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Intergroup Leadership: Two Paths to Encourage Positive Intergroup Behaviours

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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

An intergroup context can lead to decreased intentions to engage in positive intergroup behaviours. The current study examined the effect of a leader promoting an intergroup relational identity when there are potential tensions between groups. I used randomized between-subject experimental procedures. Participants (N = 281) were randomly assigned to work with outgroup members under a "collective" or "intergroup" leader. The main manipulation controlled for leader rhetorical focus. In the collective condition, the leader emphasized similarities. In the intergroup condition, the leader acknowledged contributions from both groups. Results showed that in the intergroup condition, participants were more likely to engage in organizational citizenship behaviours. Furthermore, being perceived as promoting an intergroup relational identity was positively associated with knowledge-sharing intentions, organizational citizenship behaviours-individual and organizational citizenship behaviours-organizational. Trust in leader mediated such relationships. My thesis highlighted the effective practice of recognizing each subgroup in intergroup contexts and the central role of trust.

Keywords: Intergroup Leadership; OCBs; Knowledge Sharing Intentions; Social Identity; Psychological Safety; Conflict

Summary for Lay Audience

Working in organizations often entails collaboration, and sometimes employees need to work with people from other departments or even companies. An intergroup context (e.g., marketing departments from two locations of the same company collaborate on a project; a cardiologist and an orthopaedist work together on a complex surgery) might interrupt knowledge flow and lead to a decreased intention to engage in behaviours that benefit the whole group, partly because different groups hold different identities. Therefore, understanding ways to bring different groups together without them fighting against each other is essential. The current study examined ways to improve intergroup relationships through the leadership lens.

To evaluate the influence of leadership behaviours, I designed an experiment where I assigned participants to conditions characterized with a different leader rhetorical focus. Participants were asked to imagine working with people from an outgroup, which was in conflict with the current group. In one condition, the leader tried to minimize differences between groups and force a new identity (collective identity focus). In the other condition, the leader acknowledged contributions from both groups and emphasized the relationship aspect of both groups (intergroup relational identity focus).

On average, participants in the intergroup leadership condition indicated a higher intention to engage in behaviours that benefit the intergroup. Furthermore, irrespective of the experimental condition, when leaders were perceived as striving to promote an intergroup relational identity, participants were more willing to share information, help people from the other group and the whole group because they trust this leader. This study underlines the effectiveness of encouraging an intergroup relational identity when leading across groups.

Acknowledgments

First and foremost, I would like to express my deepest appreciation to my supervisor Dr. Alex Benson, not only for his guidance and help for the past two years, but also for his assistance and edits throughout my thesis. I have learned and grew so much, and words could not begin to describe the gratitude I hold towards you, Alex.

It was my honour to have such a wonderful thesis committee. I would like to thank Dr. John Meyer and Dr. Natalie Allen for dedicating their time and providing such valuable suggestions. To my amazing cohort, Jocelyn Brown, Jennifer Lynch, and Cullen McCurrach, thank you for showing me great kindness and helping me adjusting and persisting through many difficult times. To my wonderful lab mates, Noelle Baird, Lynden Jensen, Alex McGregor, Tina Xu, thank you for always sharing and caring. I am fortunate enough to join a program that is so supportive and collaborative. In addition, I would like to give a special thank you to Dr. Giovanni Travaglino of the University of Kent, for introducing me into the world of psychology and being such a fantastic friend and colleague.

Lastly, I would like to thank my parents, for their consistent support and help. I could not achieve anything if not for them, even though they still do not know the full name of my major.

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Intergroup Leadership: Two Paths to Encourage Positive Intergroup Behaviours

Leaders are a central part of an organization and their behaviours can profoundly influence many organizational outcomes (Hogg, 2001; Reichard & Johnson, 2011). For example, leadership influences employees' job satisfaction (Fisk & Friesen, 2012), job performance (Ng, 2017), and turnover intentions (Eberly et al., 2017). Importantly, the way in which leaders behave may influence employees' willingness to engage in organizational citizenship behaviours (OCBs, Fisk & Friesen, 2012; Nohe & Michaelis, 2016) and share their work-related knowledge (Wang & Hou, 2015). However, leaders often find themselves in a difficult situation where they have to facilitate collaborations between two or more groups. This, surprisingly, is not typically considered as a specific domain of leadership, reflecting a general tendency to overlook the importance of how leaders manage intergroup relations (Richter et al., 2006).

In organizations, whether they are labelled as work units, departments, or teams, their interactions make up the basic elements of an organization. In a sense, organizations are collectives of such interrelated groups rather than separate individual members. High performing organizations often require collaborations between those groups (Brett & Rognes, 1986). More often than not, different teams are brought together to complete a task. It is essential for teams of such working together smoothly, maintaining amity for at least the duration of the inter-team collaboration. However, *intergroup contexts* (i.e., situations where interactions between groups with clearly defined boundaries are presented) may cause animosity between groups. Under such tension, groups may compete against each other and prioritize their own interests at the expense of organizational goals. For example, groups may vie for scarce organizational recourses (Pfeffer & Salancik, 1977) or emphasize the different aspects of their identities. This, however, is obviously detrimental to effective collaboration and organizational outcomes (Kramer, 1991).

As different groups encompass different identities, leaders are often faced with the challenge of facilitating positive behaviours (e.g., knowledge sharing, OCBs) across distinct groups (Nadler et al., 2009). Although some research has examined knowledge sharing behaviours and OCBs in intergroup contexts (Koschate et al., 2012; Tufan et al., 2019), these studies do not directly address the role of leadership under such circumstances. Research suggests that when intergroup collaboration is essential, it might be more effective for leaders to emphasize the interdependent relationship between distinct subgroups (i.e., *intergroup relational identity*) instead of forcing a new overarching identity (Hogg et al., 2012a). The current thesis aims to examine leadership in intergroup contexts and the mechanisms through which a leader's ability to promote an intergroup relational identity is related to group members' intentions to share knowledge and engage in OCBs towards outgroup members.

The Social Identity Approach and Intergroup Leadership

Social identity theory and self-categorization theory (i.e., the *social identity approach*) constitute important theoretical frameworks for investigating intergroup behaviours and the role of leadership in a group (Abrams & Hogg, 1988; Ashforth & Mael, 1989; Hornsey, 2008). Social identity theory (Tajfel & Turner, 1979) proposes that an individual's self-concept encompasses both a personal and a social identity. Personal identity refers to an individual's awareness of their idiosyncratic characteristics and personal traits. Social identity, instead, is defined as one's awareness of, and emotional attachment to a group. Self-categorization theory (Turner et al., 1987) contends that individuals define themselves at different levels of identity, ranging from a personal identity to more abstract levels of group memberships. When individuals identify as group members, they incorporate that group membership into their sense of self (Turner et al., 1987). Because individuals thrive to maintain their distinct social identities, they are less likely to engage in behaviours that typically involve mixing different identities (Hornsey, 2008). Research indicates that

individuals who identify more strongly with a group display stronger ingroup favouritism and loyalty to the ingroup, and simply being a group member can trigger ingroup favouritism (Balliet, et al., 2014; Levine & Moreland, 2002; Haslam & Ellemers, 2005). As group members demonstrate ingroup favouritism and outgroup bias, behaviours that help outsiders are liable to be perceived as a form of betrayal to ingroup members because it puts the ingroup in a disadvantageous position. A challenge for leaders, then, is developing a strategy to optimally guide group members through intergroup contexts.

From a social identity perspective, leaders play a key role in constructing and managing their organization's identity (Balmer, 2008). Ingroup members who represent the group well (i.e., viewed as a prototypical member) are more likely to be perceived as reliable, granted influence over others, and ultimately, chosen as leaders (Hogg et al., 2012b). A challenge encountered by many leaders, however, is that organizations consist of different teams and groups that are demarcated by distinct identities, histories, goals, norms, and functions. Group members often cherish and place great value upon their distinct subgroup identities within broader organizations (Brewer, 1991). At the same time, groups also face situations where intergroup collaboration is essential to achieve goals or optimal organizational functioning (Bartunek, 2011; Pittinsky & Simon, 2007). As such, understanding how individuals can effectively lead an organization as a whole across different (sometimes even conflictual) identities is highly important. Effective leadership is then dependent partly on a leader's ability to represent what an intergroup stands for (Hais, et al., 1997).

