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Timber! How Loss of Trust Contributes to the Downfall of Narcissistic Leaders

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A thesis submitted in partial fulfillment of the requirements for the Master of Science degree in Psychology

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Abstract

Individuals higher in grandiose narcissism are motivated to maintain a grandiose self-view, which can be accomplished through self-promotion and self-defence (Back et al., 2013).

Drawing from the dual-process model of narcissistic admiration and rivalry, the current study examined how these forms of narcissism differentially relate to changes in perceived leader effectiveness. As well, I tested whether trust mediated these relationships. The final sample included 165 participants in 42 teams followed from team formation to dissolution, gathering data at four time points. During their lifecycle, the teams worked on a design project. Support was found for narcissistic rivalry corresponding to a decrease in perceived leader effectiveness, through being viewed as increasingly self-maximizing, over time. The results demonstrate how narcissistic rivalry (but not admiration) is the source of narcissism in relation to ineffective leadership.

Keywords: Leader Effectiveness, Narcissism, Trust, Self- and Other- Interest

Summary for Lay Audience

While not commonly thought of as desirable leaders, narcissistic individuals tend to rise to positions of authority. As a result, previous research largely focused on how and why these individuals gain leadership positions. Consequently, the fall from leadership has been neglected in the literature. The current study examines this process, investigating the why and how of the fall of narcissistic leaders. Narcissism is characterized by a self-focused nature and a preoccupation with maintaining a grandiose self-view. Going beyond the unidimensional view of narcissism, this research focuses on two distinct forms of narcissism, admiration and rivalry. Admiration represents the agentic side of narcissism, focusing on building themselves up to maintain their grandiose self-views. In contrast, rivalry encompasses the antagonistic qualities of narcissism, focusing on tearing others down to maintain their grandiose self-views. Recognizing that something must be changing in the relationship between narcissistic leaders and team members to cause the fall, this study examined whether trust explains why narcissistic individuals lose leadership over time.

To assess whether trust influences narcissists' hold on leadership positions, I collected data from student teams at Western University that worked together on a project for four months. While working on this project, students met with their teams a minimum of once per week. During this time, I collected data at three-time points. At each time point, participants rated their teammates on leader effectiveness and trust. Trust was assessed through ratings of prosociality (i.e., trust) and selfishness (i.e., distrust). As personality is unlikely to change in a short period of time, admiration and rivalry were assessed before team formation.

Overall, team members responded negatively to individuals higher in narcissistic rivalry, rating them lower on leader effectiveness and higher on distrust over time. Team members viewing these individuals as more untrustworthy helped explain why individuals higher in

narcissistic rivalry were viewed as less effective leaders over time. In contrast, individuals higher in admiration were not viewed as particularly high or low on leader effectiveness, trust, or distrust. This research contributes to explaining why narcissists tend to lose leadership when they so easily gain such positions.

Acknowledgements

First, I would like to thank my supervisor, Alex Benson. You helped me transform and refine an idea into a solid project. I cannot express how much I appreciate your support and encouragement over the past two years. To be able to conduct research with your supervision, guidance, and insight has been an invaluable learning experience. Finally, thank you for sharing with me your passion for research, which will remain with me throughout my career. I am looking forward to four more years of working with you!

Thank you to my advisory committee, John Meyer and Samantha Joel, for your guidance, encouragement, and support with my thesis. You provided me with valuable knowledge, questions, and insights. Thank you for dedicating your time to help guide me towards a solid thesis. Furthermore, thank you to my thesis defence committee Samantha Joel, Blair Evans, and Gerard Seijts. I greatly appreciate your time and effort.

I would also like to thank the I/O Psychology faculty members and graduate students. Thank you for providing such a supportive community and welcoming learning environment. I have gained invaluable knowledge from the various courses, discussions, and presentations. Specifically, to my officemate, Elzie, you have been right there with me the whole time. I greatly appreciate the support you have provided me throughout the past two years.

Last, but in no way the least, to my family, who have always been my own personal cheerleaders and never wavered in support. To my Mom, you have instilled in me the love of learning and finding answers which has kept me energized throughout this project. To my Dad, you have always encouraged me to stand on my own two feet and keep going when times get tough. Thank you both for your endless amounts of encouragement, support, and love. To my brother Mark, you have been an incredible role model. You showed me that drive and ambition, while hard to maintain at times, pay off. One last family member I would like to thank, my Papa

Dan. Out of all my cheerleaders, you were by far the loudest. In anything I did, you thought I was the best. With your unwavering commitment to the belief that I was perfect, it is no wonder I have found interest in narcissism.

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Timber! How Loss of Trust Contributes to the Downfall of Narcissistic Leaders

Leadership is a two-way influential relationship between leaders and followers that entails motivating others and coordinating resources in pursuit of a common goal (Rost, 1993). As leadership in organizations is generally defined as the influence over others in pursuit of meeting organizational goals (Pompilus et al., 2006), the quality of leadership can play a key role in the success (or failure) of organizations (Zaccaro et al., 2001). The status afforded to leaders provides them greater access to resources and opportunities to participate in groups (Curhan et al., 2014). Effective leaders encourage followers to take on tasks, be creative with solutions, and make appropriate decisions (i.e., what is best for the team and organization; Bennett, 2009). As well, they build and maintain positive relationships with their followers (Grijalva et al., 2015). As effective leaders are crucial to organizational success and possess influential power, it is important to recognize who is taking advantage of promotional opportunities and becoming leaders.

Narcissism and Leader Effectiveness

Scholars have extensively examined how personality and individual differences are linked to leader effectiveness. Leader effectiveness differs from leader emergence as it focuses on leaders' performance of leader behaviours, whereas emergence is whether individuals become viewed as leaders (Grijalva et al., 2015). The current research focused on grandiose narcissism's connection to leader effectiveness. Although grandiose narcissists may not deeply care about effectively leading others, they desire the status afforded by such positions (Grapsas et al., 2020; Zeigler-Hill et al., 2019). The term narcissism¹ is derived from the Greek myth of Narcissus, a

¹ Within this thesis, the term narcissist is used as short-hand for individuals higher in grandiose narcissism, even though narcissism is studied as a continuous trait.

tale of a man who believed he was better than all others. One day, Narcissus saw himself in a pool of water and fell in love with his own reflection. Fittingly, narcissistic individuals can be conceptualized as possessing an inflated self-view, self-regulatory strategies aimed at maintaining their grandiose self-view, and relationships that lack warmth and intimacy (Brunell et al., 2008).

Narcissists may initially be perceived as good leaders due to their charm, charisma, vision, and enthusiasm (Sedikides & Campbell, 2017). However, studies have produced conflicting results regarding the association between narcissism and leadership. Studies have observed positive (Nevicka, Tan Velden, et al., 2011; Owens et al., 2015), negative (De Hoogh et al., 2013), and insignificant (Hoffman et al., 2013) correlations between narcissism and leader effectiveness. As well, a meta-analysis found a non-linear relationship between narcissism and leader effectiveness, such that individuals with moderate levels of narcissism were more effective leaders than those who were high or low in narcissism (Grijalva et al., 2015). This may be due to the positive, beneficial qualities of narcissism being accompanied by negative characteristics. For example, narcissists tend to be self-focused (Emmons, 1987), over-confident (Campbell et al., 2004), engage in risky, self-serving decision making (Cragun et al., 2020; Sedikides & Campbell, 2017), and inflate their own performance (Farwell & Wohlwend-Lloyd, 1998). As narcissism levels increase, these negative qualities may become more prominent and outweigh the positive, having an adverse impact on leader effectiveness.

Despite the potential drawbacks of narcissists, they tend to occupy leadership positions and play a crucial role in organizations (Maccoby, 2000; Rosenthal, 2006). In a glance through history, we find a litany of narcissistic leaders. For example, Steve Jobs (Robins & Paulhus, 2001), Adolf Hitler (Glad, 2002), Michael Eisner (Sankowsky, 1995), and Lyndon B. Johnson

(Watts et al., 2013) have all been described as exhibiting the cardinal features of narcissism.

Why are narcissistic individuals able to elevate their social rank and attain positions of influence? Do others actually perceive narcissists as effective leaders? The current study, using a dual-process model of narcissism, investigates how subdimensions of grandiose narcissism relate to people's perceived leader effectiveness. Further, a potential explanation for why narcissists decrease in perceived leader effectiveness over time is evaluated.

Theoretical Models of How Narcissism Relates to Leadership Effectiveness

To understand why narcissistic individuals may be perceived as effective leaders, it is important to recognize why they are afforded leadership positions. Implicit leadership theories describe how people hold beliefs and expectations of traits, abilities, and skills leaders possess (Epitropaki & Martin, 2004). Narcissists possess many leader-like characteristics, such as extraversion, high self-esteem (Brunell et al., 2008), and self-monitoring (Kowalski et al., 2018). As narcissistic individuals are able to fit the leader mould for many individuals, this could help them be perceived as effective in such positions. Additionally, expectations states theory (Berger et al., 1974) describes how group members interpret the behaviour of others and how these interpretations relate to the emergence of hierarchies (Correll & Ridgeway, 2003). Notably, individuals who make valuable contributions—or merely signal their potential value—tend to be given more opportunities to participate and are more likely to have their ideas accepted (i.e., more influential; Correll & Ridgeway, 2003). As narcissistic individuals are skilled in signalling their potential value, this allows them to secure leadership positions and impress others in such roles.

The agency model (Campbell et al., 2006) offers a complementary perspective on the complex relation of narcissism with leader effectiveness. This model emphasizes five aspects

relevant to the social processes associated with narcissism, supporting the key conclusion that narcissists prioritize getting ahead over getting along. As both getting ahead and getting along are important to leadership (Marinova et al., 2013), this may result in narcissists being viewed as less effective leaders as time progresses. As narcissists are socially skilled, they can be hard to detect (Campbell, 2005). In addition, narcissists believe they are effective leaders and are perceived as such (Brunell et al., 2008; Nevicka, De Hoogh, et al., 2011), but perhaps only perceived as effective by others during the early stages of social interactions. Theoretical support for the waning of initially positive views of narcissists can be found in the chocolate cake analogy (Campbell, 2005; Campbell et al., 2011). At first chocolate cake is appetizing and we get a rush from eating it; however, eating too much leaves people feeling sick and sluggish. The same can be said about narcissistic leaders. Narcissists' vision, charm, and enthusiasm can make them initially appealing (Sedikides & Campbell, 2017). However, overtime their negative qualities (e.g., self-serving; Sedikides & Campbell, 2017) can result in these individuals being viewed in a non-positive manner. At this point, individuals will be questioning narcissists leader effectiveness. Indeed, empirical findings regarding narcissism in relation to leadership and popularity support the notion that narcissists are seen as effective leaders initially, although eventually these positive perceptions fade. In the beginning stages of group formation and low acquaintanceship, narcissists tend to be viewed as leaders but this fades over time (Ong et al., 2016). If there is a pre-existing level of acquaintanceship, however, these initial perceptions of leadership are not present and perceptions increasingly worsen. Similarly, when narcissistic leaders have minimal interactions with their subordinates, they tend to be viewed as effective leaders, but this disappears as interactions increase (Nevicka et al., 2018). Overall, narcissistic

individuals' leader effectiveness appears to follow the motto set out by the Canadian rock band Trooper, "we're here for a good time, not a long time".

