, to continue to work with this sample in a longitudinal study could help better define how the college campus promotes leader development and their relationships with each other. In fact, using a sample from a small, private, liberal arts institution, along with another sample from a large, public, state institution would also be interesting to look at the comparisons between the two institutions.

Another implication for research is that while there is not yet a measure for Leadership Identity Development, there is work happening related to creating such a measure. Once a measure exists, there would be an opportunity to use the Subject-Object Interview in conjunction with that measure to see how closely the two really do align.

A third implication for research is related to diversity within the sample. In order to better understand the antecedents to LMX, as well as the variables that mediate the relationship between LMX and constructive-developmental stage, it would be helpful to
have a much more diverse sample. Using college students at a small, private, Midwestern college does not provide for much ethnic/racial diversity or the opportunity to use sexual orientation as a variable. Even utilizing a sample at a small, private college in a more diverse geographic region (perhaps, urban or in a more progressive part of the country), could allow the researcher to find more moderating variables.

*Implications for Practice*

Leadership development programs for college students could be impacted by focusing on different opportunities for challenge and support based on age and, therefore, constructive-developmental stage. Having a leadership program that focuses on different skills (both task and relationship) based on one’s age or year in college, could allow student affairs practitioners an additional way to purposefully impact student leadership development.

Based on the difference between male president and officer ratings of the LMX-MDM dimension of loyalty, there is an opportunity to work with male students especially on how to work together as a team and communicate about the leadership task at hand. Helping student leaders have discussions about expectations related to mistakes and how they’re dealt within a student organization, could also assist with the difference that was found.

*Limitations of the Study*

There are several limitations of this study. The use of the Subject-Object Interview method presents risk for the researcher as it is vulnerable to interviewer bias. This can be especially hard on a small college campus, where everyone know most
everyone else at least by reputation if not actually in-person. The structure of the interview has the researcher focusing on the material presented by the participant and focusing on measuring their contribution connected with the definitions of the various transition points. The risk of really connecting with the participant on a personal level, can lead the researcher to unintended responses and interpretation. Kegan refers to this danger as ‘grooving’ with the subject (1982, 1994).

The interview is subjective as control of the content revealed lies with the participant and the ability of the researcher to draw out an authentic response. The interpretation of the results involves careful review and attention to the ‘voice’ of the interview as not to mistake particular responses for one Order over another without confirming them at several points throughout the interview. The other limitation is the time intensity of the Subject-Object Interview. The interviews, typically 60 minutes in length, are recorded, transcribed and interpreted. Interpretation can take up to ten hours to determine results and ratings.

The interviews are a wonderful exchange that allow participants to discover for them the ways that they make meaning. Many times participants share that the conversation really helped them work through something that had been nagging at them and, perhaps, move on to a different understanding of an issue.

The research was presented to potential participants as a way for the researcher to learn more about leadership and used student organization participation as the way to connect with the participants. However, the Subject-Object Interview protocol guides responses to a broad view of their personal experience, rather than only one’s experience in a student organization. Some participants didn’t understand or just weren’t
comfortable talking about issues that went beyond the scope of their student organization leadership.

The researcher asked each student organization president that was interviewed to provide the names of three to five officers in the organization to be able to complete the study. Many times, officers in student organizations have to be upperclassmen. Perhaps, just asking to provide names of members at any level within a student organization would have provided a little more diversity in the age and year in college categories of the participants. It might have also helped identify the possibility of mentoring relationships with younger students that have not yet considered taking on a leadership position within a student organization.

Directions for Future Research

More empirical study is needed to examine the relationship between constructive-developmental stage and LMX relationships in college student leaders. While significant findings were limited, this study still provided additional ideas on how to continue to further similar research.

It is recommended that a similar study be done with a greater sample size. Although this study was completed with the number of participants that many constructive-developmental studies utilize, the same study with 70 participants would have generated statistically significant results. Another possibility is replicating this study with its small numbers more than once, then doing a meta-analysis of the results.
Focusing on the four separate dimensions of the LMX-MDM may have limited the findings. In addition to examining the four dimensions, the next study should also total the dimensions for one LMX score in order to examine the total relationship.

Future research testing constructive-developmental stage and Leadership Identity Development stage will be helpful for student affairs practitioners. Continuing to connect those two developmental models to Leader-Member Exchange also provides promise in helping college campus administrators to understand the importance of the student-to-student dyadic mentoring/leadership relationship. Being able to continue to work with college students to learn leadership in theory and practice, will allow student affairs practitioners to have a part in developing the future leaders of the world.

Another direction for future research is to increase the diversity of the sample used for a similar study. Research on Leadership Identity Development suggests that students of color may experience the LID stages differently than their White peers (Komives, et al., 2009). This supports the idea that having greater diversity will allow for more examination of the antecedents to LMX, as well as the variables that mediate the relationship between LMX and constructive-developmental stage.