According to intergroup leadership theory (ILT; Hogg et al., 2012a), leaders are more likely to overcome this challenge when they are perceived as fostering an *intergroup relational identity* among subgroups. An intergroup relational identity defines a group in terms of its connection with other groups. For example, a teacher identity can be defined in

terms of their relationship with the students (i.e., what makes a teacher is partly their duty to teach students; there are no teachers without students). In this case, creating an overarching identity (i.e., we are all members of this school) does not acknowledge their distinctive parts. In contrast, an intergroup relational identity emphasizes the distinctive and unique attributes of each group involved in the relationship, beyond their similarities. Relational identity is different from a collective identity, which emphasizes similarities and minimizes distinctiveness (Brewer & Gardner, 1996; Hogg et al., 2012a).

A core tenet of intergroup leadership theory is that leaders who are perceived as promoting a relational identity are more likely to foster positive intergroup collaborations and pro-group behaviours. In line with this idea, Rast et al. (2018) conducted three experiments examining the effects of promoting an intergroup relational identity. In the face of an identity distinctiveness threat, promoting a relational identity (compared to a collective identity) increased individuals' favourability towards the leader and improved intergroup attitudes. This is because, when leaders try to create a superordinate collective identity, they fail to recognize that important distinctions exist between groups. Promoting an intergroup relational identity, on the other hand, provides a sense that the collaborative interdependent nature that already exists between groups is valued. Therefore, leaders are judged more favourably and conflicts intrinsic to intergroup relations are lessened when leaders promote an intergroup relational identity, especially when a distinctiveness threat is salient. From an identity management perspective, promoting an intergroup relational identity should be a strategy that is more suited for ad hoc teams. Ad hoc teams are put together for a specific task with no future interactions described. In line with these thoughts, my thesis examines whether psychological safety and trust help to explain the effect of intergroup leadership on positive behaviours across group boundaries, with a specific focus on knowledge sharing and OCBs towards members from the other group.

The Context of High Conflict Level

Intergroup conflict has persisted throughout human history. From political conflicts to international tensions, intergroup conflict has a strong presence in human society. It has undoubtedly also plagued leaders and organizations in terms of how to bring seemingly different groups of people together. Social identity theory (Tajfel & Turner, 1979) places conflict as one of the strongest influences on one's social identity. Specifically, conflict with outgroup members creates a clear boundary between the ingroup and outgroup(s). Self-categorization theory further explains when and how different social identities become salient in a given condition (Turner et al., 1987). Individuals' identities emerge in contrast to other social objects. For instance, a student's identity may be dormant when they travel around during vacations. When they meet someone who is also a student while travelling abroad, however, their student identity may become salient in this situation. In an intergroup context (e.g., intergroup collaboration) then, daily contact between different group members makes their own group identity stand out and become salient to their own self-image.

In times of conflict, which are often associated with personal stress and turbulence, group members may look to leaders for guidance and vision (Conger, 1999, p. 164). Social information processing theory (Salancik & Pfeffer, 1978) proposes that individuals' perceptions, attitudes, and behaviours are largely influenced by the social cues provided in their immediate environments. Group members rely heavily on cues from leaders to guide them through uncertainty and ambiguity in times of conflicts. As a result, group members' sense of safety and trust would be stronger under times of conflict as intergroup leaders foster a higher level of intergroup relational identity that prevents identity clashes.

Psychological Safety and Trust in Leader as Proximal Outcomes of Intergroup Leadership

The concept of psychological safety is rooted within the work of Schein and Bennis (1965) on organizational change. They introduced psychological safety as a pivotal part for organizational learning and change because it creates an environment that tolerates failure with no retribution. Over the years, several definitions of psychological safety have emerged (Kahn, 1990; Newman et al., 2017). The majority of research has adopted Edmondson's (1999) definition, which refers to psychological safety as a belief as to whether a team is a safe place to engage in interpersonal risk-taking behaviours, such as voicing new ideas, intergroup collaborations, and experimenting with new methods (Edmondson, 1999; Nembhard & Edmondson, 2012). Psychological safety is positively associated with multiple behavioural outcomes, including knowledge sharing behaviours (Siemsen et al., 2009), creativity (Madjar & Ortiz-Walters, 2009), and OCBs (Clark et.al, 2014). As Schneider noted, "People in the work setting form climate perceptions because apprehending order in the world is a basic human chore" (1975, p. 460). Organizational members' perceptions of the climate in which they interact with others frequently serve as a beacon to guide their behaviours and are particularly important in their interactions with outgroup members. Thus, psychological safety could be important in explaining intergroup behaviours directly involving other individuals. As Zohar (1980) noted, individuals' perception of safety is directly related to how leaders behave. If a leader tries to promote an intergroup relational identity, which prevents an identity clash, a sense of safety should be built. That is, individuals should feel a higher level of freedom to express themselves without facing potential negative consequences, which is the core of psychological safety (Edmondson, 1999). Therefore, I propose the following:

H_{1a}. Leaders' efforts to foster an intergroup relational identity (compared to a collective identity) will increase psychological safety.

Trust is the willingness to be vulnerable and assume risks in a relationship (Mayer et al., 1995). It characterizes one's confidence and beliefs regarding specific social exchange partners (Sjahruddin & Normijati, 2013). When someone trusts another person, there is a strong expectation that one will engage in a set of behaviours that are important to the trustee (Gillespie 2003; Mayer et al., 1995). However, trust is a complex and multidimensional construct. There are many aspects where one's trust can lie, such as fairness, competency, integrity, and more (Butler, 1990). Trust originates partly from the belief as to whether a leader will do good and has group members' best interests in mind (Mayer et al., 1995). Promoting an intergroup relational identity acknowledges contributions and distinctiveness from both sides and thus is likely to generate trust more in terms of how fair the leaders will be steering the intergroup (Hogg et al., 2012a).

Moreover, as noted before, intergroup leaders acknowledge the distinct and unique parts of identities and emphasizes on the relationship aspect. Co-existence of multiple, sometimes even conflictual, identities thus becomes possible if a leader is perceived to be fostering an intergroup relational identity (Hogg et al., 2012a). Leaders promoting a higher level of intergroup relational identity may improve the relationships between subgroups because a portion of one's group identity essentially overlaps with that of the outgroup. Therefore, even though group members may still perceive outgroup members as "outsiders", intergroup hostility will most likely be mitigated because the "outsiders" are partly "insiders". Promoting an intergroup relational identity may then buy trust to the leader as it circumvents identity threat (i.e., concerns as to the extent to which the group is different from other similar groups). The leader is instead being perceived as transparent and honest in acknowledging real intergroup differences (Hogg et al., 2012a). Therefore, I propose:

H_{1b}. Leaders' efforts to foster an intergroup relational identity (compared to a collective identity) will increase trust in leader.

Knowledge Sharing Behaviours and Organizational Citizenship Behaviours as Distal Outcomes of Intergroup Leadership

Promoting an intergroup relational identity may foster a sense of psychological safety and trust in the leader, which may further lead to positive intergroup behaviours. For example, group members may be more willing to share knowledge and go beyond their formal job requirements to help outgroup members if they believe it is safe to take personal risks. Moreover, when group members possess a strong sense of trust in their leader, they may act in a way that benefits the whole group because they feel bound to the leader's goal.

Knowledge sharing behaviours

Sharing knowledge is vital to the prosperity of organizations in competitive environments (O'Dell et al., 1998; Ryu, Ho, & Han, 2003). Knowledge sharing refers to the behaviour of disseminating one's accrued knowledge within a group or organization (Liebowitz, 2001). However, past studies focused mainly on knowledge sharing behaviours within a specific group, such as employees in organizations (Bock et al., 2005), physicians in hospitals (Ryu et al., 2003), or virtual communities (Hsu et al., 2007). Sharing knowledge across different groups has received little attention. Even though sharing knowledge gives groups a competitive advantage, managers often find promoting such practices difficult because it does not come naturally to most people and is contingent on many factors (Bock et al., 2006). For example, employees may be less likely to share knowledge if they feel their supervisor cannot distinguish their personal effort from that of their co-workers (Bock et al., 2005; Boroumand et al., 2018).

Extensive research has focused on the motivations behind knowledge sharing behaviours (Wang & Hou, 2015). People tend to be more motivated to share information

when they believe they will be rewarded for doing so, which suggests reciprocity plays a crucial factor in knowledge sharing (Chang & Chuang, 2011; Bock et al., 2005). Moreover, identification with a group tends to increase people's willingness to share knowledge because they want to maintain the social capital afforded by the group (Chang & Chuang, 2011). Individuals are more likely to share knowledge if they perceive the benefits outweigh the costs (Chang & Chuang, 2011). Under intergroup contexts involving conflict, ingroup members might be reluctant to share their knowledge with outgroup members partly because they fear how they would be perceived by ingroup members. If they feel they are in a safe place to take personal risks, however, this may increase their intentions to share knowledge. Therefore, I propose:

> **H_{2a}.** Psychological safety will be positively associated with knowledge sharing intentions.
>
> **H_{2b}.** Leaders' efforts to foster an intergroup relational identity (compared to a collective identity) will exert a positive indirect effect on knowledge sharing behaviours through a positive effect on psychological safety.