The Narcissistic Admiration and Rivalry Concept in Relation to Leader Effectiveness

The rise and fall of narcissists in leader effectiveness may follow different trajectories for different forms of narcissism. The present study focuses on two subdimensions of grandiose narcissism (i.e., narcissistic admiration and rivalry) because they map onto distinct behavioural, cognitive, and affective-motivational processes (Back et al., 2013). The two dimensions distinguish between the assertive and antagonistic interpersonal processes associated with narcissism (Leckelt et al., 2015). Narcissistic admiration and rivalry are motivational pathways originating from the desire to maintain a grandiose self-view (Back et al., 2013). Characterized by assertive self-enhancement, narcissistic admiration includes charmingness, grandiose fantasies, and striving to be unique. These strategies are indicative of the self-promotion pathway. Consequently, narcissistic admiration tends to result in positive social outcomes (e.g., status, success, social interest) and contributes to the attainment of social potency. Narcissistic rivalry is characterized by antagonistic self-protection, which involves aggression, devaluation of others, and supremacy striving (Back et al., 2013). This encompasses the self-defence pathway, which tends to result in negative social outcomes (e.g., rejection, distrust, relationship transgressions) and contributes to social conflict.

Previous research also provides direction and insight regarding how individuals higher in narcissistic admiration and rivalry may differentially relate to leader effectiveness. Narcissistic admiration is associated with being perceived as charming (Back et al., 2013), achievement (Rogoza, Wyszynska, et al., 2016) and dominance (Back et al., 2013), which are characteristics that correlate strongly and positively with leader effectiveness (Hoffmann et al., 2011).

However, narcissistic admiration is also associated with the self-absorption, arrogance, and exploitative facets of narcissism (Back et al., 2013). These qualities can potentially undermine the initial positive evaluations. On the other hand, narcissistic rivalry is associated with aggression and the devaluation of others (Back et al., 2013; Lange et al., 2016)—neither of which would facilitate effective leadership. Individuals high in narcissistic admiration tend to initially accrue positive peer-evaluations, whereas individuals high in narcissistic rivalry typically receive negative evaluations that continually worsen over time (Leckelt et al., 2015). As such, individuals higher in narcissistic admiration appear to be more skilled in interpersonal interactions, which is a trait positively correlated with leader effectiveness (Hoffmann et al., 2011). Moreover, narcissistic admiration is positively linked to the visionary and charm aspects of transformational leadership (Khoo & Burch, 2008), which may help individuals higher in narcissistic admiration to be initially perceived as effective leaders.

Regarding leader effectiveness and personality, an important distinction to be made between narcissistic admiration and rivalry is their relation to extraversion. Rogoza, Žemojtel-Piotrowska, et al. (2016) identified extraversion as a key differentiator between narcissistic admiration and rivalry—a trait that is positively associated with leader effectiveness (Judge et al., 2002; Ng et al., 2008). Narcissistic admiration has a large positive relation to extraversion, whereas narcissistic rivalry has a small negative relation to extraversion (Rogoza, Žemojtel-Piotrowska, et al., 2016; Warner, 2013). Back et al. (2013) and Rogoza, Wszyńska, et al. (2016) observed that narcissistic admiration relates to extraversion, whereas narcissistic rivalry relates to disagreeableness. In turn, disagreeableness signals selfishness, distrust, and a lack of cooperation—all of which are associated with poor socialization (McCrae & Costa, 2003). Poor socialization, or the way an individual has learned to behave and interact with others, would not

be conducive to being an effective leader. Therefore, narcissistic admiration and rivalry may differentially relate to leadership effectiveness. Individuals higher in narcissistic admiration may excel in the emergent phase of leadership, but such successes might be fleeting. In contrast, individuals higher in narcissistic rivalry desire the status afforded by leadership positions, but their antagonistic interpersonal style makes them ill-equipped to successfully lead others. As such, the following hypotheses were proposed:

Hypothesis 1: Narcissistic admiration will be positively related to peer ratings of leader effectiveness during the initial stage of group involvement (i.e., approximately the first two weeks of acquaintance), but this positive association will weaken over time.

Hypothesis 2: Narcissistic rivalry will be negatively related to peer ratings of leader effectiveness during the initial stage of group involvement, and this negative association will strengthen over time.

Loss of Trust as a Potential Mediator Explaining the Downfall of the Narcissistic Leader

As leadership involves influencing others, the ability to garner and sustain trust is crucial. An inability to hold others' trust may explain the downfall of narcissistic leaders. Trust has been defined as confidence in another's intentions, actions, and statements (Lewicki et al. 1998; Mellinger, 1956). Trust is a desired trait in leadership (Nichols & Cottrell, 2014) and is key to the getting-along component of leadership (Marinova et al., 2013). The current study examines a subset of trust, specifically, if people are expected to conduct themselves in a prosocial (i.e., other-interest) or self-maximizing (i.e., self-interest) manner. As narcissists are concerned with their social standing, a loss in trust due to people realizing they are only concerned with their own interests may exacerbate their negative behaviours.

As trust is conceptualized as whether individuals can be expected to behave with prosocial rather than self-maximizing intentions, self- and other- interests were used as a proxy measure of trust. This is in line with the interdependence theory (Kelley & Thibaut, 1978), which supports the inclusion of self- and other-interest as mediators. Interdependence theory suggests that both self- and other-interest are relevant to interpersonal and interdependent situations. That is, people attempt to interpret the behaviour of others in terms of self- and other-interest. Specifically, are people acting in the interest of themselves or others? Individuals engage in this attributional behaviour in an attempt to predict future behaviour (Rusbult & Van Lange, 2008), allowing them to develop expectations and (dis)trust in others' motives and actions. According to the interdependence theory, trust can be relationship specific. For example, if Peter reliably behaves in a prosocial/other-interested manner, Mary will likely come to trust him. However, if Peter consistently behaves in a self-maximizing/self-interested manner, Mary will likely end up distrusting him. Thus, interdependence theory provides an avenue for a greater understanding of trust and how it may develop based on interpretations of others' actions.

Other-interest is defined as the pursuit of socially valued gains for others (e.g., improving others' status, achievement, happiness, recognition, material items; Gerbasi & Prentice, 2013). People who are concerned for others are often prosocial (Coyne et al., 2018), as the concern for others cultivates prosocial behaviour (Bierhoff, 2002). Leaders who are prosocial and focus on collective interests tend to be effective (Harrell & Simpson, 2016).

Evidence regarding the nature of the relationship between narcissism and prosocial behaviour is mixed, with studies indicating narcissism is related to higher prosociality, lower prosociality, or not related to prosociality (Nehrlich et al., 2019). Trait activation theory may explain this disagreement regarding narcissism's relation to prosocial behaviour (Christiansen &

Tett, 2008). Trait activation theory describes that the manner in which a trait is acted upon has the potential to be modified. Put another way, although narcissists tend to not be particularly concerned about others' interests, there are contexts where acting prosocially aligns with narcissistic motives. For example, narcissism is positively related to performing prosocial behaviours in public, potentially due to the expected gains of such actions (Eberly-Lewis & Coetzee, 2015). The extended agency model (Campbell & Foster, 2007) provides additional guidance on when and why narcissistic individuals may act prosocially. As narcissistic individuals prioritize agency over communion, they are less likely to be prosocial. However, if acting prosocially would provide agentic rewards, they may be more likely to behave in such a manner. Put simply, narcissists are likely to act prosocially as a means to an end. As those higher in narcissistic admiration are socially savvy, they may be able to effectively fit in and be perceived as prosocial as others. In contrast, those higher in narcissistic rivalry are unlikely to be perceived by group members as prosocial due to their antagonistic and aggressive interpersonal orientation (Back et al., 2013). As such, the following hypotheses were proposed:

Hypothesis 3: Narcissistic admiration will not predict peer ratings of perceived prosocial motives during the initial stage of group involvement. With respect to time, I expect this null association between narcissistic admiration and perceived prosocial motives to become negative over time. In turn, changes in peer ratings of perceived prosocial motives will be positively related to changes in peer ratings of leader effectiveness. As such, changes in ratings of perceived prosocial motives will mediate the relation between narcissistic admiration and changes in peer ratings of leader effectiveness

Hypothesis 4: Narcissistic rivalry will negatively predict peer ratings of perceived prosocial motives during the initial stage of group involvement. With respect to time, I

expect this negative association between narcissistic rivalry and perceived prosocial motives to strengthen over time. In turn, changes in peer ratings of perceived prosocial motives will be positively related to changes in peer ratings of leader effectiveness. As such, changes in peer ratings of perceived prosocial motives will mediate the relation between narcissistic rivalry and changes in peer ratings of leader effectiveness.

Self-interest is defined as the pursuit of socially valued gains for oneself (Gerbası & Prentice, 2013). Self-maximizing behaviour is representative of self-interest and is conceptualized as only being concerned for oneself. Research suggests that selfish behaviour results in a decrease in trustworthiness and is a reliable sign of untrustworthiness (Przepiorka & Liebe, 2016), the same dynamic observed between human-computer agent interactions (Kulms & Kopp, 2018). As trust is a desired trait in leaders (Nichols & Cottrell, 2014), this type of behaviour (i.e., selfishness) could hinder perceived effectiveness.

Evidence regarding the relation between narcissism and self-interest is more straightforward. Narcissists tend to be self-focused (Emmons, 1987; Jones & Brunell, 2014), self-serving (Rhodewalt & Morf, 1998) and prioritize self-interests over collective interests (Campbell et al., 2005). As those higher in narcissistic admiration are socially savvy, their self-focus due to their preoccupation with uniqueness (Back et al., 2013) and self-improvement (Lange et al., 2016) may not be readily apparent. In contrast, those higher in narcissistic rivalry tend to devalue (Back et al., 2013) and put others down (Lange et al., 2016), signalling a concern for only the self and not others. As such, the following hypotheses were proposed:

Hypothesis 5: Narcissistic admiration will not predict peer ratings of perceived self-maximizing motives during the initial stage of group involvement. With respect to time, I expect this null association between narcissistic admiration and perceived self-

maximizing motives to become positive over time. In turn, changes in peer ratings of perceived self-maximizing motives will be negatively related to changes in peer ratings of leader effectiveness. As such, changes in peer ratings of perceived self-maximizing motives will mediate the relation between narcissistic admiration and changes in peer ratings of leader effectiveness.