Summary

A quote attributed to Lord Chesterfield says, “We are, in truth, more than half what we are, by imitation. The great point is, to choose good role models, and study them with care. Persist, therefore, in keeping the best company, and you will sensibly become like them.” This is the reason why it’s important to continue to identify ways through research and practice that will help strengthen our college student leaders and their ability to mentor each other. Ultimately, we want student leaders that younger
students can use as models in their quest to learn more about leadership development.

Then, those younger students will ultimately become mentors to other students themselves – become ‘sensibly’ like the students they originally emulated.
REFERENCES


Dansereau, F., Graen, G., & Haga, W. J. 1975. A vertical dyad linkage approach to leadership within formal organizations – a longitudinal investigation of the role
making process. *Organizational Behavior and Human Performance*, 13, 46-78.


Liden, R. C., & Graen, G. 1980. Generalizability of the vertical dyad linkage model of


APPENDIX A

TERMS AND DEFINITIONS

Affect – One of four dimensions measured by the LMX-MDM. The mutual affection members of the dyad have for each other based primarily on interpersonal attraction, rather than work or professional values. Such affection may be manifested in the desire for and/or occurrence of a relationship which has personally rewarding components and outcomes (e.g., a friendship).

Constructive-Developmental Theory – Constructive-Developmental theory (Loevinger, 1976; Kegan, 1982, 1994) suggests that children and adults pass through a number of distinct stages throughout their lives. Each stage has a different frame of reference through which individuals make sense of their world (Kegan, 1982, 1994). Constructivism refers to the notion that the individual constructs reality, while developmentalism suggests that the process is ongoing (Kegan, 1982, 1994).

Contribution – One of four dimensions measured by the LMX-MDM. Perception of the current level of work-oriented activity each member puts forth toward the mutual goals (explicit or implicit) of the dyad. Important in the evaluation of work-oriented activity is the extent to which the subordinate member of the dyad handles responsibility and completes tasks that extend beyond the job description and/or employment contract; and likewise, the extent to which the supervisor provides resources and opportunities for such activity.

Fourth Order: Self-Authoring (or Stage 4) - As an adult transitions to the fourth order of consciousness, he/she’s self becomes ‘object.’ An individual can recognize that he/she is
indeed an individual regardless of another’s perception of him/her. In separating oneself from this interpersonal context, meaning-evolution authors a self, which maintains a coherence across a shared psychological space and so achieves an identity. Individuals are able to take an objective view of goals and commitments and operate from a personal value system that transcends their agendas and loyalties. A person that is fully in the fourth order of consciousness, sees him/herself as a system and makes the maintenance of his/her integrity more important than the perceptions that others have of him/her.

**Instrumental** – See Second Order definition

**Interpersonal** – relationship dimension within each Order of constructive-development

**Intrapersonal** – self concept dimension within each Order of constructive-development

**Leadership Identity Development (LID) model** – Based on a grounded theory study on developing a leadership identity, a 6-stage developmental process was revealed (Komives, 2005). Students in the study described their leadership identity moving from a leader-centric view to one that embraced leadership as a collaborative, relational process (Komives, 2005). “Developing a leadership identity was connected to the categories of developmental influence, developing self, group influences, students’ changing view of self with others, and students’ broadening view of leadership” (p.593, Komives, 2005).

**Leader-Member Exchange (LMX)** – Leader-Member Exchange originated from Vertical Dyad Linkage (Dansereau, Cashman & Graen, 1973). Leader Member Exchange is a theory that proposes that leaders exhibit different patterns of behavior toward different members of their work groups (Duchon, Green & Taber, 1986). These members are divided into to two basic categories: the in-group (characterized by high trust, interaction,
support, and formal/informal rewards) and the out-group (characterized by low trust, interaction, support and rewards) (Dienesch & Liden, 1986).

**Lens** – The focus on a particular experience, knowledge, or other information that allows one to take a perspective.

**Loyalty** – One of four dimensions measured by the LMX-MDM. The expression of public support for the goals and the personal character of the other member in the LMX dyad. Loyalty involves a faithfulness to the individual that is generally consistent from situation to situation.

**Meaning-making** – The activity of how an individual makes sense of experiences, knowledge, relationships, and the self.

**Modern mind** – See Fourth Order definition.

**Multi-Institutional Study of Leadership (MSL)** – a study that began at the University of Maryland-College Park in 2005. Its focus is the Social Change Model of Leadership (HERI, 1996), but includes scales related to Leadership Identity Development.

**Object** – Things that are *object* are that one is aware of, can reflect upon, can tend to, take control of, internalize, and operate upon. Things that are *Subject* have *you*, while *you* have things that are *Object*. The more taken as *Object* in life, the more complex worldview because one can see and act upon more things.

**Officer** – A student(s) that holds an executive board position with a student organization. This could include positions such as, vice president, secretary or treasurer. They work closely with the president of their student organization.

**Order of Consciousness (or Order)** – A phrase used to identify a particular stage of the constructive-development theory.
**President** – A student that has been elected or selected as president or leader at the highest hierarchical level for a particular student organization(s).