Organizational Citizenship Behaviours-Individual (OCBI)

OCBs are broadly referred to as behaviours that enhance job performance but go beyond formal job requirements (Organ, 1988). Helping other group members and staying at work beyond normal working hours are two examples of such behaviours. McNeely and Meglino (1994) further suggested OCBs should be distinguished by the target of the helping behaviour. Whereas behaviours directed toward group members that benefit individual members' performance refer to organizational citizenship behaviours-individual (i.e., OCBI), behaviours directed at one's organization that benefit the whole group refer to organizational citizenship behaviours-organizational (i.e., OCBO, Dalal, 2005). This distinction is particularly important to the current study because distinct processes may explain why group

members engage in different forms of OCBs in intergroup contexts. OCBs are related to a range of positive organizational outcomes, such as improved work outcomes, promotion of organizational goals, increased effectiveness, creativity, and a more positive climate (Vigoda-Gadot, 2007). Some researchers have even claimed that organizations could not survive unless employees were willing to engage in OCBs from time to time (Katz & Kahn, 1978; Robinson & Morrison, 1995).

Even with the importance of OCBs, it is not easy for organizational members to consistently engage in such behaviours. OCBI often entails taking personal risks, especially in intergroup contexts. For example, if an employee tries to help an employee from the "outgroup" with work-related issues (e.g., a different organizational department), they may be perceived as giving others an advantage that could be used against the ingroup in the future. These behaviours are atypical to the ingroup and other group members may attempt to maintain group stereotypes by separating the "good" representatives of the ingroup from the "bad seeds" (Marques & Paez, 1994). The negative implications would deter group members from engaging in OCBI in intergroup contexts. Leaders who promote an intergroup relational identity, however, may create the sense of psychological safety needed for group members to feel comfortable to help outgroup members in ways that go beyond their formal job requirements. However, OCBO are behaviours directed at the group or organization as a whole. The effect of psychological safety in the context of high conflict intergroup contexts focuses on alleviating the negative perception of identity loss associated with the formation of a superordinate group. However, in the case of OCBO, the identity cost would be low as OCBO benefit both groups. In this sense, psychological safety may only be weakly associated with OCBO, if at all. Therefore:

H_{3a}. Psychological safety will be positively associated with intentions to engage in OCBI rather than OCBO.

H_{3b}. Leaders' efforts to foster an intergroup relational identity (compared to a collective identity) will exert a positive indirect effect on OCBI through a positive effect on psychological safety.

Organizational Citizenship Behaviours-Organization (OCBO)

For OCBs targeted at the whole group, OCBO may have different implications for group members in intergroup settings because the identity focus shifts to the whole group instead of their sub-group identities. Social exchange theory (Blau, 1964) is a useful theoretical framework to explain the occurrence of OCBO in intergroup contexts. According to social exchange theory, group members who feel a strong norm of reciprocity may exert extra effort toward work in exchange for receiving support or favour from a leader or an organization. For example, employees who felt supported by their leader tended to engage in higher levels of OCBs (Hofmann, et al., 2003; Kessler, et al., 2004).

Trusting one's leader provides a base for such reciprocity. Group members who trust their leader are more likely to feel impelled to follow a leader's declared goals and mission for the group. This assumes that subordinates and leaders are engaged in a social exchange relationship. Group members feel a strong need to pay back good treatment of their leader through behaviours that benefit the leader (i.e., identification with the leader's goals; Blau, 1964; Konovsky & Pugh, 1994). Trusting a leader changes group members' beliefs, values and attitudes so that they are willing to perform beyond the minimum required by the organization (Podsakoff et al., 1990). From a social identity perspective (Tajfel & Turner, 1979), however, OCBO is different from OCBI in intergroup contexts. OCBI directly involves people from the other group while OCBO instead, focuses more on the overarching intergroup. As leaders are a key representative of the group, their actions represent what the group stands for and trust in leaders should make group members behave beneficially to the whole group. However, trusting a leader does not lessen their fear for potential sanctions

from other group members if they engage in behaviours that directly benefit the outgroup. Therefore, I propose the following:

H_{4a}. Trust in leader is positively associated with OCBO intentions.

H_{4b}. Leaders' efforts to foster an intergroup relational identity (compared to a collective identity) will exert a positive indirect effect on OCBO through a positive effect on trust in leader.

Overview of Hypotheses

Intergroup contexts such as intergroup collaboration pose special difficulties for leaders and the intergroup. A key issue is that individuals' sub-group identities become salient in such circumstances and helping outgroup members will be considered as an act that blurs the group boundaries (Hogg et al., 2012a). Engaging in knowledge sharing behaviours and OCBs, especially OCBI, further signals a possibility of giving the outgroup an advantage, which might be considered deviant by other ingroup members. What can leaders do to prompt knowledge sharing behaviours and OCBs while trying to bring multiple teams together?

According to intergroup leadership theory (Hogg et al., 2012a), if leaders successfully construct a stronger intergroup relational identity in such dire situations, employees may feel safe enough to take personal risks (H_{1a}). Moreover, efforts to promote an intergroup relational identity will also buy trust in the leader because intergroup leaders acknowledge both groups and are perceived as open and honest (H_{1b}). Psychological safety further encourages stronger intentions to engage in OCBI (H_{2a}-H_{2b}) and knowledge sharing (H_{3a}-H_{3b}) because psychological safety alleviates the potential negative impacts on their identity from behaviours directly involves members from another group. However, psychological safety does little to help promoting OCBO because beneficial behaviours targeting the whole group has little bearing on their potential identity loss. In such cases, trust in leader encourages

OCBO because group members feel a need to reciprocate the leader by abiding the leader's mission and engaging in behaviours that benefit the group as a whole (H_{4a}-H_{4b}). Figure 1 is a visual depiction for the proposed model.

Methods and Procedure

Undergraduate students (*N* = 281) from a large Canadian university were recruited to take part in a study about leadership, of which five participants did not provide consent to the study and two did not answer questions beyond manipulation. Students received half course credit in exchange for their participation. Participants self-reported diverse backgrounds, with 42% of the participants identifying as white, 33% as Asian, 3.9% as Middle Eastern, 3.6% as East Indian, 2.5% as Black and 1.1% as Hispanic. In addition, 13.5% of the participants identified with multiple ethnicities or with an ethnicity that was not listed. Five participants did not provide their ethnicity. Further, 78.6% of the participants were female and 21% were male. One participant did not identify with any gender and five did not provide their gender.

Experimental Design

Ethics was approved by the Office of Human Research Ethics at the university with which the author is affiliated. All the responses were collected online through Qualtrics survey software. A captcha test was placed at the beginning of the study to prevent low quality responders from accessing the survey. Participants completed the questionnaire using their own electronic devices. After providing consent, demographic and cultural variables were collected. Next, participants were randomly assigned to read one of two vignettes that varied by leader's rhetorical focus (i.e., promoting a collective identity vs. intergroup relational identity). An equal number of participants were assigned to each condition (*n* = 137).

Participants were given a preamble as to why they were reading about this leader's speech. Working with competing university students, participants were asked to produce a

report on each school's advantages and disadvantages, which serves as a guide for new high school graduates. The target outgroup university was chosen because both ingroup and outgroup universities had similar rankings and were in competition. This situation closely resembles real organizational problems in which two competing groups must work together. It also represents ad hoc team well in the sense that team members had no expectation of merging into one beyond the collaboration. Student identity was chosen because student identity is deeply ingrained in each participant. Such identity might create a stronger response when participants have to work with outgroup members. The passages representing the leader's rhetorical focus were designed to indicate that the leader was either promoting a collective identity or an intergroup relational identity in a hypothetical situation where they had to work with students from a competing university. Leaders in the intergroup relational identity condition asked their teammates to work together while retaining their distinctiveness:

> …It is important that students from both universities recognize the unique and valued contributions each one can provide to the team.... Students should not ignore important differences between Western University and Queen's University and pretend both schools are the same. In fact, it is essential that students from both universities realize that this collaboration will only excel if individuals recognize the distinct and unique roles that students from both universities possess.