Hypothesis 6: Narcissistic rivalry will positively predict peer ratings of perceived self-maximizing motives during the initial stage of group involvement. With respect to time, I expect this positive association between narcissistic rivalry and perceived self-maximizing motives to strengthen over time. In turn, changes in peer ratings of perceived self-maximizing motives will be negatively related to changes in peer ratings of leader effectiveness. As such, changes in peer ratings of perceived self-maximizing motives will mediate the relation between narcissistic rivalry and changes in peer ratings of leader effectiveness.

Overview of Research

Despite the evidence of the short-lived success of narcissistic leaders, the differential relations of narcissistic admiration and rivalry to leadership effectiveness have not yet been investigated. It is crucial to understand who is rising to leadership and how individuals become seen as effective leaders, as narcissistic individuals can have varying drawbacks in these positions. As different forms of narcissism have distinct characteristics and consequences, a multidimensional approach to studying narcissism may help reconcile the mixed findings within the literature regarding narcissism and leadership. Accordingly, this study evaluated whether narcissistic admiration and rivalry had differential relationships to leader effectiveness. Moreover, loss of trust—as measured by peer ratings of prosocial and self-maximizing

motives— was investigated as a mediator as it may explain the downfall of narcissistic leaders.

This study was pre-registered and deposited on the Open Science Framework:

https://osf.io/ebwrf/?view_only=cc93cc114e9d4b3ba0ed0dade8ebb767.

Method

Sample

Western University undergraduate students were recruited through a first-year engineering design course in 2019-2020. Each semester, students were organized and assigned to a single self-managed team of 4-6 individuals who worked together for the duration of the term (i.e., 4 months). Time point 1 consisted of 561 participants. Time point 2 consisted of 326 participants in 70 groups with an average size of 4.66 individuals. Time point 3 consisted of 220 participants in 51 groups with an average size of 4.31 individuals for leadership ratings and 212 participants in 49 groups with an average size of 4.31 individuals for prosocial and self-maximizing ratings (i.e., trust). Finally, time point 4 consisted of 332 participants in 73 groups with an average size of 4.55 individuals. Table 1 summarizes the demographic information at each time point. The teams had no formal hierarchy and were tracked from formation to dissolution. During the winter term (i.e., the focus of the current research), the teams worked on a major design project with an external organizational partner. At the request of the course instructor, teams were assigned semi-randomly to account for the under-representation of women in the course. As such, teams had either no women or at least two women. Gender was determined based on the information possessed by the university. Students participated in exchange for course credit. For participating at each time point, participants received 0.33%, and a bonus of 0.66% if they completed all four measurement points. As this was a multi-wave study

with data collected at four different time points, consent was obtained at the beginning of each survey.

Table 1*Time-point Specific Demographic Information*

	Time point 1	Time point 2	Time point 3	Time point 4
M_{age}	18.10 ^a	18.02 ^c	18.05 ^e	18.04 ^g
SD_{age}	1.13 ^a	1.16 ^c	1.29 ^e	1.17 ^g
%men	74.5 ^b	72.7 ^d	74.1 ^f	73.5 ^h

Note. $N^a = 469$; $N^b = 545$; $N^c = 277$; $N^d = 317$; $N^e = 189$; $N^f = 218$; $N^g = 276$; $N^h = 322$; $M_{age} =$

mean age; SD_{age} = standard deviation of age; %men = percent of population that identify as men.

As this study involves peer-ratings, participants who provided ratings of others but were not rated by their teammates could not be included. As well, I only retained those who had data for each time point. Thus, while all time points had over 200 participants, only 165 individuals ($M_{\text{age}} = 18.08$; $sd_{\text{age}} = 1.42$; 71.5% men; 45.5% White; 17.6% Asian; 13.3% Middle Eastern) in 42 teams (2-5 members) had a complete set of scores.

Procedure and Measures

A multi-wave design with four time points was used to collect the data. Participants were given the option to complete a questionnaire battery at each time point for course credit. At time-point one (i.e., September), the participants completed a demographics questionnaire (Appendix A) and the Narcissistic Admiration and Rivalry Questionnaire (NARQ; Back et al., 2013). As well, at this time, information regarding the research and a teamwork training workshop was provided. Personality and individual differences data were collected in September, but new teams were created for the winter term. The remaining measures occurred in January, February, and March to allow for the exploration of change sensitive questions (e.g., changes in leadership). At time-points two (i.e., January), three (i.e., February), and four (i.e., March), peer-rated variables (i.e., leader effectiveness, prosocial, self-maximizing) were assessed using brief measures due to the round robin design, which requires each group member to evaluate all other group members. As each time point included multiple surveys and round robin questionnaires, brief measures were used to avoid participant fatigue.

Narcissism

To assess narcissistic admiration and rivalry, participants completed the NARQ (Back et al., 2013; Appendix B). The NARQ has been previously validated (Back et al., 2013). The NARQ was completed at time point one. Both the admiration ($\alpha = .76$) and rivalry ($\alpha = .81$)

subscales use a 6-point Likert-type scale ranging from 1 (*not at all agree*) to 6 (*agree completely*). Sample items from both scales include “I deserve to be seen as a great personality” (admiration) and “I react annoyed if another person steals the show from me” (rivalry).

Leadership

To assess leader effectiveness, participants rated each of their teammates using the Leader and Follower Peer Reports (Appendix C). This scale was created for this study given the lack of a validated single-item measure of leadership. A relative percentile method was used due to its advantages and increased validity over absolute methods (Goffin & Olson, 2011). As the current study focused on leader effectiveness, only leader ratings were examined. To ensure uniform understanding of effective leadership, participants were provided with the following definition: effective leaders delegate tasks to others, show initiative, motivate team members, and unite members in accomplishing team goals. Based on the definition, participants were asked to “please rate each team member’s effectiveness as a leader on the following scale relative to all other team members you have ever worked with on a team project” by placing a marker along a scale. The 101-point visual analogue scale ranges from 0 to 100 with anchors at 0 (*far below average*), 50 (*average team member*) and 100 (*far above average*).

Trust

To assess peer ratings of trust (i.e., prosocial and self-maximizing motives), participants responded to two items from the Theories of Self-Relative-to-Other Behaviour questionnaire (SROB; Gerbasi & Prentice, 2013; Appendix D). The SROB has been previously validated (Gerbasi & Prentice, 2013). One item represents the prosocial subscale (i.e., other-interest) and one item represents the self-maximizing subscale (i.e., self-interest). Participants rated each of their teammates on both items. This two-item peer-report questionnaire uses a 7-point Likert-

type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The items include “I am concerned with the overall best interest for everyone” (prosocial) and “I only care about my interests” (self-maximizing). The items were slightly altered to become a peer-report measure and included team members’ names (e.g., Tracey only cares about their own interests).

Analysis

Personality traits such as narcissism are complex and multifaceted. Further complexity is added as there are two perspectives of personality, that of the individual and that of the observer (Hogan, 1998). According to the Self-Other Knowledge Asymmetry (SOKA) model (Vazire, 2010), there can be differences between what an individual knows about themselves and what others know about them (Kolar et al., 1996; Vazire & Mehl, 2008). An individual (Person A) and observer (Person B) may not have the same perspective of Person A’s personality. Additionally, this can also be influenced by the relationship between the two individuals (e.g., strangers, acquaintances, friends, family, co-workers). Regarding personality judgement, acquaintance level is important as individuals who have a closer relationship typically have more knowledge of each other. As acquaintance increases, observers are better able to accurately predict internal and observable characteristics (Vazire, 2010). Relevant to this study, I am interested in how a target’s self-reported personality (i.e., narcissism levels) relates to how observers (i.e., team members) view the target’s social behaviours.

Social Relations Modelling

The first step for evaluating Hypotheses 1-6 was to use social relations modelling (SRM) to decompose the variance in interpersonal perceptions (i.e., target variance, perceiver variance, dyad-specific variance, and error variance). In essence, SRM allows for the detection of how an individual views others and is viewed by others (Back & Kenny, 2010). The analyses were

conducted in TripleR as it does not place restrictions on the number of groups or individuals within each group for round robin designs (Schmukle et al., 2009).

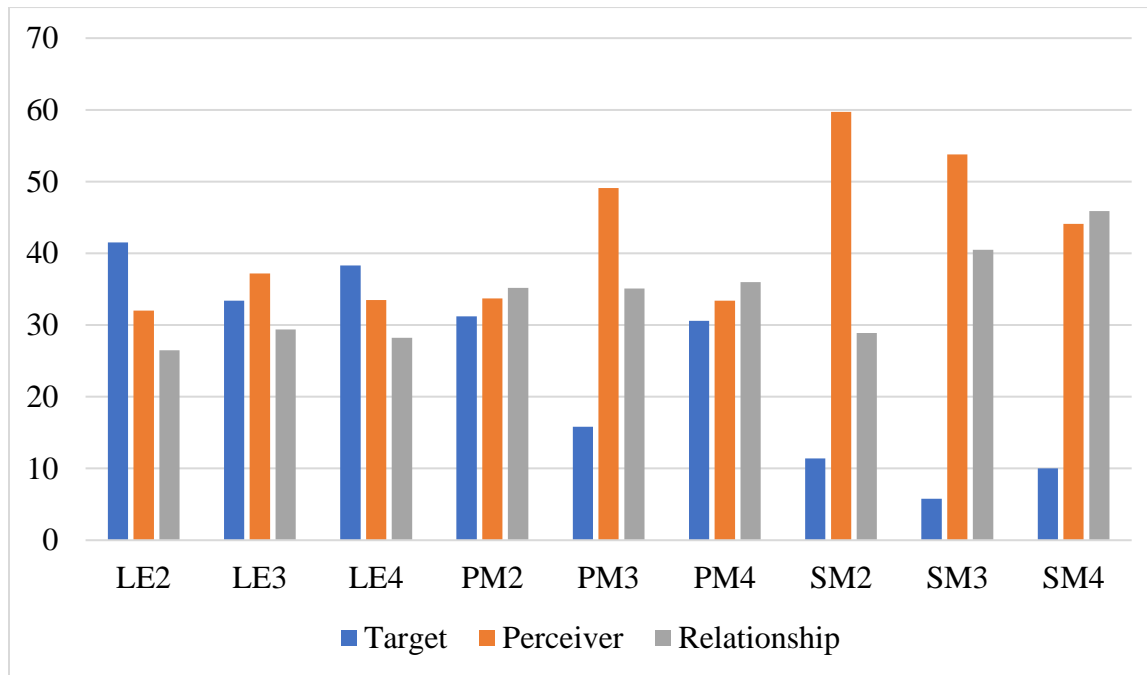
SRM decomposes the variance of peer ratings into perceiver variance, target variance, and relationship variance. Although a latent variable can be created to separate the error variance from the relationship variance, partialling out error variance was not possible due to using single-item measures. After decomposing the peer-ratings, target effects were extracted for leadership effectiveness, prosocial motives, and self-maximizing motives for the subsequent latent growth curve models. *Target effects* are the general tendency for how an individual is perceived by other group members. For example, group members might tend to think Taylor is particularly prosocial, but Ralph is particularly self-maximizing. Only target effects were of interest as I wanted to focus solely on how an individual tends to be viewed by others, irrespective of other biasing factors (e.g., perceiver effects, relationship effects). When extracting target effects, reliabilities are also calculated. Target effect reliability can be interpreted similarly to how the reliabilities of measures in general are interpreted (Greguras et al., 2001). However, low reliabilities are not concerning as SRM tends to capture more variance (Greguras et al., 2001) by taking into account other factors, such as target variance, relationship variance, and group size. Therefore, our reliability expectations for these target effects need to be adjusted accordingly. In the current study, the reliability of the target effects varied across time points for leader effectiveness (time point 2 = .84; time point 3 = .76; time point 4 = .81), prosocial motives (time point 2 = .75; time point 3 = .56; time point 4 = .72), and self-maximizing motives (time point 2 = .57; time point 3 = .28; time point 4 = .40).

