

**Creativity in the Workplace: the Mediating Role of Trust between Shared Leadership  
and Creativity**

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### Abstract

In this study, we examined the relationship between shared leadership and creativity within the dyadic relationship of leader and follower. We proposed that the relationship between shared leadership is mediated by trust. We build on previous research concerning shared leadership, trust and creativity and their associations. Using a dyadic approach, we paired up 99 leaders (average age: 42 years, 60% male) and followers (average age: 33 years, 41% male), all of who filled out a questionnaire concerning their perceptions on the dyadic relationship between them. Our study is a one wave multi source field study. We found that trust is positively related with both creativity ( $p = .01$ ) and shared leadership ( $p = .03$ ). However, our results show no significant relationship between shared leadership and creativity and also show no mediating effect of trust in the relationship between shared leadership and creativity. Our findings extend literature in the sense that we can emphasize the importance of trust in the dyadic relationship between employer and employee. It also contradicts literature in the sense that shared leadership and creativity may not be associated as expected. Confounding factors may be at play. Future research should include replacing shared leadership with participative leadership as a possible predictor of creativity on the employee level of the organization.

## Introduction

In today's society, the importance of proper use of innovation within companies is at an all-time high. As our society is moving and changing at a very fast pace, organizations need to be ever-changing too to even have a chance at long-term survival. To illustrate this: about 100 years ago, organizations survived for an approximate time frame of 65 years. Compare this to twenty years ago: companies survived for an approximate time frame of 10 years. The rates are even more dramatic nowadays (Foster & Kaplan, 2001). Solid companies do not have what it takes to survive, if they don't learn to change and adapt. Innovation is an essential part of changing, because it promotes and activates change and helps organizations to remain competitive (Foster & Kaplan, 2001). In literature, innovation is widely viewed to be essential for an organization's long term success and survival (Amabile 1988; Ancona & Caldwell 1992; Kanter 1988; Mumford 2000). Creativity and innovation are especially relevant to study, because in the average organization employees are generally functioning in standardized ways and within standardized tasks, instead of evolving and developing new ideas. Moreover, a lot of research on creativity within the workplace is conducted on higher order levels, instead of the individual, employee level (Garvin, 2008). This leaves a gap in research. Creativity is very complex, a lot of mental capacity is involved in engaging in creativity (Madjar, 2011; Janssen, 2004). Shared leadership may positively affect creativity (Amabile 1996; Huelsheger et al. 2009; West 1990) because several properties of shared leadership are associated with creativity. The most prominent examples are the high quality of sharing distinct information within shared leadership (Hoch, 2013) and a perceived healthy power balance (Chen, 2020) that positively affects creativity. However, research fails to explain how this association between shared leadership and creativity comes about, really.

We propose that a positive relationship between shared leadership and creativity exists through reciprocal trust between employer and employee. The grounds that we build this

notion on are accordingly: trust enables employees to reflect upon their own ideas and that of others, and it positively affects communication (De Jong, 2010), it enhances goal oriented behavior (Kouzes and Posner 2009; Pearce and Manz 2005; De Jong, 2010) and it positively affects a supportive work environment (Solansky, 2008; De Jong, 2010; Morgeson et al. 2010; Chen, 2021). All of these are essential for the emergence of creativity among employees. When employees feel safe, they are more likely to share their ideas and resources (De Jong, 2010; Chen, 2021). Building upon each other's ideas increases the quality of creative ideas (Oedzes et al., 2019) and goal oriented behavior is important for employees to promote innovative ideas of others (Chen, 2021).

We will study the relationship between employer and employee by having pairs of leaders and followers fill out individual questionnaires on their perceptions of their dyadic relationship concerning multiple areas. In this way, we aim to fill in the gap within literature on the topic of creativity for the lower levels of organizations. We aim to confirm our hypothesis that the relationship between shared leadership and creativity exists through trust, to answer how the relationship between shared leadership and creativity comes about. This study may provide knowledge for organizations on how to improve creativity on their work floors, specifically on the lower levels. Moreover, it may provide direction for other researchers in the field of organizational psychology to explore the topic of creativity within organizations.