In contrast, leaders in the collective identity condition asked employees to ignore their past experiences to work as a team:

> … It is important that students from both universities recognize your similarities and work together as members of this collaborative team. …… I believe you are part of a single collective team, and ignoring your differences is an essential to your success. In fact, it is essential that students from both universities realize that this collaboration

will only excel if individuals recognize they have a common identity as a member of this team, no matter university to which they belong.

A manipulation check assessed participants' evaluation of the leader's rhetorical focus (on promoting an intergroup relational identity). As an attention check, participants were asked to correctly identify the purpose of the report that appeared in the prompt for the hypothetical scenario. Afterwards, participants were asked to complete several questionnaires regarding key variables in the study (i.e., intergroup relational identity, psychological safety, trust in leader, OCBs and knowledge sharing intentions). Last, participants were debriefed and thanked at the end of the study.

Measures

Measures are described below. Unless stated otherwise, all measures used a 7-point Likert scale (*1 = Strongly Disagree* to *7 = Strongly Agree*).

Leader's Effort to Promote an Intergroup Relational Identity

Leader's effort to promote an intergroup relational identity was measured using a 4-item scale adapted from Rast et al. (2018). Participants were asked to think about their leader in the prior vignette and to indicate how much they agree or disagree with each item. Sample items are "This leader stresses that students from Western University and those from Queen's University work together while preserving their distinct and separate identities"; "This leader argues that emphasizing each group's unique strengths is crucial" (α = .88). Perceived leader's effort to promote an intergroup relational identity was used to determine the effectiveness of the manipulation.

Psychological Safety

Psychological safety was measured using a 4-item scale adapted from Edmondson (1999). Participants were asked to indicate the extent to which they agree or disagree with each of the statements based on how they would feel in their new team. Sample items are "If

you make a mistake on this team, it would often be held against you by students from Queen's University"; "It would be difficult to ask students from Queen's University for help"(reverse coded); and "No one from Queen's University would deliberately act in a way that undermines my efforts" (α = .72).

Trust in Leader

Trust in leader was measured using a 5-item scale adapted from McAllister (1995) and Podsakoff et al. (1990). Participants were asked to indicate the extent to which they agree or disagree with each of the statements based on how they would feel about the leader in the prior vignette. Sample items are "I would feel quite confident that my leader will always try to treat me fairly"; "I would be willing to freely share my ideas, feelings, and hopes with this leader" and "If I shared my problems with this leader, I know (s)he would respond constructively and caringly" (α = .91).

OCBs

Organizational citizenship behaviours (OCBI and OCBO) were assessed using an 8-item scale adapted from Lee and Allen (2002). Sample items are "I would willingly give my time to help students from Queen's University who have problems"; "I would offer ideas to improve the functioning of the team" (α_{ocbo} = .81; α_{ocbi} = .84).

Knowledge Sharing Intentions

Knowledge sharing intentions was assessed using a 4-item scale adapted from Bock et al. (2005). Sample items are "I would share my illustrations and analysis with students from Queen's University"; "I would always provide my templates, methodologies and models for students from Queen's University" and "I would intend to share my experience or know-how with students from Queen's University" (α = .90).

Conflict Level

Two items were developed to assess conflict level in this study. Participants were asked to indicate the level of conflict based on the passage they read. The two items were “To what extent do you think this way of collaboration can create conflict among students from both universities?” and “To what extent do you think there will be tension working with Queen’s University students?”

Attention Check

Participants were asked to indicate what the report included based on the passage they read. They chose from “Student experience; pros and cons of each university”, “Tuition fees”, “Major description” and “I forgot”. Of the 274 undergraduate students, 35 participants (17 in the intergroup leadership condition and 18 in the collective leadership condition) failed the attention check and were excluded from the subsequent analysis.

Data Analysis and Results

Data Inspection

To test for the influence of extreme outliers, I calculated standardized scores for leader’s effort to promote an intergroup relational identity (i.e., the manipulation check for leader rhetorical focus) by each manipulation condition (i.e., intergroup leadership and collective leadership conditions). Three respondents had scores above 2.24. Similarly, I calculated a standardized score for conflict levels, and five respondents went over the probable range. As suggested by Aguinis et al. (2013), these are extreme outliers. Next, I conducted sensitivity analyses with and without these outliers. However, excluding the outliers from the dataset did not change the patterns of results. Therefore, I report the results with outliers included. A sensitivity power analysis was conducted to evaluate the required effect size for detecting a significant effect. This study was powered to be able to detect a small to moderate effect, $f = .18$, $N = 236$, $\alpha = .05$, $1\text{-}\beta = .80$.

Analysis of Variance

Means and standard deviations by condition were summarized in Table 1. The descriptive statistics and correlations between variables were shown in Table 2. All analyses were conducted in software R 4.0.0 (R Core Team, 2020). First, to test the effectiveness of the manipulation, a one-way ANOVA was performed to determine if intergroup relational identity scores were significantly higher in the intergroup leadership condition than the collective leadership condition. Leader's rhetorical focus was dummy coded (i.e., collective identity = 0; intergroup relational identity = 1). The results showed a significant difference in how participants perceived leader's rhetorical focus between two conditions, $F(1, 235) = 99.47$, $p < .001$, $\eta^2 = 0.30$. As expected, a post hoc contrast via TukeyHSD revealed that participants in the intergroup leadership condition scored 1.58 higher than those in collective leadership condition, 95% CI = [1.27, 1.90], $p < .001$. Next, to evaluate whether the manipulated elicited differences in trust in leader and psychological safety, one-way ANOVAs were conducted. Results showed that leader rhetorical focus did not elicit differences in either trust in leader, $F(1, 234) = 0.35$, $p = .554$, $\eta^2 = 0.00$, or psychological safety, $F(1, 234) = 0.72$, $p = .454$, $\eta^2 = 0.00$. However, leader rhetorical focus produced differences in OCBO, $F(1, 234) = 4.14$, $p = .043$ $\eta^2 = 0.02$. Post hoc analysis showed a 0.20 increase in the intergroup leadership condition 95% CI = [0.01, 0.39], $p = .043$, $\eta^2 = 0.02$.

Path Analysis

Next, path analysis was conducted using the lavaan package (Rosseel, 2012) in software R 4.0.0 (R Core Team, 2020). To test hypotheses H_1-H_3, I specified a model where leader rhetorical focus predicted psychological safety and trust in leader. In turn, I expected trust in leader to predict OCBO, and psychological safety to predict OCBI and knowledge sharing intentions. Figure 2 visually represents this model.

Results showed that the data fit the model poorly (CFI_{robust} = 0.75; TLI_{robust} = 0.07; $RMSEA_{robust}$ = 0.31, 90% CI = [0.25, 0.37] and $SRMR_{robust}$ = 0.16). H_{1a}-H_{2b} predicted that leader's focus on forming an intergroup leadership would create an environment of psychological safety and buy trust in themselves. However, leader's rhetorical focus did not significantly relate to psychological safety (*B* = -0.11, *SE* = 0.15, CI = [-0.40, 0.18], *p* = .451) or trust (*B* = 0.09, *SE* = 0.14, CI = [-0.20, 0.37], *p* = .552). Supporting H_{2a} and H_{3a}, psychological safety was positively related to knowledge sharing intentions (*B* = 0.14, *SE* = 0.05, CI = [0.05, 0.23], *p* = .003) and OCBI (*B* = 0.14, *SE* = 0.05, CI = [0.05, 0.23], *p* < .01). Moreover, as predicted in H_{4a}, trust in leader was positively associated with OCBO (*B* = 0.10, *SE* = 0.04, CI = [0.02, 0.18], *p* = .012). However, H_{2b}, H_{3b} and H_{4b} were not supported as the indirect effects were not significant. Psychological safety did not exert an indirect effect on knowledge sharing intentions, *B* = -0.02, *SE* = 0.02, CI = [-0.06, 0.03], *p* = .461, or OCBI (*B* = -0.02, *SE* = 0.02, CI = [-0.06, 0.03], *p* = .464). The indirect effect on OCBO via trust in leader was also not significant (*B* = 0.01, *SE* = 0.02, CI = [-0.02, 0.04], *p* = .562). Therefore, the indirect effects of the proposed model were not supported.

Given that the manipulation had a significant effect on how individuals constructed their identity in the team, I further explored the role of perceived leader effort to construct an intergroup relational identity in predicting knowledge sharing intentions and organizational citizenship behaviours. It is possible that leader's speech might not be enough to elicit positive intergroup behaviours. After all, theory emphasizes that the perception of leader's effort to promote an intergroup relational identity is what drives the positive organizational behaviours.