As SRM decomposes the variance of peer ratings into perceiver variance, target variance, and relationship variance. Figure 1 contains a break down of the variance. This illustrates the

extent to which the variance components (i.e., perceiver variance, target variance, and relationship variance) contribute to the overall variance in peer rating scores. For example, at time point two regarding the ratings of leadership effectiveness, 41.5% of the variance is attributed to the target, 32% can be attributed to the perceiver, and 26.5% to the unique relationship between the target and perceiver.

Figure 1

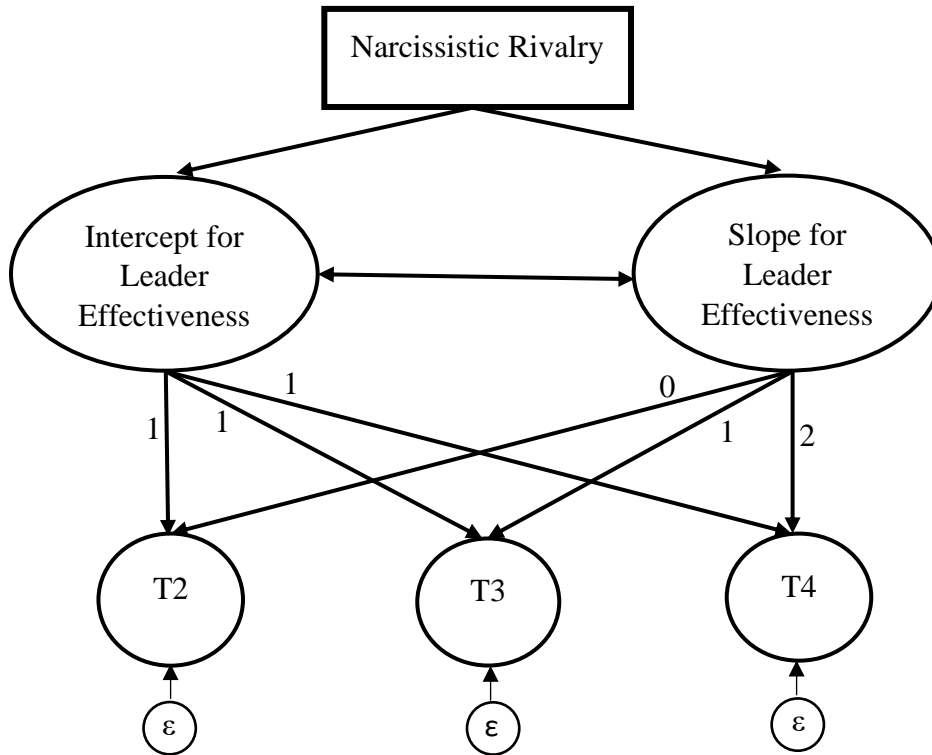
Variance Decomposition of the Ratings at Each Time-Point for all Round-Robin Ratings



Note. LE2 = Perceived Leader Effectiveness at Time-Point 2; LE3 = Perceived Leader Effectiveness at Time-Point 3; LE4 = Perceived Leader Effectiveness at Time-Point 4; PM2 = Perceived Prosocial Motives at Time-Point 2; PM3 = Perceived Prosocial Motives at Time-Point 3; PM4 = Perceived Prosocial Motives at Time-Point 4; SM2 = Perceived Self-Maximizing Motives at Time-Point 2; SM3 = Perceived Self-Maximizing Motives at Time-Point 3; SM4 = Perceived Self-Maximizing Motives at Time-Point 4.

Latent Growth Curve Models

Given the nested nature of the data, latent growth curve modelling was used to assess how narcissistic admiration and rivalry relate to leader effectiveness over time (see Figure 2). Specifically, this study has three levels nested within each other: time (level 1) nested within individuals (level 2), and individuals (level 2) nested within teams (level 3). This analysis allows for the assessment of how narcissistic admiration and rivalry predict initial levels (i.e., intercept when time is at 0; January) and changes (i.e., slopes) in perceived leader effectiveness over time. The intercepts and slopes contribute to the growth factors which are the trajectories of attributes (Duncan & Duncan, 2009). The intercept and slope are modelled and denoted using factor loadings. For example, the initial target effect of leadership effectiveness is represented by the intercept and held constant using a fixed factor loading of 1. The subsequent assessments of leadership effectiveness are given factor loadings to represent the passage of time. In the current study, the repeated measures were approximately equally spaced one month apart. Thus, factor loadings were of equal intervals (e.g., 1, 2, 3). This approach to latent growth modeling contributes to addressing the non-independence due to the repeated measures (i.e., time) being nested within individuals. To further account for the non-independence due to the nested nature of individuals within teams, the cluster-robust standard errors option (i.e., TYPE = COMPLEX) was used in Mplus. Furthermore, the inclusion of the MLR estimator addresses non-normality. Self-ratings of narcissism were included as predictor variables and were grand mean centered.

Figure 2*Latent Growth Curve Model Example*

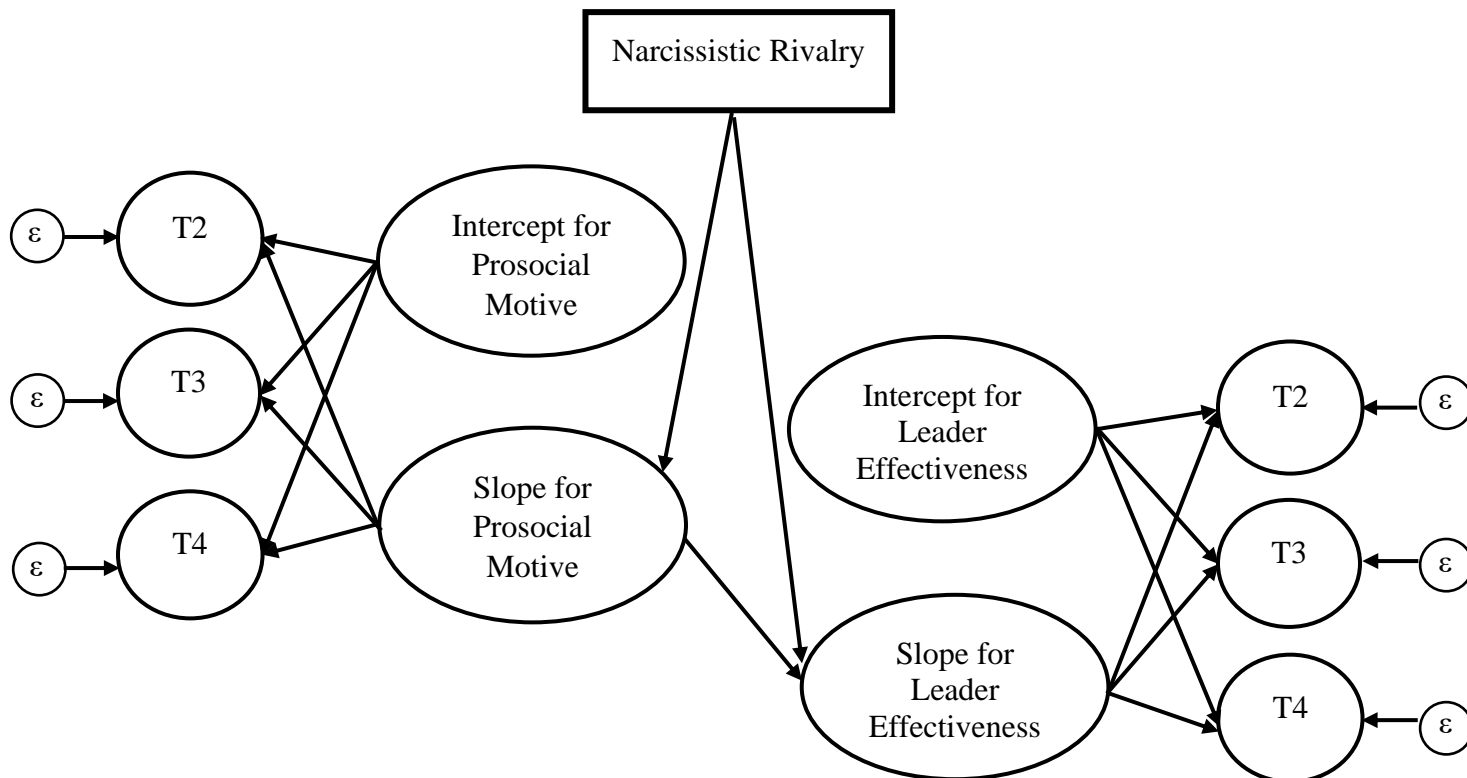
Note. T2 = time point 2; T3 = time point 3; T4 = time point 4.

Before any predictors were included in the latent growth models, unconditional models were conducted for leader effectiveness, prosocial motives, and self-maximizing motives. While these models can provide the information necessary to calculate ICCs (intraclass correlations), they also provide baselines, allowing changes caused by adding other variables (e.g., predictors) to the model to be identified. As well, this baseline allows for model fit to be compared to determine whether adding variables improves the models.