**Professional Respect** – One of four dimensions measured by the LMX-MDM. Perception of the degree to which each member of the dyad has built a reputation, within and/or outside the organization, of excelling at his or her line of work. This perception may be based on historical data concerning the person, such as: personal experience with the individual; comments made about the person from individuals within or outside the organization; and awards or other professional recognition achieved by the person. Thus it is possible, though not required, to have developed a perception of professional respect before working with or even meeting the person.

**Second Order: Instrumental** – The individual in this stage is able to understand that he/she has a private world that is separate from the parents’ world. He/she begins to have a self-concept, a consistent notion of what he/she is, not just that he/she is. The individual at this stage has taken control of his/her impulses. These impulses are now ‘object.’ They can be reflected upon and taken control of. The individual’s needs and preferences are ‘subject’ – embedded in the individual – so that he/she is unable to reflect on them, only act upon them. The individual’s point of view or role concept is also subject at this point, meaning that he/she cannot reflect on their role or another’s role or point of view. His/her point of view is the only one he/she knows and is unable to see it as one option of many. This order primarily is seen in adolescents and some adults.

**Self** – One’s personality and experiences. Self refers to the conscious, reflective personality of an individual which they are tie to, fused with or embedded in (Subject).

**Self-authoring** – See Fourth Order definition.
Social Change Model of Leadership (SCM) – The Social Change Model of Leadership was created specifically for college students and is one of the most well known student leadership models (Kezar, Carducci, & Contreras-McGavin, 2006). It describes leadership as a purposeful, collaborative, values-driven process.

Subject – Things that are Subject to someone can’t be seen because they are part of the person and are experienced as unquestioned, as part of the self – taken for granted, taken for true or not taken at all. Something that’s Subject has you (Kegan 1994). The leader’s belief and experience in motivation are Subject to them. Not knowing there are different ways that people are motivated makes the leader powerless to change their style to meet the needs of the diversity of their group (self).

Subject-Object Interview (SOI) – The procedure used to assess an individual’s subject-object development (Kegan, 1982, 1994). In order to conduct Subject-Object Interviews, one must be trained in its administration and interpretation through a three-day workshop and continue to score ten interviews with a similarly trained colleague. Those ten interviews must be scored the same by each interviewer before one can be considered proficient.

Third Order: Socialized - As an adolescent or adult moves into the third order of consciousness, he/she begins to recognize that he/she has needs, instead of he/she being those needs. By seeing this, he/she is able to coordinate, or integrate, one need system with another creating mutuality. However, this transition is often experienced as uncomfortable and unwelcome (Kegan, 1994). An individual that is fully in the third order of consciousness, is able to reflect on his/her own point of view as well as others. There is an interpersonal focus to the third order of consciousness that didn’t exist
previously and with the recognition of other points of view comes a desire to please others or at least to avoid conflicts if possible. The self is ‘subject’ again in that there is no self, if other people don’t recognize and like that self.

**X(Y) Transition** – X is the ruling Order – Signs of Y attributes are emerging. It’s a sign of beginning to look externally.

**X/Y Transition** - X to Y transition. There are two full structures operating at the same time in transitional position. X – the early structure as predominant.

**Y/X Transition** - Y is ruling, but signs of X are still there. Two different epistemological structures (Subject – Object balances) are demonstrating themselves. The more developed structure tends to pre-dominate. The individual cannot slip back as X/Y. The individual is transitional and does not overcome/cancel fully operational previous structure [as in Y(X)].

**Y(X) Transition** - Signs of old X are remaining, but much less evident. X is present, but new structure Y dominates. Characterized by strong protest against the kind of meaning making evidenced by the X structure.
APPENDIX B

Summary of Hypotheses

Leader-Member Exchange and Constructive-Development

Hypothesis 1: A student organization president needs to be at the same or higher constructive-developmental stage than the other officers in order to have a high-quality LMX relationship with the other officers.

Leader-Member Exchange

Hypothesis 2a: The quality of the LMX relationship will be greater if the President is the same sex as the officers.

Hypothesis 2b: If one dimension of the LMX relationship is high-quality, than the other three will follow suit.

Constructive-Development

Hypothesis 3a: Students in the position of president will be at a higher developmental stage than the officers of the organization.

Hypothesis 3b: Older students will be at a higher developmental stage than younger students.
APPENDIX C

LMX-MDM Questionnaire

1. Version that Officers completed

**LMX-MDM**

*In the following set of questions, think of your immediate manager (or team leader), __________________________. [If this is NOT the person who rates your performance, please write in the correct name and contact one of our research staff.] Please select your response from the 7 presented below and enter the corresponding number in the space to the left of each question.*

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Slightly Disagree</th>
<th>Neither Disagree Nor Agree</th>
<th>Slightly Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

___1. I respect my manager’s knowledge of and competence on the job.

___2. My manager would defend me to others in the organization if I made an honest mistake.

___3. My manager is the kind of person one would like to have as a friend.

___4. I do not mind working my hardest for my manager.

___5. My manager would come to my defense if I were “attacked” by others.

___6. I like my manager very much as a person.

___7. I do work for my manager that goes beyond what is specified in my job description.

___8. I admire my manager’s professional skills.

___9. My manager defends (would defend) my work actions to a superior, even without complete knowledge of the issue in question.