Secondary Analyses

Similar to Model 1, instead of leader rhetorical focus, perceived leader's effort to promote an intergroup relational identity was specified as a predictor of psychological safety

and trust in leader. In turn, trust in leader was specified as a predictor of OCBO, and psychological safety as a predictor of OCBI and knowledge sharing intentions. Figure 3 is a summary of the proposed Model 2.

The data did not fit the model well (CFI_{robust} = 0.78; TLI_{robust} = 0.17; $RMSEA_{Robust}$ = .31, 90% CI = [0.25, 0.37] and $SRMR_{robust}$ = 0.15) but improved from the previous model. Perceived leader's effort to promote an intergroup relational identity was significantly positively related to trust in leader (*B* = 0.28, *SE* = 0.05, CI = [0.18, 0.38], *p* < .001). However, a similar pattern was not observed for psychological safety (*B* = -0.07, *SE* = 0.05, CI = [-0.17, 0.03], *p* = .190). Like Model 1, psychological safety was positively related to knowledge sharing intentions (*B* = 0.15, *SE* = 0.05, CI = [0.06, 0.24], *p* = .001) and OCBI (*B* = 0.14, *SE* = 0.05, CI = [0.04, 0.24], *p* = .006). Trust in leader was positively associated with OCBO (*B* = 0.10, *SE* = 0.05, CI = [0.01, 0.18], *p* = .030). The indirect effect of perceived leader's effort to promote an intergroup relational identity on OCBO via trust in leader was significant (*B* = 0.03, *SE* = 0.01, CI = [0.00, 0.05], *p* = .034). However, psychological safety did not mediate the relationship between leader's effort to promote an intergroup relational identity and knowledge sharing intentions (*B* = -0.01, *SE* = 0.01, CI = [-0.03, 0.01], *p* = .226) or OCBI (*B* = -0.01, *SE* = 0.01, CI = [-0.03, 0.01], *p* = .241).

Results of Model 2 highlight the vital role of trust. As previously discussed, intergroup relational identity focuses on the overlapping part of both identities; therefore, a leader who is perceived to establish an intergroup relational identity can be seen as a trustworthy group member. Evidence from Model 1 and Model 2 suggest that trying to form an intergroup relational identity bought more trust in the leader. Further, according to social exchange theory (Blau, 1964), team members would want to act in ways that align with leaders' goals to reciprocate. As discussed in the literature review, knowledge sharing behaviours and OCBI directly involve contact with outgroup members, which makes it hard

for trust in leader to prompt such behaviours. However, because OCBI and knowledge sharing intentions are essential for the group functioning, the need to reciprocate may take the form of encouraging OCBI and knowledge sharing intentions. Therefore, Model 3 was specified as leader's effort to promote an intergroup relational identity predicting trust in leader, which in turn leads to knowledge sharing intentions, OCBI, and OCBO (See Figure 4).

Supporting my predictions, results showed that perceived leader efforts to promote an intergroup relational identity was significantly positively related to trust in leader (B = 0.28, SE = 0.05, CI = [0.18, 0.38], p < .001). Trust in leader was positively related to knowledge sharing intentions (B = 0.42, SE = 0.07, CI = [0.30, 0.55], p < .001), OCBI (B = 0.43, SE = 0.07, CI = [0.28, 0.57], p < .001) and OCBO (B = 0.33, SE = 0.06, CI = [0.22, 0.45], p < .001). With trust in leader as the mediator, there were significant and positive indirect effects of perceived leader's effort to promote an intergroup relational identity on knowledge sharing intentions (B = 0.12, SE = 0.03, CI = [0.07, 0.17], p < .001), OCBI (B = 0.12, SE = 0.03, CI = [0.06, 0.18], p < .001) and OCBO (B = 0.09, SE = 0.02, CI = [0.05, 0.14], p < .001).

Discussion

Intergroup contexts put strains on many behaviours that are beneficial to group functioning. Different groups may compete for valuable recourses (Pfeffer & Salancik, 1977). The reason behind such phenomenon might be that the negative consequences of being associated with an outgroup member could deter people from engaging in positive intergroup behaviours. Therefore, leaders who try to cultivate an identity that brings separate groups together (i.e., intergroup relational identity) may prompt positive intergroup behaviours. My thesis examined how to encourage positive intergroup behaviours through the lens of leadership. When two or more groups work together, leaders constructing an intergroup relational identity helps to break the possible barriers between groups. From a

social identity approach (Tajfel & Turner, 1979; Turner et al., 1987), when people identify with the intergroup, they should feel safe expressing themselves and helping people from other groups. On the other hand, social exchange theory (Blau, 1964) proposes that leaders' efforts to develop such identity should instil a strong need in group members to reciprocate. Group members, therefore, may behave in a way that adheres to leaders' goals.

Past research on intergroup leadership mainly focused on leader evaluation and intergroup attitudes (Kershaw et al., 2021; Rast et al., 2018). The current study expanded this literature to positive intergroup behaviours. An experimental study was conducted to empirically test the effect of intergroup leadership. In the intergroup condition, participants perceived leader's effort to promote an intergroup relational identity, which indicated the effectiveness of promoting such identity through leader speech. Further, a direct causal link was established between leader rhetorical focus and OCBO. On average, participants showed stronger intentions to behave in ways that would benefit the whole group when they perceived the leader was focusing on both groups' unique identities. However, the manipulation of leader rhetorical focus did not influence the proposed mediators: psychological safety or trust in leader.

Nonetheless, when looking at the levels of leaders' effort promoting an intergroup relational identity, results from the path analyses highlighted the central role of trust. First, the objective manipulation of leader rhetorical focus mattered less than how the leaders were perceived. Although the experimental manipulation did not induce higher levels of leader trust, participants indicated a higher trust level when they perceived the leader tried to form an intergroup relational identity. Put another way, people's perception of an intergroup relational identity was significantly associated with group members' trust in the leader. Further, trust in leader seems to be more critical than psychological safety as a mediator of the link between how leader was perceived and positive intergroup behaviours.

It was originally proposed that psychological safety should ease people's nerves if they want to engage in behaviours involved with outgroup members. However, results from Model 2 and Model 3 showed that trust in leader mediated the relation between intergroup relationship identity and positive intergroup behaviours, while psychological safety did not mediate such relations. The nonsignificant mediating effect of psychological safety could be partly attributed to the fact that psychological safety was proposed to be a group-level phenomenon that requires a certain consensus among group members. However, given the vignette design of my study, a shared level of psychological safety was less likely to be elicited from reading a scenario. Future research could explore if a shared psychological safety plays a meaningful role in relation to intergroup relational identity in more ecologically valid designs with organizational samples.

This study further supports a growing body of research on effective leadership under intergroup contexts (Hogg et al., 2012a; Rast et al., 2018). Prior research suggested that identification to the work unit was essential in promoting a wide range of outcomes. Collective identity emphasizes similarities (Ashforth & Mael, 1989), which functions well to encourage pro-ingroup behaviours (Hogg et al., 2012a). By promoting a collective identity in sport teams, athletes were found to exhibit more prosocial behaviours towards their teammates (McLaren et al., 2021). According to Social Identity Approach, group members engage in positive behaviours that benefit the whole group because their group membership is part of their social identity. However, such practice might backfire when the work unit was a collective of two or more subgroups. In intergroup contexts, a strong sense of sub-group identity could instead lead to selfish behaviours that only benefit the sub-ingroup. A collective identity in this sense might bear negative implications as group members' sub-group identity would be diminished in the overarching collective identity. Therefore, people might not behave positively towards out-subgroup members. Thus, the current study

emphasized the important role of leaders trying to form an intergroup relational identity in bridging seemingly different groups to function as a whole. Positive intergroup behaviours from leader's efforts to form an intergroup relational identity seemed partly to result from the increased trust in the leader. These patterns aligned with the proposed rationale that participants would want to reciprocate the leader by engaging in positive intergroup behaviours.

Furthermore, findings from current study bear practical implications. Identity management is complex and situationally dependent. As illustrated in my study, positive intergroup behaviours were more salient when people perceived their leader as trying to promote an intergroup relational identity. It might not always be desirable to promote an overarching identity. Furthermore, leaders should not be unfamiliar with situations where they need to alleviate the tension among group members due to different group memberships. In such scenarios, creating an intergroup relational identity between members should lead to an increased sense of trust group members place in their leaders. The same principles should apply to situations outside the organizational and educational settings. For example, political leaders need to show the ability to bring people of sometimes conflicting political views together. Community leaders want to encourage community involvement of newcomers or immigrants. Therefore, recognizing the subgroup differences can be an effective leadership practice.