Parallel Process Latent Growth Curve Models

Building upon latent growth curve models, parallel process latent growth curve mediation models determined whether changes in peer-ratings of prosocial and self-maximizing motives mediated the effect of the subdimensions of grandiose narcissism on changes in peer-ratings of leader effectiveness (see Figure 3). In this analysis, growth factors can occur in tandem, with the growth factor of one variable predicting the growth factor of another. In other words, this analysis shows how change in a mediator can predict change in the dependent variable (von Soest & Hagtvet, 2011). These models address whether the relations of narcissistic admiration and rivalry with leader effectiveness are mediated by prosocial and self-maximizing motives. Self-reported narcissism (i.e., admiration and rivalry) scores were specified as time-invariant predictors, and the mediators (i.e., perceived prosocial and self-maximizing motives) were specified as time-variant mediators. For the purposes of this research, a mediation is present when the indirect effect is significant. For example, if the product of the relationships between (a) narcissistic admiration to the slope of prosocial motive and (b) the slope of prosocial motive to the slope of leader effectiveness is significant, a mediation can be inferred. In other words, if the indirect path of narcissistic admiration → the slope of prosocial motives → the slope of leader effectiveness is significant, a mediation can be inferred. Parallel process latent growth

models are useful for explaining mediated relations of growth among variables (Cheong et al., 2003). The variance of the outcome variable (i.e., changes in perceptions of leader effectiveness) was constrained to zero to ease model estimation.

Figure 3*Parallel Process Latent Growth Curve Mediation Model Example*

Note. T2 = time point 2; T3 = time point 3; T4 = time point 4.

While I tested for outliers based on the Cook's Distance (i.e., Cook's D) criteria, this led to convergence issues. As well, data points flagged as outliers may actually represent extreme but substantively interesting cases. Thus, I did not exclude outliers. However, individuals were excluded if they had missing data. This is due to latent growth models requiring a minimum of three time points, which is all that was included in this study. If an individual was missing a single time point, the analyses would not be able to accurately estimate their trajectory. Thus, missing data has the potential to significantly skew the results as many individuals in this study were missing at least one-time point.

Additionally, the ICCs representing the amount of between-team variance relative to overall variance were investigated for leadership effectiveness, prosocial motives, and self-maximizing motives. The ICCs revealed significant between-team variance in leadership effectiveness (time point 2 = 2.5%, time point 3 = 7.4%, time point 4 = 18.4%), prosocial motives (time point 2 = 22.8%, time point 3 = 30.9%, time point 4 = 28.4%), and self-maximizing motives (time point 2 = 41.4%, time point 3 = 63.2%, time point 4 = 48.8%). These ICCs are not completely unexpected. Prosocial and self-maximizing motives are based on perceptions of behaviour, which is likely visible to all members of the group. As such, it is to be expected that team members may receive similar ratings. As mentioned, this non-independence due to team membership was addressed using cluster-robust standard errors in model estimation.

Results

An overview of the descriptive statistics including correlations, means, and standard deviations is displayed in Table 2. The disattenuated correlations, which account for the target effect unreliability, are reported in Table 3.

Regarding leader effectiveness, the distributions at each time point were negatively skewed (time point 2 = -1.137; time point 3 = -1.017; time point 4 = --1.135). As well, it should be noted that despite using a specific group in the student population, the mean levels of narcissistic admiration and rivalry are in line with previous research on students (e.g., Jordan et al., 2021; Leckelt et al., 2015; Seidman et al., 2020).

Table 2*Descriptives and Zero-Order Correlations*

	Adm	Riv	LE2	LE3	LE4	PM2	PM3	PM4	SM2	SM3	SM4
Adm											
Riv	.02										
LE2	-.02	-.10									
LE3	.05	-.13	.84***								
LE4	.01	-.22**	.76***	.84***							
PM2	-.02	-.14	.76***	.66***	.68***						
PM3	.01	-.15	.61***	.73***	.66***	.70***					
PM4	-.03	-.20*	.61***	.65***	.80***	.73***	.67***				
SM2	.00	0.20*	-.42***	-.40***	-.42***	-.57***	-.54***	-.53***			
SM3	.04	.22**	-.29***	-.43***	-.42***	-.38***	-.58***	-.43***	.61***		
SM4	.06	.27***	-.38***	-.49***	-.63***	-.51***	-.54***	-.75***	.60***	.67***	
<i>M</i>	3.72	2.24	71.31	71.46	68.43	5.92	5.88	5.85	2.20	2.26	2.36
<i>SD</i>	0.67	0.73	16.38	15.86	17.17	0.88	0.91	0.95	0.80	0.96	1.00

Note. $N = 165$. *Adm* = narcissistic admiration; *Riv* = Narcissistic admiration; *LE2* = Leader effectiveness time point 2; *LE3* = Leader effectiveness time point 3; *LE4* = Leader effectiveness time point 4. *PM2* = Prosocial motives time point 2; *PM3* = Prosocial motives

time point 3; *PM4* = Prosocial motives time point 4; *SM2* = Self-maximizing motives time point 2; *SM3* = Self-maximizing motives time point 3; *SM4* = Self-maximizing motives time point 4. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 3*Disattenuated Correlations*

	Admiration	Rivalry
Leadership T2	-0.02	-0.11
Leadership T3	0.05	-0.15
Leadership T4	0.01	-0.24
Prosocial T2	-0.03	-0.17
Prosocial T3	0.01	-0.20
Prosocial T4	-0.04	-0.24
Self-Maximizing T2	0.00	0.27
Self-Maximizing T3	0.07	0.41
Self-Maximizing T4	0.10	0.44

Note. $N = 165$. $T2$ = time point 2; $T3$ = time point 3; $T4$ = time point 4. Disattenuated correlations corrected for the unreliability of target effects. Significance values cannot be computed for these correlations.

Time Point Specific Estimates

To provide clarity in interpreting the results, relations at each time point between the subdimensions of narcissism and leader effectiveness, prosocial motive, and self-maximizing motives were evaluated. In these time-point specific models, all available individuals at that time point were used to provide more reliable estimates. The time-point specific estimates of the relations of narcissistic admiration and rivalry with leader effectiveness, prosocial motives, and self-maximizing motives are shown in Table 4. Narcissistic admiration was not significantly related to leader effectiveness, prosocial motives, or self-maximizing motives at any of the time points. On the other hand, narcissistic rivalry negatively predicted leader effectiveness and prosocial motives, and positively predicted perceived self-maximizing motives at all time points.

Table 4

Time-Point Specific Estimates of Narcissistic Admiration and Rivalry Predicting Perceived Leader Effectiveness, Prosocial Motives, and Self-Maximizing Motives.

	Leader Effectiveness			Prosocial Motives			Self-Maximizing Motives		
	<u>T2</u>	<u>T3</u>	<u>T4</u>	<u>T2</u>	<u>T3</u>	<u>T4</u>	<u>T2</u>	<u>T3</u>	<u>T4</u>
	<i>b (SE)</i>	<i>b (SE)</i>	<i>b (SE)</i>	<i>b (SE)</i>	<i>b (SE)</i>	<i>b (SE)</i>	<i>b (SE)</i>	<i>b (SE)</i>	<i>b (SE)</i>
	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>	<i>p</i>
Adm	0.86 (1.35) .525 ^a	0.43 (1.76) .808 ^b	0.30 (1.60) .850 ^e	0.08 (0.08) .304 ^a	-0.06 (0.11) .559 ^c	-0.01 (0.08) .910 ^e	0.00 (0.08) 1.000 ^a	0.08 (0.10) .427 ^d	0.09 (0.08) .272 ^e
Riv	-2.80 (1.42) .049 ^a	-3.21 (1.27) .011 ^b	-3.53 (1.39) .011 ^e	-0.20 (0.06) .001 ^a	-0.17 (0.08) .044 ^c	-0.25 (0.07) <.001 ^e	0.17 (0.07) .007 ^a	0.26 (0.10) .009 ^d	0.25 (0.07) .001 ^e

Note. $N^a = 317$; $N^b = 218$; $N^c = 210$; $N^d = 209$; $N^e = 322$; b = unstandardized regression

coefficient; SE = standard error; $T2$ = time point 2; $T3$ = time point 3; $T4$ = time point 4; Adm = narcissistic admiration; Riv = narcissistic rivalry. Each cell is a separate model.

Unconditional Latent Growth Curve Models

Unconditional models for leader effectiveness ($\chi^2 (1) = 5.558, p = .018; CFI = 0.975; RMSEA = 0.166; SRMR = 0.029$), prosocial motives ($\chi^2 (3) = 0.599, p = .897; CFI = 1.00; RMSEA = 0.000; SRMR = 0.085$), and self-maximizing motives ($\chi^2 (1) = 0.089, p = .766; CFI = 1.000; RMSEA = 0.000; SRMR = 0.008$) identifying the average parameters that describe the growth trajectories and the associated variances are reported in Table 5.

Table 5*Unconditional Models of Leader effectiveness, Prosocial Motives, and Self-Maximizing Motives*

	Leader Effectiveness	Prosocial Motive	Self-Maximizing Motive
	<i>b</i> (<i>SE</i>)	<i>b</i> (<i>SE</i>)	<i>b</i> (<i>SE</i>)
	<i>p</i>	<i>p</i>	<i>p</i>
Mean			
Intercept	71.89 (1.21)	5.91 (0.08)	2.20 (0.10)
	< .001	< .001	< .001
Slope	-1.38 (0.60)	-0.04 (0.03)	0.08 (0.05)
	.020	.267	.116
Variances			
Intercept	219.99 (38.56)	0.59 (0.15)	0.44 (0.14)
	< .001	< .001	.002
Slope	5.52 (10.86)	.000 (.000)	0.07 (0.06)
	.611	999.000	.238
Residual Variance			
Time point 2	54.36 (24.03)	0.19 (0.04)	0.20 (0.11)
	.024	< .001	.066
Time point 3	27.76 (8.86)	0.29 (0.08)	0.36 (0.14)
	.002	< .00	.009
Time point 4	56.78 (24.19)	0.28 (0.06)	0.20 (0.12)
	.019	< .001	.099

Note. *b* = unstandardized regression coefficient; *SE* = standard error. Each column represents a different model. *N* = 166, *k* = 42.

Latent Growth Curve Models with Narcissism as a Predictor of Leadership Effectiveness

To answer the questions of whether narcissistic admiration and rivalry are linked to initial perceptions and changes in perceptions of leader effectiveness, I specified two models where narcissistic admiration and rivalry scores were used to predict the intercept and slope of a latent growth curve of the leader effectiveness scores. Narcissistic admiration scores were used as the predictor in Model 1, $\chi^2(2) = 8.555, p = .014$; CFI = 0.974; RMSEA = 0.141; SRMR = 0.026. As displayed in Table 6, failing to support Hypothesis 1, narcissistic admiration was not significantly related to initial attributions of leader effectiveness or changes in these attributions over time.