___10. My manager is a lot of fun to work with.

___11. I am willing to apply extra efforts, beyond those normally required, to meet my manager’s work goals.

___12. I am impressed with my manager’s knowledge of his/her job.

scale development. *Journal of Management*, 24, 43-72. Be sure to read the “Addendum” on page 68 of this article.

2. Version that Presidents completed

*Below are statements concerning the members of your group. For each group member, please indicate your agreement or disagreement with each statement using the following scale.*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Description</th>
<th>Subordinate 1: Write name here</th>
<th>Subordinate 2: Write name here</th>
<th>Subordinate 3: Write name here</th>
<th>Subordinate 4: Write name here</th>
<th>Subordinate 5: Write name here</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strongly Disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Slightly Disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Neither Disagree nor Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Slightly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Strongly Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. I like this employee (group member) very much as a person.
2. This employee (group member) does work for me that goes beyond what is specified in his/her job description.
3. I am impressed with this employee’s (group member’s) knowledge of his/her job.
4. This employee (group member) is the kind of person one would like to have as a friend.
5. This employee (group member) would defend my work actions to others in the organization, even without complete knowledge of the issue in question.
6. This employee (group member) is a lot of fun to work with.
7. I seek out this employee’s (group member’s) opinion on important job-related matters.
8. This employee (group member) would come to my defense if I were criticized by others.
9. This employee (group member) does not mind working his/her hardest for me.
10. This employee (group member) would defend me to others in the organization if I made an honest mistake.
<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11. I admire this employee's (group member's) work-related skills.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. This employee (group member) is willing to apply extra efforts, beyond those normally required, to meet my work goals.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX D

Subject-Object Interview Protocol

Administering the Subject-Object Interview

Project title: Student Leader LMX Relationships As Moderated by Constructive-Developmental Theory

Materials: Ten (10) subject cards (3” x 7”), pencil, tape recorder and ninety (90) minute tape

Prepping the Subject: Subject needs to know he/she

(a) is participating in a 45-60-minute interview
(b) the goal of which is to learn “how you think about things,”
   “how you make sense of your own experience, etc.
(c) doesn’t have to talk about anything he/she doesn’t want to.

PART I: Generating Content: The Inventory

The subject is handed the ten (10) index cards. Each card has a title printed on it, to wit:

1. Angry
2. Anxious, Nervous
3. Success
4. Strong Stand, Conviction
5. Sad
6. Torn
7. Moved, Touched
8. Lost Something
9. Change
10. Important to Me

The subject is told that the cards are for his/her use only, that you won’t see them, and that he/she can take them with him/her or throw them away after the interview. The cards are just to help the subject jot down things we might want to talk about in the interview.

The subject is told, “We will spend the first 15-20 minutes with the cards and then talk together for an hour or so about those things you jotted down on the cards which you choose to talk about. We do not have to talk about anything you don’t want to talk about.”
(1) “Now let’s take the first card” (Angry)

“If you were to think back over the last several weeks, even the last couple of months, and you had to think about times you felt really angry about something, or times you got really mad or felt a sense of outrage or violation – are there 2 or 3 things that come to mind? Take a minute to think about it, if you like, and just jot down on the card whatever you need to remind you of what they were.” (If nothing comes to mind for a particular card, skip it and go on to the next card)

(2) (Anxious, Nervous)

“…if you were to think of some times when you found yourself being really scared about something, nervous, anxious about something…”

(3) (Success)

“…if you were to think of some times when you felt kind of triumphant, or that you had achieved something that was difficult for you, or especially satisfying that you were afraid might come out another way, or a sense that you had overcome something…”

(4) (Strong Stand, Conviction)

“…if you were to think of some times when you had to take a strong stand, or felt very keenly ‘this is what I think should or should not be done about this,’ times when you became aware of a particular conviction you held…”

(5) (Sad)

“…felt real sad about something, perhaps something that even made you cry, or left you feeling on the verge of tears…”

(6) (Torn)

“…felt really in conflict about something, where someone or some part of you felt one way or was urging you on in one direction, and someone else or some other part was feeling another way; times when you really felt kind of torn about something…”

(7) (Moved, Touched)

“…felt quite touched by something you saw, or thought or heard, perhaps something that even caused your eyes to tear up, something that moved you…”

(8) (Lost Something)
“…times you had to leave something behind, or were worried that you might lose something or someone; ‘goodbye’ experiences, the ends of something important or valuable; losses…”

(9) (Change)

“As you look back at your past, if you had to think of some ways in which you think you’ve changed over the last few years – or, even months – if that seems right – are there some ways that come to mind?”