Limitations and Future Directions

The experimental procedure utilized provides some confidence in the causal effect of a leader's rhetorical focus on how the leader was perceived to form an intergroup relational identity and how likely group members would engage in OCBO. However, the vignette used in the experiment described a specific situation where university students needed to work with students from a rival university. The ecological validity might be questioned such that

students working on projects might not generalize to other fields. The attitudes towards other people who are different might change with experience and maturation. Individuals might have less adverse reaction to a collective identity leader rhetorical focus as they gain more experience in their work settings. However, this study provides initial evidence on why leader promoting an intergroup relational identity could foster pro-group behaviours under conflict situations. In the current study, I hypothesized high-conflict situations would put a demand on leaders acknowledging each group's identity. Future studies could investigate the contextual factors that render intergroup leadership ineffective. For example, group members might only weakly identify with their sub-group. In this case, leaders recognizing the group differences might do very little in instilling a sense of trust.

The second limitation comes with the self-report nature of the questionnaire. Self-report measurements might undermine my ability to detect differences across the experimental conditions. For example, participants might indicate a higher than accurate level of intentions to help due to social desirability bias because no tangible consequences were present for not answering honestly. This might explain the lack of meaningful differences between conditions on my main outcomes (i.e., psychological safety, information sharing intentions, and OCBI). To further solidify my findings, future research can utilize a multimethod approach. For instance, using an organizational sample, organizational citizenship behaviours could be measured by peers or using a behavioural observation score.

In the vignette, the leader's affiliation is ambiguous. The vignettes described "a" leader's speech. However, participants might have a different reaction depending on how the leader is affiliated with the subgroups. For example, the leader could be promoted from one of the subgroups, or perhaps brought in to lead from an outside source. If the leader is affiliated with one of the subgroups, promoting an intergroup relational identity might be less effective than a third party leader making the same effort. To address this aspect, a recent

research found that an out-subgroup leader lessened ingroup bias when they were perceived as promoting an intergroup relational identity (Kershaw et al., 2021). It would be interesting to see if leader's efforts to form an intergroup relational identity would be perceived as disingenuous or favouring one group over the other if the leader is affiliated with one sub-group. Moreover, the experiments used in the study described the essence of ad hoc teams, in which intergroup leadership was believed to be most effective. Further research is needed to explore the effectiveness of intergroup leaders in other team contexts.

Further, the vignettes described two universities of similar status. However, when one group has considerably higher status and more power, we might observe a different behavioural pattern exhibited by subgroup members depending on how much status and power their subgroup possesses. The members in the subgroup possessing higher power might desire an intergroup relational identity as a result of an identity protective strategy. The lower power group might prefer an overarching collective identity in which their status would get boosted from being associated with a higher power group.

Finally, this experiment was conducted in Canada, a traditional individualistic country. Even with participants from diverse ethnic backgrounds, it is unclear whether intergroup leaders can utilize this same strategy in a more collectivistic culture. In a collectivistic culture where group goals and values are emphasized, individuals might engage in pro-intergroup behaviours regardless of what identity the leader tries to establish.

Conclusion

Drawing from intergroup leadership literature (Hogg et al., 2012a), my thesis examined if intergroup leaders could help facilitate positive intergroup behaviours. An experimental vignette approach was used to test the effectiveness of leader rhetorical focus. Group members were more likely to engage in OCBO as a form of pro-intergroup behaviour in the intergroup relational identity condition. Results revealed the important role of leader

promoting an intergroup relational identity in encouraging pro-intergroup behaviours. Further, trust in the leader prompted social exchange process, which in turn helped to motivate people to engage in knowledge sharing and OCBs. Promoting a collective identity was effective to promote positive behaviours in one overarching group. The current study provides evidence that in intergroup context where subgroups were in conflict, promoting an intergroup identity may foster more positive intergroup behaviours.

Table 1

Means, Standard Deviations by Condition

Measures	Collective identity		Intergroup relational identity	
	M	*SD*	*M*	*SD*
Age	18.42	2.44	18.12	1.04
Intergroup Relational Identity†	4.05	1.42	5.63	0.98
Trust in Leader	5.15	1.16	5.23	1.04
Psychological Safety	4.43	1.05	4.32	1.20
OCB-O	5.70	0.81	5.90	0.70
OCB-I	5.39	0.95	5.38	1.03
Information Sharing Intentions	5.44	0.87	5.54	0.94

Notes. †Perceived leader effort to promote an intergroup relational identity.

Table 2

Means, Standard Deviations, and Correlations between Variables

Measures	*M*	*SD*	2	3	4	5	6	7	8	9
1. Age	18.26	1.87	-.01	-.07	-.14	-.06	-.07	.11	.11	.07
2. Gender	-	-		.08	.09	-.02	.06	-.03	.01	-.09
3. Manipulation	-	-			.55***	.04	-.05	.13	.00	.06
4. Intergroup Relational Identity†	4.85	1.46				.37***	-.09	.18	.08	.18
5. Trust in Leader	5.19	1.10					.23**	.48***	.44***	.51***
6. Psychological Safety	4.37	1.13						.21*	.27**	.27**
7. OCB-O	5.80	0.76							.67***	.61***
8. OCB-I	5.38	0.99								.51***
9. Information Sharing Intentions	5.49	0.90								

Notes. *** $p < .001$, ** $p < .01$, * $p < .05$, †Perceived leader effort to promote an intergroup relational identity. Gender male = 1, female = 2. N = 236

Figure 1

Conceptual Model

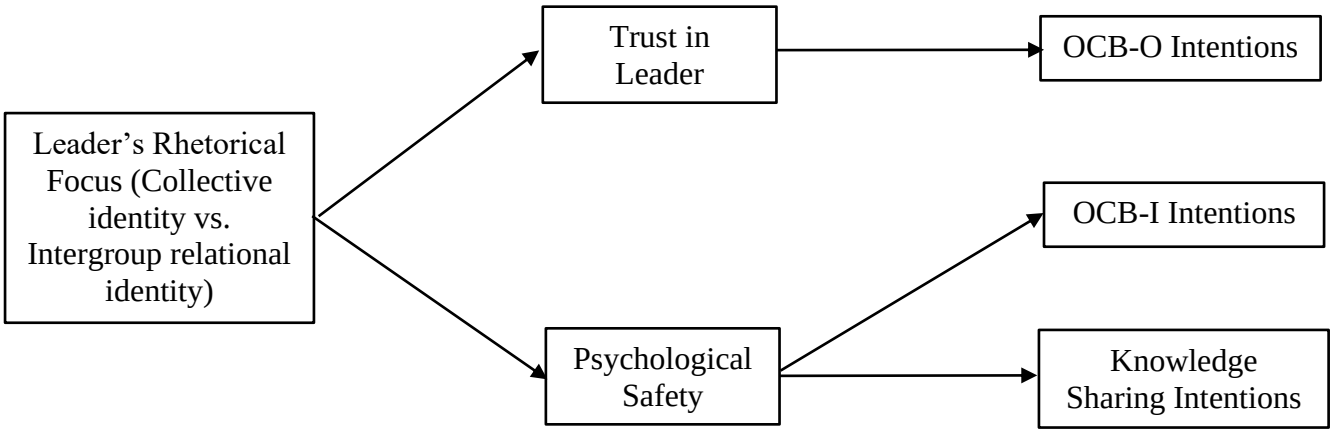
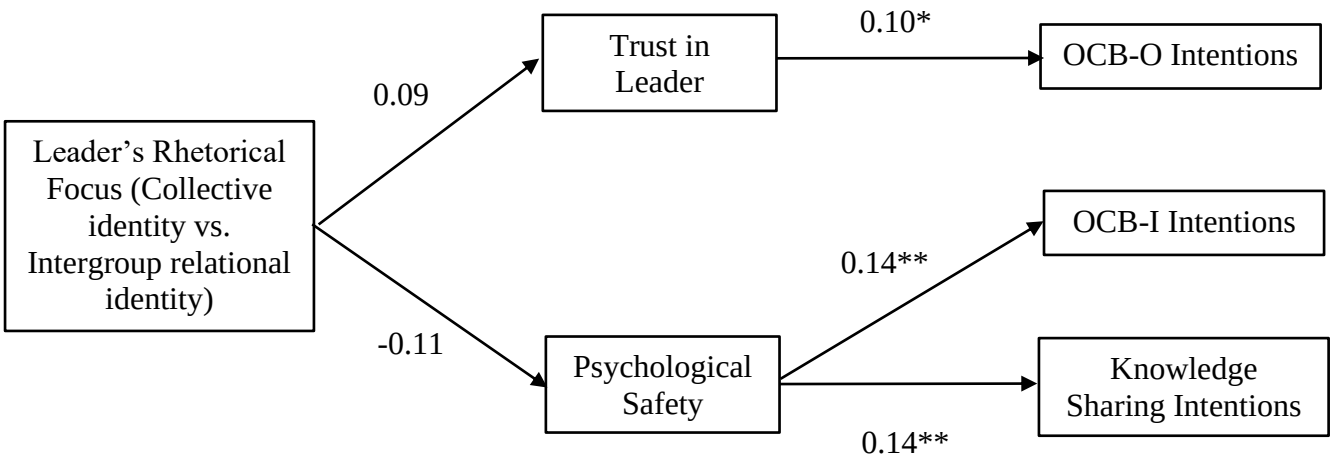