I then examined whether narcissistic rivalry predicted initial attributions and changes in attributions of leader effectiveness in Model 2, $\chi^2(2) = 5.927, p = .052$; CFI = 0.984; RMSEA = 0.109; SRMR = 0.031. As displayed in Table 6, narcissistic rivalry scores were not significantly related to initial attributions of leader effectiveness, but narcissistic rivalry scores predicted a decrease in perceptions of leader effectiveness over time. Thus, Hypothesis 2 was partially supported.

Table 6

Latent Growth Curve Analyses for Narcissistic Admiration and Rivalry Predicting Initial Perceptions and Changes in Leader Effectiveness

	Leader Effectiveness	
	<u>Intercept</u>	<u>Slope</u>
	<i>b (SE)</i>	<i>b (SE)</i>
	<i>p</i>	<i>p</i>
Model 1:		
Admiration	0.06 (2.12) .977	0.44 (0.60) .461
Model 2:		
Rivalry	-1.78 (1.74) .304	-1.45 (0.73) .046

Note. $N = 165$, $k = 42$. b = unstandardized regression coefficient; SE = standard error. Each row represents a different model.

Peer-ratings of Prosocial Motives as a Mediator

Despite narcissistic admiration not significantly predicting initial attributions of prosocial motives (Table 4), Model 3 evaluated whether the relation between narcissistic admiration and peer ratings of prosocial motives became negative over time, and whether such changes in perceived prosocial motives mediated the effect of narcissistic admiration on changes in perceptions of leader effectiveness, $\chi^2 (16) = 47.802, p < .001$; CFI = 0.952; RMSEA = 0.110; SRMR = 0.136. As shown in Table 7, narcissistic admiration did not significantly predict changes in attributions of prosocial motive. Consequently, the changes in attributions of prosocial motives did not mediate the relation between narcissistic admiration and changes in attributions of leader effectiveness (i.e., indirect effect), failing to support Hypothesis 3. However, changes in prosocial motives positively predicted changes in perceptions of leader effectiveness, lending support to the final linkage in the proposed mediation model.

As narcissistic rivalry significantly predicted negative initial attributions of prosocial motives (Table 4), Model 4 evaluated whether the relation between narcissistic rivalry and attributions of prosocial motives became increasingly negative over time, and whether such changes in attributions of prosocial motives mediated the effect of narcissistic rivalry on changes in attributions of leader effectiveness, $\chi^2 (16) = 47.725, p < .001$; CFI = 0.950; RMSEA = 0.110; SRMR = 0.140. As displayed in Table 7, narcissistic rivalry did not significantly predict changes in attributions of prosocial motives. Further, the indirect effect (i.e., the indirect path from narcissistic rivalry to leader effectiveness through prosocial motive) was not significant, failing to support Hypothesis 4. However, changes in prosocial motives positively predicted changes in perceptions of leader effectiveness, providing support to the final linkage in the proposed mediation model.

Table 7*Parallel Process Latent Growth Curve Model Mediation Analyses Involving Perceived**Prosocial Motives*

	<u>Slope Lead</u> <i>b (SE)</i> <i>p</i>	<u>Slope Pro</u> <i>b (SE)</i> <i>p</i>	<u>Indirect</u> <i>b (SE)</i> <i>p</i>	<u>Total</u> <i>b (SE)</i> <i>p</i>
Model 3:				
Admiration	0.58 (0.54) .284	-0.01 (0.03) .744	-0.21 (0.64) .744	0.37 (0.56) .507
Slope Prosocial	19.30 (2.63) .000			
Model 4:				
Rivalry	-0.26 (0.57) .654	-0.06 (0.04) .131	-1.18 (0.80) .137	-1.44 (0.68) .035
Slope Prosocial	19.50 (2.65) .000			

Note. $N = 165$, $k = 42$. b = unstandardized regression coefficient; SE = standard error; Int = intercept; $Lead$ = leader effectiveness; Pro = prosocial motive. Each pair of rows is a different model.

Peer-ratings of Self-Maximizing Motives as a Mediator

Narcissistic admiration did not significantly predict initial attributions of self-maximizing motives (Table 4). Nonetheless, I specified Model 5 to evaluate whether the relation between narcissistic admiration and perceived self-maximizing motives became positive over time, and whether such changes in perceived self-maximizing motives mediated the effect of narcissistic admiration on changes in perceived leader effectiveness, $\chi^2 (16) = 21.786, p = .150$; CFI = 0.987; RMSEA = 0.047; SRMR = 0.042. Table 8 shows that narcissistic admiration did not significantly predict changes in attributions of self-maximizing motives, nor did self-maximizing motives mediate the relation between narcissistic admiration and leader effectiveness (i.e., indirect effect), failing to support Hypothesis 5. However, changes in self-maximizing motives negatively predicted changes in perceptions of leader effectiveness, lending support to the final linkage in the proposed mediation model.

Narcissistic rivalry positively predicted initial attributions of self-maximizing motives (Table 4). Model 6 further evaluated whether the relation between narcissistic rivalry and perceived self-maximizing motives becomes increasingly positive over time, and whether such changes in perceived self-maximizing motives mediated the effect of narcissistic rivalry on changes in perceived leader effectiveness, $\chi^2 (16) = 25.119, p = .068$; CFI = 0.979; RMSEA = 0.059; SRMR = 0.067. As reported in Table 8, narcissistic rivalry positively predicted changes in attributions of self-maximizing motives, as well, changes in self-maximizing motives negatively predicted changes in perceptions of leader effectiveness. Additionally, the indirect effect (i.e., the indirect path from narcissistic rivalry to leader effectiveness through self-maximizing motives) was significant, supporting Hypothesis 6.

Table 8

Parallel Process Latent Growth Curve Model Mediation Analyses Involving Perceived Self-Maximizing Motives

	<u>Slope Lead</u> <i>b (SE)</i> <i>p</i>	<u>Slope Self</u> <i>b (SE)</i> <i>p</i>	<u>Indirect</u> <i>b (SE)</i> <i>p</i>	<u>Total</u> <i>b (SE)</i> <i>p</i>
Model 3:				
Admiration	0.86 (0.52) .099	0.04 (0.04) .312	-0.48 (0.49) .333	0.39 (0.60) .519
Slope Self	-11.09 (2.00) .000			
Model 4:				
Rivalry	-0.26 (0.60) .664	0.11 (0.04) .011	-1.21 (0.53) .023	-1.47 (0.66) .026
Slope Self	-11.08 (2.17) .000			

Note. $N = 165$, $k = 42$. b = unstandardized regression coefficient; SE = standard error; Int = intercept; $Lead$ = leader effectiveness; $Self$ = self-maximizing motives. Each pair of rows is a different model.

Discussion

In the current study, I sought to build on the existing research examining the relationship between narcissism and leadership. Although narcissists obtain leadership positions, research suggests their effectiveness in such positions dissipates over time (Ong et al., 2016; Sedikides & Campbell, 2017), yet empirical research examining why this happens has been limited. Drawing from the NARC (Back et al., 2013) and the interdependence theory (Kelley & Thibaut, 1978), this study examined how narcissistic admiration and rivalry differentially influence individuals' leadership trajectories through others' interpretations of their behaviour. Using a longitudinal design that tracked project teams for the duration of their lifecycle, key findings suggest that narcissistic rivalry and perceived self-maximizing motives are key variables for understanding the downfall of leaders.

My findings suggest that trust – through self-maximizing and prosocial motives (i.e., self- and other-interest, respectively) – is a vital component to understanding why individuals lose leadership, adding to the literature supporting the relevance of interdependence theory (Kelley & Thibaut, 1987). As shown in the results, changes in perceived self-maximizing motives negatively predicted changes in perceived leader effectiveness and, changes in perceived prosocial motives positively predicted changes in perceived leader effectiveness, lending support to the final linkages of the mediation models in Hypotheses 3-6. These findings are in line with the interdependence theory as it outlines that in interpersonal situations, people naturally interpret others' behaviours in terms of motivations, which contribute to trust. In turn, having individuals trust you to behave in a prosocial manner contributes to an individual being perceived as an effective leader (Harrell & Simpson, 2016). In contrast, self-interest signals untrustworthiness (Przepiorka & Liebe, 2016), which hinders perceptions of leader effectiveness. Connecting this to inherently social situations can shed light on why shifts occur. Specifically, as

trust is a dynamic component of relationships, and crucial to leader effectiveness, changes in perceptions of trust impact changes in perceptions of leader effectiveness. This effect was evident in the results. As such, the current research examining peer evaluations adds clarity to why narcissists, who so easily gain power, lose it. Trust is relevant to narcissism as narcissists are typically self-serving (e.g., Cragun et al., 2020; Sedikides & Campbell, 2017) and untrusted by teammates (Giambatista & Hoover, 2018). However, depending on their social skills and trait expression, their motivations may be undetectable. Overall, these results further unpack the relationship between trust and leadership, showing the importance of others' evaluations of an individual's motive.

Narcissistic admiration and narcissistic rivalry demonstrated differing growth trajectories in perceptions of self-maximizing motives and leader effectiveness. Individuals higher in narcissistic rivalry (but not admiration) resulted in increasingly negative perceptions of leader effectiveness and increases in perceptions of self-maximizing motives. In other words, as acquaintanceship increases, individuals higher in narcissistic rivalry are viewed as more self-maximizing (i.e., less trustworthy) and less effective as leaders. In addition, the trajectories of self-maximizing and prosocial motives are tightly related to the leadership trajectory, providing support to Hypotheses 2 and 6. While I expected that narcissistic rivalry would predict initial attributions and changes in attributions of leader effectiveness (Hypothesis 2), I only found support for the association of changes in attributions over time. As well, I expected that self-maximizing motives would mediate the relationship between narcissistic rivalry and changes in perceptions of leader effectiveness (Hypothesis 6). I observed support for this mediation. While research shows that narcissists lose leadership over time (e.g., Grijalva et al., 2015; Nevicka et al., 2018; Ong et al., 2016; Sedikides & Campbell, 2017), these results add to the growing

literature on narcissistic leadership by indicating the downfall is partly due to the arrogant-aggressive behaviours associated with narcissistic rivalry and the resulting lack of trust.