(10) (Important)

“If I were just to ask you, ‘What is it that is most important to you?’, or ‘What do you care deepest about?’ or ‘What matters most?’ – are there 1 or 2 things that come to mind?”

PART II

“Now we have about an hour to talk about some of these things you’ve recalled or jotted down. You can decide where we start. Is there one card you felt more strongly about than the others? (or a few cards, etc.)…”

(Now the probing-for-structure part of the interview begins…) (Subject keeps selecting cards)

What the interviewer should keep in mind:

1. Don’t worry about getting through all the cards; you never do. The idea is to let the subject introduce personally salient content, and for you to try to understand it. It doesn’t matter how many cards you do. (Though it can be useful to know which cards are most salient.)

2. The subject will give you the “whats” (what is important, what felt successful); you must learn the “whys” (why is it important? Why does that constitute success?) The answer to the whys helps you to understand how the person’s subject-object construction is shaping real life, the goal of the interview.

3. Since you are probing for structure you need to keep asking “why?” (like any structural interview) but since you are probing real-life experience, often deeply felt, care must be taken to frame the “whys” in such a way that does not seem to suggest the person is somehow wrong to be caring so deeply. E.g. “I’m worrying that I might fail my statistics final.” The interviewer wants to know what is at stake in this possible loss (e.g., maybe if he fails his father won’t buy him an Alfa Romeo; or maybe if I fail I feel I will be letting down the family, or maybe, if she fails she feels she is letting down herself – all conceivably different structures). But we don’t want to ask a question like “why are you so worried about that?” because it can unintentionally suggest we have doubts about the
appropriateness of worrying about such a thing. Each interviewer must find his/her own way to convey that he/she is not trying to understand why it should be that the subject has this worry but in what sense it is a worry.

4. The interviewer must wear “two hats” in the conduct of the interview – that of empathic, receptive listener, and that of active inquirer. Ignoring the first on behalf of the second leaves most interviewees feeling grilled, and not well understood; the interview will become unpleasant at best, and unproductive at worst. Ignoring the second on behalf of the first leaves most interviews unscorable; people rarely spontaneously speak in an epistemologically unambiguous fashion.

5. The central activity in the interviewer’s own head is the forming of hypotheses during the interview itself. The more familiar a person is with the 21 epistemological distinctions the interview can make the easier it is to generate hypotheses. One excellent way of becoming more familiar with these distinctions is the activity of analyzing (or “scoring”) subject-object interviews.

6. Further information, advice, and sympathy about all these activities can be found in great quantity in The Guide to the Subject-Object Interview: Its Administration and Interpretation.

# APPENDIX E

## Subject-Object Interview Analysis Form

### Subject-Object Analysis: Formulation Process Sheet

Name or Code of Interviewee: __________________________ Analysis Page #: ___

<table>
<thead>
<tr>
<th>Bit # / Interview Page #</th>
<th>Range of Hypotheses:</th>
<th>Questions:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 1(2) 1/2 2/1 2(1)</td>
<td>1) What structural evidence leads you to these hypotheses?</td>
</tr>
<tr>
<td></td>
<td>2 2(3) 2/3 3/2 3(2)</td>
<td>2) What evidence leads you to reject other plausible counter-hypotheses?</td>
</tr>
<tr>
<td></td>
<td>3 3(4) 3/4 4/3 4(3)</td>
<td>3) If you have a range of hypotheses, what further information do you need to narrow the range?</td>
</tr>
<tr>
<td></td>
<td>4 4(5) 4/5 5/4 5(4) 5</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX F

Subject-Object Interview Overall Formulation Form

Subject-Object Analysis: Overall Formulation Sheet

Name or Code of Interviewee: ________________________ Analysis Page #: ___

A. Tentative Overall Hypotheses (minimum of 3 bits reflective of each hypothesis):

B. Rejected Tentative Hypothesis/Hypotheses and Reason(s) for Rejection:
   1. Hypoth: ____________  Why rejected:
   2. Hypoth: ____________  Why rejected:

C. Single Overall Score (minimum of 3 bits reflective solely of this score):
   [if interview not scorable with single score enter range of scores*]

D. Testing S.O.S. If you have not already justified your rejection of scores on either “side” of the S.O.S., do so here:

* [if unable to formulate single score, explain what further information needed to reach single score.]
APPENDIX G

Cover Letter to Participants via email

Letter to Presidents

Dear ____________.

My name is Shelly Mumma and I am the Director of Leadership Development, Service & Engagement at St. Norbert College and a doctoral student at the University of Nebraska-Lincoln. I am writing to ask your help on an exciting new study about the professional relationships between student leaders within an organization and how that relates to the way each student makes meaning of their college experience. I am interested in interviewing students who are in positions of leadership with a variety of student organizations. The goal of my study is to be able to add to the limited research on leadership and meaning-making. I believe student leaders have the potential to impact other students in very meaningful ways on a college campus and hope that this research helps identify ways to support student leaders in these endeavors.