Figure 2

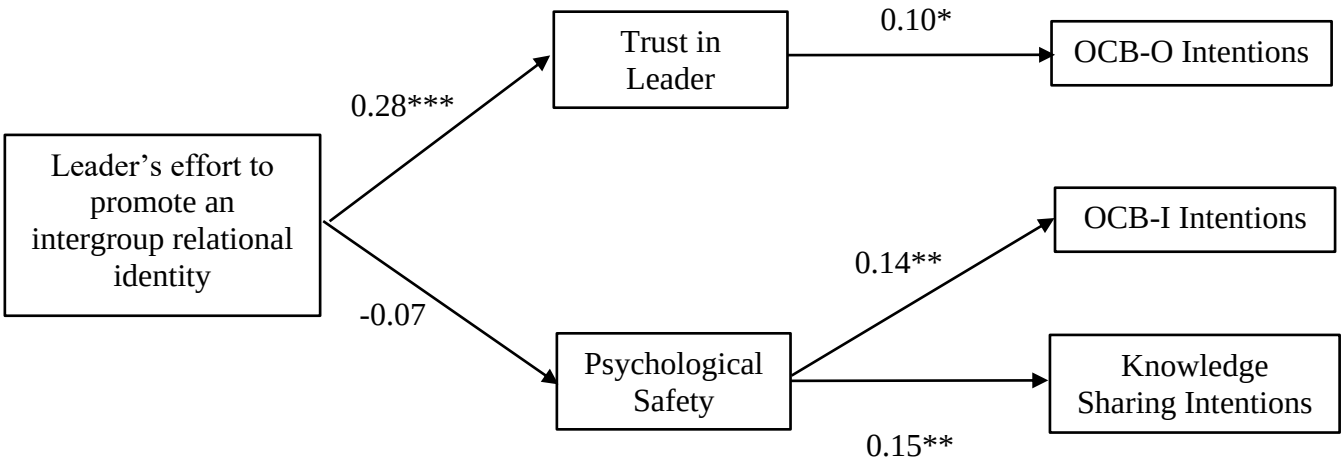
Model 1: Summary of Hypothesized Conditional Indirect Effect



Notes. *** $p < .001$, ** $p < .01$, * $p < .05$.

Figure 3

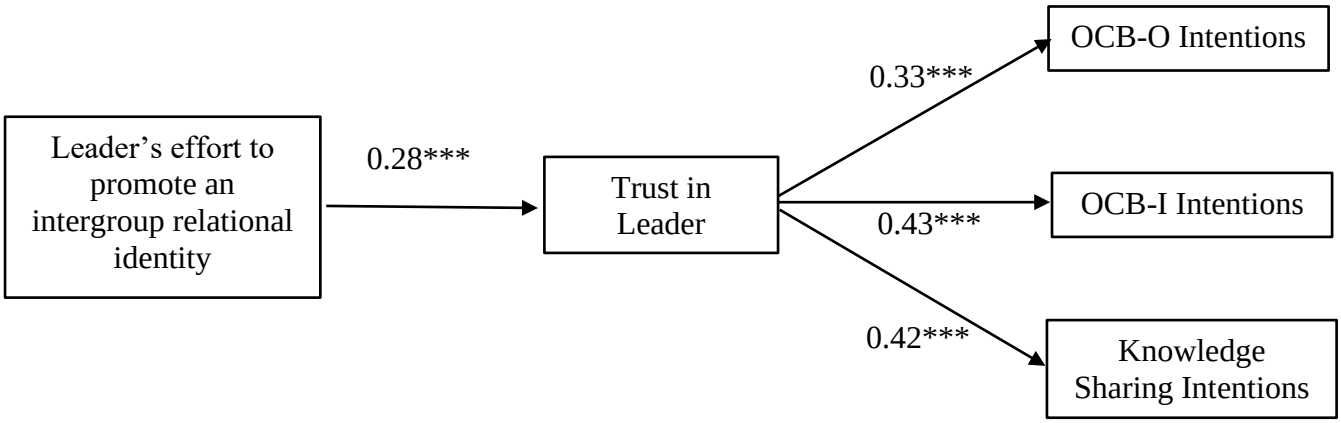
Model 2: Summary of Hypothesized Conditional Indirect Effect



Notes. *** $p < .001$, ***p* <.01, * $p < .05$.

Figure 4

Model 3: Summary of Hypothesized Conditional Indirect Effect



Notes. *** $p < .001$, ** $p < .01$, * $p < .05$.

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Appendices

Appendix A: Conflict priming

On an annual basis, Maclean's University Guide provides a list of Canadian university rankings based on overall reputation and student experience. As you might already know, the ranking a university receives on Maclean's list influences university prestige, funding received from the government, and the job prospects of graduating students. In recent years, prospective students, current students, faculty, and alumni have all called for more specific reports that compare similarly ranked universities. To produce a more informative report in future years, Maclean's is going to begin a pilot program where student representatives from similarly ranked universities will work together to produce a specialized report on their student experiences. In the 2020 rankings, Queen's University and Western University were ranked highly and next to one another.

We would like you to imagine that you have been chosen, along with several other Western University students, to produce a report on your student experiences with students from Queen's University. This report must emphasize the pros and cons of choosing either Western or Queen's university. Throughout this process, you will work together to provide a single report of student experiences at both universities. Students from both universities are required to collaborate in writing, illustrating, analyzing, and formatting the report. It will be used to guide new high school graduates in their choices of universities, therefore bears implications for the future university rankings and funding. As two top ranked universities across a variety of criteria, it is clear that there will be tension in producing a report that accurately promotes the interests of both Western and Queen's university.

Appendix B: Experimental Materials

Given the potential for conflict and tension that might arise from these two groups of students working together, your team leader has prepared a speech to be used in the next meeting. Please read the draft of the speech carefully and envision yourself as a member of this team hearing this speech.

Intergroup relational identity condition: Recently, there has been much controversy and debate surrounding the relationship between students from Western University and those from Queen's University within this collaborative team. It is important that students from both universities recognize the unique and valued contributions each one can provide to the team. No matter which university you belong to, you must work together. Students should not ignore important differences between Western University and Queen's University and pretend both schools are the same. As the appointed leader of this team, I encourage you to embrace your distinct and separate identities. In fact, it is essential that students from both universities realize that this collaboration will only excel if individuals recognize the distinct and unique roles that students from both universities possess.

Collective identity condition: Recently, there has been much controversy and debate surrounding the relationship between students from Western University and those from Queen's University within this collaborative team. It is important that students from both universities recognize your similarities and work together as members of this collaborative team. No matter which university you originally belong to, you are all members of a common group: this collaborative team. As the appointed leader of this team, I believe you are part of a single collective team, and ignoring your differences is an essential to your success. In fact, it is essential that students from both universities realize that this collaboration will only excel if individuals recognize they have a common identity as a member of this team, no matter university to which they belong.

Appendix C: Demographics Questions

Which is ethnic/cultural background you identify the most with?

- ○ Aboriginal/Native
- ○ Asian
- ○ Black
- ○ East Indian
- ○ Hispanic
- ○ Middle Eastern
- ○ White
- ○ Multiple or You don't have an option that applies to me (please specify)

  _____

What year are you in?

- ○ First year
- ○ Second year
- ○ Third year
- ○ Fourth year
- ○ Fifth year

○ Graduate studies

What is your gender?