Regarding narcissistic admiration, counter to expectations, it did not predict changes in leader effectiveness, prosocial motive, or self-maximizing motive. However, consistent with expectations, narcissistic admiration was not related to initial perceptions of prosocial motive or self-maximizing motive. This suggests that narcissistic admiration is less relevant than narcissistic rivalry to leader effectiveness and trust. Individuals higher in narcissistic admiration are not seen as particularly high or low, consistently, in leader effectiveness, prosocial motives and self-maximizing motives. In other words, there is no systematic association between narcissistic admiration and prosocial motives, self-maximizing motives, or leader effectiveness. Narcissistic admiration not relating to leadership is counter to what would be anticipated based on previous findings (e.g., Nevicka et al., 2018; Ong et al., 2016). While grandiose narcissism has previously been linked to leadership, this sample may differ in respective levels of admiration and rivalry than previous research. As those high in admiration, but low in rivalry may account for the positive impact of grandiose narcissism (e.g., social potency, leadership; Back et al., 2013).

The current study supports an expanding area on the insights to be gained from using a multidimensional approach to narcissism. An advantage of the NARC is that it separates the distinctive processes of narcissistic admiration and rivalry that contribute to the varying social consequences of narcissism (Back et al., 2013). Treating narcissism as a unidimensional construct combines admiration and rivalry (and their distinct intra- and inter-personal processes), potentially obscuring divergent associations. Accordingly, the multidimensional approach taken in the current research may explain why previous research has found inconsistent results when

investigating the relationship between narcissism, as a unidimensional construct, and leadership (e.g., negative, insignificant, and positive correlations; De Hoogh et al., 2013; Hoffman et al., 2013, Owens et al., 2015, respectively). Separating the agentic (narcissistic admiration) and antagonistic (narcissistic rivalry) aspects of narcissism adds clarity to when narcissism may be negatively or positively related to leadership, as each have differing interpersonal and intrapersonal processes.

Lending support to the NARC, the social consequences of narcissistic rivalry became increasingly apparent as teammates spend more time together. As narcissistic rivalry is associated with behaving in an increasingly arrogant-aggressive manner (Back et al., 2013) and are rated increasingly more negative by others over time (Leckelt et al., 2015), these behaviours may be contributing to these individuals being perceived as selfish (i.e., self-maximizing), and therefore, untrustworthy and ineffective as leaders. These results also provide support to the NARC by showing that narcissistic admiration and rivalry differentially related to peer-rated leader effectiveness, prosocial motive, and self-maximizing motive. Additionally, while the NARC suggests that rivalry is likely to result in a decrease in trust, the current study zeros in on a particular aspect that is concentrating on the confidence in others' intentions and actions. The current study suggests that narcissistic rivalry results in distrust as they are viewed by others as only being focused on their own benefit and are consequently viewed as less effective leaders.

This study also lends support to the extended agency model (Campbell & Foster, 2007) through examining narcissistic admiration and rivalry's relationship to prosocial motive. Although the extended agency model suggests that narcissistic individuals may behave prosocially as a means to an end, this study suggests this is only applicable to narcissistic admiration. Regarding prosociality, the results indicate that individuals higher in narcissistic

admiration are not consistently viewed as particularly high or low in prosocial motives, as there is no systematic association. This suggests that individuals high in narcissistic admiration may have the potential to be prosocial when prestige and status (i.e., leadership) are on the line. Being perceived as not particularly low in prosociality likely helps individuals high in narcissistic admiration maintain leadership in situations when there is no formal hierarchy and leadership is up for grabs, as in self-managed teams. In contexts where leadership is granted (i.e., individuals are selected to fulfill leader positions) not being viewed as low in prosociality may potentially be a part of some individuals high in admiration's exploitative tendencies to help them obtain these positions. Beyond the interdependence theory (Kelley & Thibaut, 1978), the NARC (Back et al., 2013) and the agency model (Campbell & Foster, 2007), this research expands upon the existing empirical research by further describing the other side of the narcissistic leader coin, the fall.

Limitations & Future Directions

The limitations of the current research should be considered. While studying ecologically valid teams, the teams in this study were comprised of a specific demographic. Specifically, this study focused on first-year engineering students at a large Canadian university. Examining specific demographics does not allow for smooth generalizations to the rest of the population. Future research should examine a variety of different demographics. Additionally, as students have other responsibilities, the team is not their only commitment. Groups who spend less time together and those with lower quality interactions would have less accurate perceptions of their teammates. Future research may replicate this study with teams who have more consistent meeting schedules and more structured meetings. Furthermore, as the teams in this study were self-managed, it may not be seamlessly generalizable to teams with formal leadership structures. When leaders are formally selected, this may involve different team dynamics and leadership

trajectories. As such, future research should replicate the findings in teams with a formal hierarchy and examine whether untrustworthy leaders lose their positions over time. A final limitation regarding the teams is their duration. Following teams for a longer timespan may allow participants to have more accurate perceptions of their teammates, potentially resulting in significant relations appearing. As well, there is evidence that narcissistic admiration and rivalry accrue less positive and more negative evaluations, respectively, over time as their true nature becomes apparent (Leckelt et al., 2015). Therefore, future research should study teams for longer periods.

Another limitation regarding the study design is the issue of causal inference. While parallel process latent growth curve modelling is an innovative analysis, it does not allow for temporal causality to be empirically confirmed. To infer causality, it is typically recommended that the predictor variable is measured before the outcome variable. Thus, the processes of the mediator and outcome variables being measured simultaneously hinders the ability to say with complete confidence that the relationship is in a certain direction. However, a strong theoretical rationale can support a causal direction and replace the temporal component to some extent. In this study, there is strong theoretical and empirical support for a specific direction (i.e., trust to leadership). Future research may expand upon and confirm the current findings by collecting data on the mediator slightly in advance of the outcome variable.

Regarding the questionnaires, a few limitations should be addressed. First, the items used to assess trust were based on individuals' perceptions of others. Specifically, how individuals are trusted to act, whether behaviour is motivated by a concern for the collective or the self, was based on inferred motives. Future research may extend this by implementing a more direct measure of trust. Perhaps a measure specifically formed to assess the extent to which an

individual is trusted by others could be included in future research. Second, the limitation surrounding the leader effectiveness measure can be acknowledged in future research. While the single item had benefits (e.g., relative percentile method), it has not previously been validated. Therefore, future research could examine and confirm the validity of this single-item measure. In addition, the specific behaviours identified in the leader effectiveness definition were not assessed individually. Future research could assess specific leader behaviours.

Limitations surrounding narcissistic admiration and rivalry in this study should also be acknowledged. In the population studied, an unexpectedly low correlation was found between narcissistic admiration and rivalry, which may be a unique pattern specific to the current sample. Indeed, narcissistic admiration and rivalry tend to have a moderate positive correlation (e.g., Back et al., 2013; Wetzel et al., 2016). Future research can further investigate the conditions which may cause these typically correlated constructs to have a weak relationship. Additionally, this study did not explore the relative levels of narcissistic admiration and rivalry. Research has shown that various combinations of narcissistic admiration and rivalry can occur within individuals (Wetzel et al., 2016), and these profiles of narcissism may influence individuals' behaviour and how others view them. For example, individuals high in both narcissistic admiration and rivalry would likely be viewed negatively. Comparing this combination to others, such as subgroups low in both narcissistic admiration and rivalry or subgroups with moderate levels of narcissistic admiration and low narcissistic rivalry may be particularly informative. Comparing these profile combinations would show how varying levels of narcissistic admiration and rivalry influence an individual's behaviour and how others view them. Future research can examine whether the relative levels matter and how the combinations of narcissistic admiration and rivalry can influence individuals' leadership trajectories. Finally, this study used narcissistic

admiration and rivalry as time-invariant predictors. It may be worthwhile to evaluate whether narcissistic admiration and rivalry levels differ across time and how this influences their leadership trajectories.

A final avenue for future research is to go beyond solely target effects, which provide insight regarding an individual's reputation for leadership in a group. Dyadic relations could show how narcissistic individuals view each other. Perhaps evaluating whether narcissists view their teammates as effective leaders, prosocial, or self-maximizing. For example, are narcissistic individuals more accepting of narcissistic leaders and view them as more effective? This may be a particularly viable avenue for future research as narcissistic individuals tend to be more tolerant and accepting of other narcissistic individuals (Hart & Adams, 2014). Future research may do this by examining dyad-specific effects. This would investigate how the relative levels of narcissism of two people predict unique ratings toward each other.

Practical Implications

Organizations should be aware of the real possibility of narcissists rising to leadership positions; however, their fall from leadership is equally as important. This study highlights the qualities of narcissistic leaders that contribute to why they fall from leadership. As well, the results provide a tentative timeline for the onset of the downfall. This information may be crucial to organizations as when narcissists lose leadership, a fallout is likely to occur, and narcissists' negative behaviours are likely to increase. As outlined in the energy clash model (Sedikides & Campbell, 2017), as others become more aware of the narcissistic leaders' intentions, they begin to dislike the leader. This antipathy towards the narcissistic leader results in conflict, and the leader is likely to blame others for their failure (Sedikides & Campbell, 2017), which may negatively impact leader, employee, and organizational performance.

Beyond providing information on why narcissists fall from leadership, this study provides an important contribution to what makes effective leaders. The results of the current study indicate that those who are prosocial, which is the basis of trust, are seen as effective leaders, confirming previous research. As trustworthiness is desirable in leaders (Nichols & Cottrell, 2014), perceptions that the leaders can be trusted need to be maintained or perceptions of leader effectiveness will fade. Thus, if leaders consistently show they prioritize self-interests over the group, followers may come view them as untrustworthy and these views should spill over into perceptions of leader effectiveness. Specifically, as trustworthiness decreases, so do perceptions of leader effectiveness. Organizations need to ensure individuals taking on leadership positions are consistently trustworthy and prosocial. As such, organizations can train and encourage their leaders to be more prosocial, increasing trust and, by extension, how effective they are viewed as leaders. To accomplish this, organizations can include trust and prosociality components to their leadership training. It may be beneficial for leaders (and employees in general) to undergo impression management training to better convey these qualities. While this may appear to be in contradiction to trustworthiness, this suggestion is not to be deceptive, but to improve decision-making abilities of the leaders that can enhance perceptions of prosociality and, therefore, trust. In addition to training, organizations can promote prosocial behaviour through rewarding prosocial behaviour. Workers and organization should also be made aware of the benefits of being prosocial. Regarding narcissistic individuals, prosocial-like behaviour could be fostered through ensuring the alignment between their self-interests and the collective's interests.