I would like to conduct a 60-minute interview on campus. Participation is voluntary and you may choose to withdraw at any time. I would like to record all interviews and then transcribe them verbatim. I would also like you to complete a 12-item survey about your leadership relationship with others in your organization. Any information obtained during this study, which could identify a participant will be kept strictly confidential. The information obtained in this study may be published in scientific journals or presented at professional meetings. Pseudonyms will be used in reports and presentations when referring to participants.

I will also be conducting interviews with other student leaders within your same student organization. I will be asking them to reflect on the professional relationship that you have. They will also complete the same 12-item survey about your professional relationship. Any information you share will not be communicated to any other student or administrator. In addition, a colleague from another institution will review a randomly selected set of transcribed interviews according to the required protocol.

I will contact you in a few days to answer any questions you might have and inquire if you are willing to participate in this study. I look forward to talking with you about this project.

Sincerely,

Shelly Morris Mumma
100 Grant St.
St. Norbert College  
DePere, WI  54115  
(920) 403-4023  
shelly.mumma@snc.edu  

AND  

Dan Wheeler  
Professor Emeritus and Former Head  
Ag Leadership, Education and Communication  
University of Nebraska - Lincoln  
(402) 570-6126  
dwheeler1@unl.edu
Letter to Officers

Dear ______________,

My name is Shelly Mumma and I am the Director of Leadership Development, Service & Engagement at St. Norbert College and a doctoral student at the University of Nebraska-Lincoln. I am writing to ask your help on an exciting new study about the professional relationships between student leaders within an organization and how that relates to the way each student makes meaning of their college experience. I am interested in interviewing students who are in positions of leadership with a variety of student organizations. The goal of my study is to be able to add to the limited research on leadership and meaning-making. I believe student leaders have the potential to impact other students in very meaningful ways on a college campus and hope that this research helps identify ways to support student leaders in these endeavors.

I would like to conduct a 60-minute interview on campus. Participation is voluntary and you may choose to withdraw at any time. I would like to record all interviews and then transcribe them verbatim. I would also like you to complete a 7-item survey about your leadership relationship with the President of YOUR ORGANIZATION. Any information obtained during this study, which could identify a participant will be kept strictly confidential. The information obtained in this study may be published in scientific journals or presented at professional meetings. Pseudonyms will be used in reports and presentations when referring to participants.

I have conducted an interview with the President of YOUR ORGANIZATION and I will be asking her to reflect on the professional relationship that you have. She will also complete the same 7-item survey about your professional relationship. Any information you share will not be communicated to any other student or administrator. In addition, a colleague from another institution will review a randomly selected set of transcribed interviews according to the required protocol.

I will contact you in a few days to answer any questions you might have and inquire if you are willing to participate in this study. I look forward to talking with you about this project.

Sincerely,

Shelly

Shelly Morris Mumma
Director, Leadership Development, Service & Engagement and Campus Center
St. Norbert College
100 Grant Street
DePere, WI 54115
(920) 403-4023
(920) 403-4092 FAX

AND

Dan Wheeler
Professor Emeritus and Former Head
Ag Leadership, Education and Communication
University of Nebraska - Lincoln
(402) 570-6126
dwheeler1@unl.edu
APPENDIX H

Informed Consent for Participants
INFORMED CONSENT FORM (Student Organization President)

Identification of Project:

Student Leader LMX Relationships as Moderated by Constructive-Developmental Theory

Purpose of the Research:

This study is a research project with the purpose of examining the effect a college student leader’s developmental stage has on the quality of leadership relationship he/she has with students within his/her organization. You are invited to participate because you are the president of an active student organization. You must be 18 years of age to participate in the program.

There are 2 parts of this study for Leaders. Participation in Part One will take approximately 20 minutes to complete the leadership assessment portion of the study. Participation in Part Two of the study will take approximately 60 minutes to complete an audiotaped interview with the researcher.

Procedures:

Part 1:
Participation in this study will require approximately 20 minutes of your time. You will complete an assessment via a secured server on the Internet that consists of twelve Likert type questions that apply to 5 student executive board members or members of your group. Additionally, some basic demographic data will be obtained prior to beginning the assessment. At the completion of the assessment, you will submit it to the researcher on line via the Internet through a secured and encrypted server.

Part 2:
Participation in Part 2 will require approximately 60 minutes of your time. In a personal and confidential interview, the researcher will ask you about ordinary experiences (live feeling moved, or being angry or conflicted about some decision, etc.). The interview will take place in an agreed upon location. In preparation for the interview, you will be introduced to the topics for the interview and be allowed to jot some notes or thoughts on paper prior to the actual taped interview. After about 15 minutes of this preparation, the researcher will begin the interview with your consent.

Risks and/or Discomfort:

There are no known risks or discomforts associated with this research.