○ Male

○ Female

○ Non-binary - Third Gender

○ I don't identify myself with any gender

○ Prefer to self-describe _____

Please indicate your age_____ (in years)

_____

Please provide your SONA ID below.

_____

Appendix D: Attention Check

What does the report include?

- ○ Student experience; pros and cons of each university
- ○ Tuition fees
- ○ Major description
- ○ I forgot

Appendix E: Conflict Level Questionnaire

To what extent do you think this way of collaboration can create conflict among students from both universities?

Extremely unlikely	Moderately unlikely	Slightly unlikely	Neither likely nor unlikely	Slightly likely	Moderately likely	Extremely likely
1	2	3	4	5	6	7

To what extent do you think there will be tension working with Queen's University students?

Extremely unlikely	Moderately unlikely	Slightly unlikely	Neither likely nor unlikely	Slightly likely	Moderately likely	Extremely likely
1	2	3	4	5	6	7

Appendix F: Leader Rhetorical Focus Questionnaire (Rast et al., 2018)

On the basis of the scenario you read before, please **envision yourself working on this team** when responding to the following questions. Please indicate the extent to which you agree or disagree with the following statements.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1	2	3	4	5	6	7

1. This leader stresses that students from Western University and those from Queen's University work together while preserving their distinct and separate identities.
2. This leader argues that emphasizing each group's unique strengths is crucial.
3. This leader thinks that part of the team identity is defined by recognizing group differences between students from Western University and those from Queen's University.
4. This leader believes the distinct identities between students from Western University and those from Queen's University are important for the relationship between these groups.

Appendix G: Psychological Safety Questionnaire (Edmondson 1999)

On the basis of the scenario you read before, please **envision yourself working on this team** when responding to the following questions. Please indicate the extent to which you agree or disagree with the following statements.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1	2	3	4	5	6	7

1. If you make a mistake on this team, it would often be held against you by students from Queen's University.
2. People on this team would sometimes reject students from the other university for being different.
3. It would be difficult to ask students from Queen's University for help.
4. No one from Queen's University would deliberately act in a way that undermines my efforts.

Appendix H: Trust in Leader Questionnaire (McAllister 1995 & Podsakoff et al., 1990)

On the basis of the scenario you read before, please **envision yourself working on this team** when responding to the following questions. Please indicate the extent to which you agree or disagree with the following statements.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1	2	3	4	5	6	7

1. I would feel quite confident that my leader will always try to treat me fairly.
2. I would have complete faith in the integrity of my leader.
3. I would be willing to freely share my ideas, feelings, and hopes with this leader.
4. I would be willing to talk freely to this leader about difficulties I am having on this report and know that (s)he will want to listen.
5. If I shared my problems with this leader, I know (s)he would respond constructively and caringly.

Appendix I: Knowledge Sharing Intentions Questionnaire (Bock et al., 2005)

On the basis of the scenario you read before, please **envision yourself working on this team** when responding to the following questions. Please indicate the extent to which you agree or disagree with the following statements.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1	2	3	4	5	6	7

1. I would share my illustrations and analysis with students from Queen's University.
2. I would always provide my templates, methodologies and models for students from Queen's University.
3. I would intend to share my experience or know-how with students from Queen's University.
4. I would try to share my expertise from my education or training with students from Queen's University in a more effective way.

Appendix J: Organizational Citizenship Behaviours-Individual Questionnaire (Lee & Allen, 2002)

On the basis of the scenario you read before, please **envision yourself working on this team** when responding to the following questions. Please indicate the extent to which you agree or disagree with the following statements.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1	2	3	4	5	6	7

1. I would willingly give my time to help students from Queen's University who have problems.
2. I would show genuine concern and courtesy toward students from Queen's University, even under the most trying situations.
3. I would give up time to help students from Queen's University who have work or nonwork problems.
4. I would share my personal skillset with students from Queen's University to help their work.

Appendix K: Organizational Citizenship Behaviours-Organization Questionnaire (Lee & Allen, 2002)

On the basis of the scenario you read before, please **envision yourself working on this team** when responding to the following questions. Please indicate the extent to which you agree or disagree with the following statements.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
1	2	3	4	5	6	7

1. I would keep up with developments in the team.
2. I would offer ideas to improve the functioning of the team.
3. I would take action to protect the team from potential problems.
4. I would demonstrate concern about the image of the team.

Appendix L: Ethics and Amendment Approval

Western Research

Date: 16 March 2020

To: Dr. Alex Benson

Project ID: 115124

Study Title: A Leadership Study

Short Title: ILP-study

Application Type: NMREB Initial Application

Review Type: Delegated

Full Board Reporting Date: April 3 2020

Date Approval Issued: 16/Mar/2020

REB Approval Expiry Date: 16/Mar/2021

Dear Dr. Alex Benson

The Western University Non-Medical Research Ethics Board (NMREB) has reviewed and approved the WREM application form for the above mentioned study, as of the date noted above. NMREB approval for this study remains valid until the expiry date noted above, conditional to timely submission and acceptance of NMREB Continuing Ethics Review.

This research study is to be conducted by the investigator noted above. All other required institutional approvals must also be obtained prior to the conduct of the study.

Documents Approved:

Document Name	Document Type	Document Date	Document Version
ILP-study-Informed consent sheet	Implied Consent/Assent	12/Mar/2020	2
ILP-study-Mturk recruitment prime Participant recruitment profile	Recruitment Materials	12/Mar/2020	2
ILP-study-Online questionnaire	Online Survey	12/Mar/2020	2
ILP-study-Project Summary and Debriefing profile	Debriefing Letter	12/Mar/2020	2

No deviations from, or changes to the protocol should be initiated without prior written approval from the NMREB, except when necessary to eliminate immediate hazard(s) to study participants or when the change(s) involves only administrative or logistical aspects of the trial.

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,

Kelly Patterson, 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).

Western Research

Date: 11 August 2020

To: Dr. Alex Benson

Project ID: 115124

Study Title: A Leadership Study

Application Type: NMREB Amendment Form

Review Type: Delegated

Full Board Reporting Date: September 4 2020

Date Approval Issued: 11/Aug/2020

REB Approval Expiry Date: 16/Mar/2021

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
ILP-study-Online questionnaire	Online Survey	31/Jul/2020	1
ILP-study-Project Summary and Debriefing profile	Recruitment Materials	31/Jul/2020	1
ILP-study-Informed consent sheet	Implied Consent/Assent	31/Jul/2020	1
ILP-study-SONA Participant recruitment profile	Recruitment Materials	04/Aug/2020	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,

Kelly Patterson, 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).

Curriculum Vitae

ZHUO LI

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EDUCATION

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The University of Western Ontario (London, Canada), Industrial/Organizational Psychology
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PUBLICATION

Eriksson, K., Strimling, P., Gelfand, M., …… **Li, Z.**, …… Perceptions of the appropriate response to norm violation in 57 societies. *Nature Communications* **12,** 1481 (2021). https://doi.org/10.1038/s41467-021-21602-9

Travaglino, G. A., **Li, Z.**, Zhang, X., Lu, X., & Choi, H. S. (2020). We are all in this together: The role of individuals' social identities in problematic engagement with video games and the internet. *British Journal of Social Psychology*, *59*(2), 522-548. https://doi.org/10.1111/bjso.12365

PRESENTATIONS

Poster Presentation

"Culture and Narcissism: The Roles of Fundamental Social Motives"
Society for Personality and Social Psychology; Virtual; Feb. 13rd, 2021

"Cure and Curse: The Role of Social Identities in Problematic Engagement with Video Games and the Internet"
Society for Personality and Social Psychology Preconference: Group Processes and Intergroup Relations; New Orleans; Feb. 27th, 2020

Verbal Presentation

Evans, M. B., **Li, Z.**, & Benson, A. J. (April 2021). "Modelling age-varying associations between group memberships, neighborhood connectedness, and well-being" *Presented as part of an interdisciplinary workshop entitled COVID 19 - Recovery and Resilience, hosted by the Network for Economic and Social Trends and the Centre for the Study of Political Behaviour.*

"Where do I stand? A person-centered approach to cultural orientations"
Brownbag presentation; University of Western Ontario; Oct. 30th, 2020

"Examining Employees' Turnover in the Context of a Chinese Hospital: The Roles of Identity and Intergroup Relationships"
The 13th Biennial Asian Association of Social Psychology Conference; Taipei; Jul. 11th, 2019

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The University of Western Ontario Research Assistant Sept. 2020 – Present
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- PSYCHOL 3723G – Attitude and Attitude Change
- PSYCHOL 2800E – Research Methods in Psychology