While narcissists are not stereotypically thought of as prosocial, there are certain circumstances under which they may behave in a prosocial manner (Campbell & Foster, 2007; Konrath & Tian, 2018), feigning other-interest. As narcissistic individuals are motivated by self-

enhancing rewards (e.g., leadership, status), this can influence whether they behave in a prosocial manner. Self-managed teams, where leadership is up for grabs, may not provide the necessary urgency or pressure for all narcissistic individuals to be motivated to present themselves in a conducive manner to obtain leadership. When leadership is up for grabs, narcissistic individuals' may rely on their natural demeanour to take the leader role. For example, individuals higher in narcissistic rivalry may rely on other-derogation and supremacy striving to attempt to take the leader role. Thus, organizations will need to be cognizant that this type of team structure may not inspire all individuals to act desirably. Additionally, if the hierarchy that emerges in self-managed teams is less prestige-based (i.e., respect-based), communal behaviours (e.g., agreeableness), which likely are intertwined with prosociality, are not related to status, which, in self-managed groups, would be linked to leadership (de Waal-Andrews et al., 2015). As well, agentic behaviours (e.g., assertiveness) are beneficial to status attainment in dominance-based hierarchies (i.e., fear-based). Therefore, the types of hierarchies that form in self-managed groups can determine which behaviours are beneficial to obtaining leadership. For organizations to promote certain qualities, such as trustworthiness, in self-managed teams, desirable rewards can be implemented for individuals to strive towards.

Conclusions

In the present research, I examined how narcissistic admiration and rivalry affect perceptions of leader effectiveness and the mediating effects of trust – evaluated through perceived prosocial and self-maximizing motives - on this relationship. Narcissistic admiration did not have a significant relation to initial perceptions or changes in perceptions of leader effectiveness, prosocial motives, or self-maximizing motives. However, narcissistic rivalry did relate to changes in perceptions of leader effectiveness and self-maximizing motives. As well,

changes in perceptions of self-maximizing motives mediated the relationship between narcissistic rivalry and changes in perceptions of leader effectiveness. The results of this study highlight the importance of examining trust and the fall of narcissists from leadership positions in concert. This study also demonstrates how individuals are expected to behave and how their motives are interpreted can influence whether they are seen as effective or ineffective leaders.

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Appendix A

Demographics Questionnaire

1. How old are you (in years)? _____

2. Sex (Please select a response):

Male []

Female []

3. You don't have an option that applies to me. I identify as (please specify):

4. What is your ethnic identity? If more than one category applies, please select all that apply.

_____ Aboriginal/Native

_____ Asian

_____ Black

_____ East Indian

_____ Hispanic

_____ Middle Eastern

_____ White

_____ Multiple or You don't have an option that applies to me (please specify below)

5. Is English your first language?

Yes [] No []

6. In total, how many months of lifetime work experience do you have?

Months: _____

Appendix B

Narcissistic Admiration and Rivalry Questionnaire (Back et al., 2013)

Narcissistic Admiration and Rivalry Questionnaire

Instructions: Please indicate how much the following statements apply to you.

1. I am great.					
1	2	3	4	5	6
Strongly Disagree					Strongly Agree
2. I will someday be famous.					
1	2	3	4	5	6
Strongly Disagree					Strongly Agree
3. I show others how special I am.					
1	2	3	4	5	6
Strongly Disagree					Strongly Agree
4. I react annoyed if another person steals the show from me.					
1	2	3	4	5	6
Strongly Disagree					Strongly Agree
5. I enjoy my successes very much.					
1	2	3	4	5	6
Strongly Disagree					Strongly Agree
6. I secretly take pleasure in the failure of my rivals.					
1	2	3	4	5	6
Strongly Disagree					Strongly Agree
7. Most of the time I am able to draw people's attention to myself in conversations.					
1	2	3	4	5	6
Strongly Disagree					Strongly Agree

8. I deserve to be seen as a great personality.					
1	2	3	4	5	6
Strongly Disagree					Strongly Agree
9. I want my rivals to fail.					
1	2	3	4	5	6
Strongly Disagree					Strongly Agree
10. I enjoy it when another person is inferior to me.					
1	2	3	4	5	6
Strongly Disagree					Strongly Agree
11. I often get annoyed when I am criticized.					
1	2	3	4	5	6
Strongly Disagree					Strongly Agree
12. I can barely stand it if another person is at the center of events.					
1	2	3	4	5	6
Strongly Disagree					Strongly Agree
13. Most people won't achieve anything.					
1	2	3	4	5	6
Strongly Disagree					Strongly Agree
14. Other people are worth nothing.					
1	2	3	4	5	6
Strongly Disagree					Strongly Agree
15. Being a very special person gives me a lot of strength.					
1	2	3	4	5	6
Strongly Disagree					Strongly Agree

16. I manage to be the center of attention with my outstanding contributions.

1	2	3	4	5	6
Strongly Disagree					Strongly Agree

17. Most people are somehow losers.

1	2	3	4	5	6
Strongly Disagree					Strongly Agree

18. Mostly, I am very adept at dealing with other people.

1	2	3	4	5	6
Strongly Disagree					Strongly Agree

Appendix C

Leader and Follower Peer Reports (GEL, 2018)

***Number of names and ratings depends on number of group members

Instructions: For the next few questions, you will be asked about leadership and followership in your design team.

Roles of leadership and followership are both important to successful teamwork. Although some people may predominantly occupy the position of a leader or a follower, other group members may switch between roles of leading and following. In the following sections, we will provide a definition of effective leaders and effective followers. Please read these carefully before rating your group members.

PLEASE READ CAREFULLY: Effective leaders delegate tasks to others, show initiative, motivate team members, and unite members in accomplishing team goals. Based on the last few months of working with your team, please rate each group member on the extent to which they demonstrated effective leadership within your group.

Please rate each team member's effectiveness as a leader on the following scale relative to all other team members you have ever worked with on a team project.

Please enter your first team member's name in the space to the left of the scale. Please place a line on the scale to indicate the number that best represents your assessment.

Far Below Average	Average Team Member	Far Above Average								
0	10	20	30	40	50	60	70	80	90	100
<hr style="border: 0.5px solid black;"/> I-----I										

Appendix D

Theories of Self-Relative-to-Other Behaviour questionnaire (Gerbası & Prentice, 2013).

Self-Other Interest Rating

Please indicate the extent to which you agree with each of the statements.

1. This person only cares about their own interests						
1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Neutral	5 Somewhat Agree	6 Agree	7 Strongly Agree
2. This person is concerned with the overall best interest for the group.						
1 Strongly Disagree	2 Disagree	3 Somewhat Disagree	4 Neutral	5 Somewhat Agree	6 Agree	7 Strongly Agree

Appendix E

Ethics Approval



Date: 5 September 2019

To: Dr. Alex Benson

Project ID: 112318

Study Title: Understanding engineering project teams

Application Type: NMREB Amendment Form

Review Type: Delegated

Full Board Reporting Date: 04/Oct/2019

Date Approval Issued: 05/Sep/2019 15:46

REB Approval Expiry Date: 13/Aug/2020

Dear Dr. Alex Benson,

The Western University Non-Medical Research Ethics Board (NMREB) has reviewed and approved the WREM application form for the amendment, as of the date noted above.

Documents Approved:

Document Name	Document Type	Document Date	Document Version
EngMaterials2019-2020_V2_20190827	Online Survey	27/Aug/2019	1
EngMaterials2019-2020_V2_20190827	Paper Survey	27/Aug/2019	1
Letter of information ENG 2019 Sep implied consent version	Implied Consent/Assent	04/Sep/2019	1
Letter of information ENG 2019 Sep implied consent version clean	Implied Consent/Assent	04/Sep/2019	1
Letter of information ENG 2019 Sep written consent version clean	Written Consent/Assent	04/Sep/2019	1

REB members involved in the research project do not participate in the review, discussion or decision.

The Western University NMREB operates in compliance with the Tri-Council Policy Statement Ethical Conduct for Research Involving Humans (TCPS2), the Ontario Personal Health Information Protection Act (PHIPA, 2004), and the applicable laws and regulations of Ontario. Members of the NMREB who are named as Investigators in research studies do not participate in discussions related to, nor vote on such studies when they are presented to the REB. The NMREB is registered with the U.S. Department of Health & Human Services under the IRB registration number IRB 00000941.

Please do not hesitate to contact us if you have any questions.

Sincerely,

Katelyn Harris, Research Ethics Officer on behalf of Dr. Randal Graham, NMREB Chair

Note: This correspondence includes an electronic signature (validation and approval via an online system that is compliant with all regulations).

Appendix F

JENNIFER LYNCH

MSc. Candidate
 Department of Psychology
 University of Western Ontario
 London, ON

EDUCATION

MSc. Industrial/Organizational Psychology	In Progress (2021)
Western University (London, Ontario)	
<i>Thesis: Timber! How Loss of Trust Contributes to the Downfall of Narcissistic Leaders</i>	
BA (Honours Specialization) in Psychology	2019
Western University (London, Ontario)	
<i>Thesis: How Narcissistic Admiration and Rivalry Relate to Team Conflict Processes</i>	
BHSc (Honours Specialization) in Health Sciences	2018
Western University (London, Ontario)	

AWARDS, SCHOLARSHIPS, AND DISCTINCTIONS

Social Sciences and Humanities Research Council Scholarship (CGS-M), Western University	2020
Douglas N. Jackson Memorial Award, Western University	2019
Dean's Honour List, Western University	2016-2019

RESEARCH INTERESTS

Group dynamics, followership, leadership, and individual differences.

RESEARCH EXPERIENCE

Research Assistant: Meta-analysis Coding Western University	January 2020-March 2020
Research Assistant: Meta-analysis Coding Western University	January 2019-March 2019
Pre-graduate Research Work: Data organization Western University	August 2019

CONFERENCE PRESENTATIONS

Lynch, J., Jordan, C., Giacomini, M., & Benson, A. (February, 2021). Dr. Jekyll and Mr. Hyde: How narcissistic admiration and rivalry relate to perceived narcissism and likeability within teams over time. Poster Presentation at the meeting of the Society for Personality and Social Psychology, virtual.

Lynch, J., Benson, A., & McGregor, A. (May, 2019). How narcissistic admiration and rivalry relate to team conflict processes. Poster Presentation at the meeting of the Canadian Psychological Association, Halifax, Nova Scotia.

PUBLICATIONS

Lynch, J., McGregor, A., & Benson, A. J. (2021). My way or the highway: Narcissism and dysfunctional team conflict processes. *Group Processes and Intergroup Relations*.
<https://doi.org/10.1177/13684302211001944>

VOLUNTEER & GROUP MEMBERSHIP

Ethics and Subject Pool Executive Committee, Graduate Student Representative Western University	2020-2021
Society of Graduate Students: Policy Committee Western University	2020-2021
Psychology Colloquium Committee Western University	2020-2021
Society of Graduate Students: Psychology Commissioner Western University	2019-2021
Ontario Perception of Care survey distribution Canadian Mental Health Association, Middlesex	2016-2017

MEMBERSHIPS

Society for Personality and Social Psychology	2020
Canadian Psychology Association	2019