Benefits:

You may find the learning experience enjoyable and the information may be helpful to you in your volunteer and work life. The information gained from this study (Part 1 and 2) may help us to better understand the relationship between leader behavior and human development.
Confidentiality:

Any information obtained during this study that could identify you will be kept strictly confidential. The data will be stored in a locked cabinet in the investigator’s home office or a secured server and will only be seen by the investigator during the study and for three years after the study is complete. The information obtained in this study may be published in scientific journals or presented at scientific meetings but the data will be reported as aggregate data. The audiotapes will be erased after transcription.

Compensation:

There will be no compensation for participating in this research.

Opportunity to Ask Questions:

You may ask any questions concerning this research and have those questions answered before agreeing to participate in or during the study. Or you may call the investigator at any time, office phone (920) 403-3888. If you have questions concerning your rights as a research subject that have not been answered by the investigator or to report any concerns about the study, you may contact the University of Nebraska - Lincoln Institutional Review Board, telephone (402) 472-6965.

Freedom to Withdraw:

You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the investigator, the University of Nebraska or any of your affiliations with your organization or educational institution. Your decision will not result in any loss of benefits of which you are already entitled.

Consent, Right to Receive a Copy:

You are voluntarily making a decision whether or not to participate in this research study. Your signature certifies that you have decided to participate having read and understood the information presented. You will be given a copy of this consent form to keep,

________________________  Check if you agree to be audiotaped during the interview.

Signature of Participant:

_________________________________________  _________________________________
Signature of Participant                                      Date

Name and Phone Number of Investigator(s)
Snelly Morris Mumma, M.S., Principal Investigator
Daniel Wheeler, Ph.D., Secondary Investigator

Office (920) 403-3888
Office (402) 570-6126
Consent for Officers

INSTITUTE OF AGRICULTURE AND NATURAL RESOURCES
DEPARTMENT OF AGRICULTURAL LEADERSHIP, EDUCATION AND COMMUNICATION

INFORMED CONSENT FORM

Identification of Project:
Student Leader LMX Relationships as Moderated by Constructive-Developmental Theory

Purpose of the Research:
This study is a research project with the purpose of examining the effect a college student leader’s developmental stage has on the quality of leadership relationship he/she has with students within his/her organization. The president of your student organization has agreed to participate in this study and has supplied your name as another leader within the organization. The president identified you via email correspondence and provided the researcher with your contact information. You must be 18 years of age to participate in the program.

There are 2 parts of this study for Leaders.
Participation in Part One will take approximately 15 minutes to complete the leadership assessment portion of the study.
Participation in Part Two of the study will take approximately 60 minutes to complete an audio taped interview with the researcher.

Procedures:
Part 1:
Participation in this study will require approximately 15 minutes of your time. You will complete an assessment via a secured server on the Internet that consists of twelve Likert type questions. Additionally, some basic demographic data will be obtained prior to beginning the assessment. At the completion of the assessment, you will submit it to the researcher on line via the Internet through a secured and encrypted server.

Part 2:
Participation in Part 2 will require approximately 60 minutes of your time. In a personal and confidential interview, the researcher will ask you about ordinary experiences (I’ve feeling moved, or being angry or conflicted about some decision, etc.). The interview will take place in an agreed upon location. In preparation for the interview, you will be introduced to the topics for the interview and be allowed to jot some notes or thoughts on paper prior to the actual taped interview. After about 15 minutes of this preparation, the researcher will begin the interview with your consent.

Risks and/or Discomfort:
There are no known risks or discomforts associated with this research.

Benefits:
You may find the learning experience enjoyable and the information may be helpful to you in your volunteer and work life. The information gained from this study (Part 1 and 2) may help us to better understand the relationship between leader behavior and human development.

303 Agricultural Hall / P.O. Box 830709 / Lincoln, NE 68583-0709 / (402) 472-2607 / FAX (402) 472-5863
Confidentiality:

Any information obtained during this study that could identify you will be kept strictly confidential. The data will be stored in a locked cabinet in the investigator’s home office or a secured server and will only be seen by the investigator during the study and for three years after the study is complete. The information obtained in this study may be published in scientific journals or presented at scientific meetings but the data will be reported as aggregate data. The audiotapes will be erased after transcription.

Compensation:

There will be no compensation for participating in this research.

Opportunity to Ask Questions:

You may ask any questions concerning this research and have those questions answered before agreeing to participate in or during the study. Or you may call the investigator at any time, office phone (920) 403-3888. If you have questions concerning your rights as a research subject that have not been answered by the investigator or to report any concerns about the study, you may contact the University of Nebraska – Lincoln Institutional Review Board, telephone (402) 472-6965.

Freedom to Withdraw:

You are free to decide not to participate in this study or to withdraw at any time without adversely affecting your relationship with the investigator, the University of Nebraska or any of your affiliations with your organization or educational institution. Your decision will not result in any loss of benefits of which you are already entitled.

Consent, Right to Receive a Copy:

You are voluntarily making a decision whether or not to participate in this research study. Your signature certifies that you have decided to participate having read and understood the information presented. You will be given a copy of this consent form to keep.

Check if you agree to be audiotaped during the interview.

Signature of Participant:

______________________________  ________________________________
Signature of Participant                  Date

Name and Phone Number of Investigator(s)
Shelly Morris Mumma, M.S., Principal Investigator  Office (920) 403-3888
Daniel Wheeler, Ph.D., Secondary Investigator  Office (402) 570-6126

Student Organization President - #***
Page 02 of 02
APPENDIX I

Institutional Review Board Approval of Study Letter from UNL

IRB NUgrant System
09/25/2009 10:58 am
IRBNewProjectForm - 10149
Official Approval Letter for IRB project #10149

September 25, 2009

Shelly Mumma
Agricultural Leadership, Education and Communication
1206 Outward Ave De Pere, WI 54115

Daniel Wheeler
Agricultural Leadership, Education and Communication
6001 S 88th St Lincoln 68526-

IRB Number: 2009
Project ID: 10149
Project Title: STUDENT LEADER LMX RELATIONSHIPS AS MODERATED BY CONSTRUCTIVE-DEVELOPMENTAL THEORY

Dear Shelly:

This letter is to officially notify you of the approval of your project by the Institutional Review Board (IRB) for the Protection of Human Subjects. It is the Board’s opinion that you have provided adequate safeguards for the rights and welfare of the participants in this study based on the information provided. Your proposal is in compliance with this institution’s Federal Wide Assurance 00002258 and the DHHS Regulations for the Protection of Human Subjects (45 CFR 46) and has been classified as exempt.

You are authorized to implement this study as of the Date of Final Approval: 09/25/2009. This approval is Valid Until: 05/07/2010.

1. The approved informed consent forms have been uploaded to NUgrant (files
with -Approved.pdf in the file name). Please use these forms to distribute to participants. If you need to make changes to the informed consent form, please submit the revised forms to the IRB for review and approval prior to using them.

We wish to remind you that the principal investigator is responsible for reporting to this Board any of the following events within 48 hours of the event:

• Any serious event (including on-site and off-site adverse events, injuries, side effects, deaths, or other problems) which in the opinion of the local investigator was unanticipated, involved risk to subjects or others, and was possibly related to the research procedures;
• Any serious accidental or unintentional change to the IRB-approved protocol that involves risk or has the potential to recur;
• Any publication in the literature, safety monitoring report, interim result or other finding that indicates an unexpected change to the risk/benefit ratio of the research;
• Any breach in confidentiality or compromise in data privacy related to the subject or others; or
• Any complaint of a subject that indicates an unanticipated risk or that cannot be resolved by the research staff.

This project should be conducted in full accordance with all applicable sections of the IRB Guidelines and you should notify the IRB immediately of any proposed changes that may affect the exempt status of your research project. You should report any unanticipated problems involving risks to the participants or others to the Board.

If you have any questions, please contact the IRB office at 472-6965.

Sincerely,

Mario Scalora, Ph.D.
Chair for the IRB
APPENDIX J

Institutional Review Board Support of Study Letter from Research Location

September 24, 2009

Shelly Morris Mumma
Director, Leadership Development, Service & Engagement
and Campus Center
St. Norbert College
100 Grant Street
De Pere, WI 54115

Dear Shelly,

I am writing to verify that I have reviewed the materials you provided me (and that you plan to submit to the University of Nebraska Institutional Review Board). In the materials, you have provided a description of the project, have acknowledged and/or addressed the ethical issues associated with the project, and have afforded me with the opportunity to evaluate the project in the context of the size and nature of the institution at which it will be conducted. Based upon my review of these materials, I can support your plans to conduct the project here on the St. Norbert College (SNC) campus.

This support is contingent on your providing me (as chair of the SNC IRB) with documentation of the University of Nebraska IRB approval of the project and a copy of the final version of the application submitted to and approved by that body. It is important that we have copies of such documentation for our local records. Assuming that such documentation is provided us, I would also support any plans you may have to provide your participants with the contact information for our SNC IRB.

If I can be additional help to you and/or to the University of Nebraska IRB, please do not hesitate to contact me.

With best wishes for success in your research endeavor,

Raymond M. Zurawski, Ph.D.
Associate Professor of Psychology, and
Chair, SNC Institutional Review Board
Confidentiality Agreement for Transcriptionists

Confidentiality Agreement

Transcriptionist

I, the undersigned, hereby acknowledge that I will in no way disclose the identities of the subjects or convey known data from the study entitled: Student Leader LMX Relationships As Moderated by Constructive-Developmental Theory. I will maintain participant confidentiality in all matters to which I have been given access relative to this study.

Signed: ___________________________ Date: ___________________________

[Signature]

12-6-09
Confidentiality Agreement

Transcriptionist

I, the undersigned, hereby acknowledge that I will in no way disclose the identities of the subjects or convey known data from the study entitled: Student Leader LMX Relationships As Moderated by Constructive-Developmental Theory. I will maintain participant confidentiality in all matters to which I have been given access relative to this study.

Signed: [Signature]  Date: 11/01/09