### **Theory and hypothesis development**

#### **The Relationship between Shared Leadership and Creativity**

We propose that shared leadership is positively associated with creativity. High levels of shared leadership are associated with higher levels of creativity (Hoch, 2013). Shared leadership is defined as the distribution of leadership influence among multiple team members (Carson, 2007), or in other words, the extent to which a leader shares power with their

followers. The notion in the literature is that leadership encapsulates a set of functions that do not necessarily all need to be performed by one individual (Drescher, 2014). But *how* exactly could shared leadership be related to creativity? We use the Motivated Information Processing in Groups (MIP-G) model to explain the relationships included in our study, because of its claim that people are most creative when they are motivated to engage in deliberate information processing (De Dreu, Nijstad & van Knippenberg, 2008). This model is not tested on creativity specifically, but is applicable to nonroutine, cognitive tasks, which includes creativity (Bechtoldt et al., 2010).

According to the MIP-G model, participation in the decision making process of employees contributes to creativity, because it has a positive influence on the amount of diverse views and perspectives that are shared (Amabile et al., 1996; West, 2002). This is confirmed in research on shared leadership: when more distinct information is shared, employees have access to more information, which they can process to come up with better ideas, leading to more creativity. When the quality of sharing of ideas is higher, this may lead to a promotion of new ideas (Hoch, 2013), therefore increasing creativity. Moreover, when employees perceive a healthy power balance, they are more likely to bring in new ideas (Chen, 2021). Power balance, in this study, refers to the meaning that a leader shares power and that influence between employer and employee is mutual. Employees need to feel that they have a share in the decision making process of an organization in order for them to bring in innovative ideas (Chen, 2021). This again refers back to the MIP-G model that states that participation in the decision making process has a positive influence on creativity. Formal empowering leadership, which includes that leaders promote and affirm employees who bring in new ideas, is positively related to creativity (Oedzes et al., 2019). So, shared leadership may be positively related to creativity because of a healthy power balance, especially one where leadership is empowering and where influence is mutual. It may also be positively

related to creativity because of the high quality of sharing of knowledge that is stimulated within shared leadership.

Additional reasons why shared leadership may be positively associated with creativity are accordingly: through shared goal orientation, a preceding factor of shared leadership (Carson, 2007) the likelihood that employees promote each other's novel ideas is higher (Hoch, 2013) and shared leadership may play a facilitating role in the adaptive ability of employees by empowering them to increase influence and use it well (Hoch, 2013). When teams work together under a shared vision toward a common goal, this is likely to influence the establishment of shared leadership in a positive way (Carson, 2007). As a result of shared goal orientation, team members are more likely to promote each other's ideas (Carson et al, 2007; Morgeson et al, 2010). Goal orientated factors like common goals, vision and task orientation are positively associated with creativity (Chen, 2021; Hoch, 2013). So, shared leadership may be positively related to creativity, due to the contribution of shared goal orientation to both shared leadership and creativity. Moreover, within the context of shared leadership, employees learn new skills, namely those of leadership, which makes them more adaptable (Hoch, 2013). When individuals are well adapted, they are also more capable of being creative (Hoch, 2013; Chen, 2021). Because previous studies have shown that creativity and shared leadership are positively related, and for the mentioned reasons, we expect that shared leadership is positively associated with creativity.

*Hypothesis 1: shared leadership is positively associated with creativity*

### **The Relationship between Trust and Creativity**

We propose that trust and creativity are positively associated. Within this study, creativity is defined as the generation and promotion of new ideas (Hoch, 2013). Employee creativity is a result of the interactions between work environment and employee characteristics. When the work context and employees' characteristics both promote creativity

and match, this results in high levels of employee creativity (Chen, 2021). The opposite is true for when the context and/or traits of an employee are negative in regards to creativity (Chen, 2021). Regarding the individual, to be creative involves sophisticated cognitive processes such as motivation, knowledge and ability to act on both. For radical creativity, there has to be a certain level of resources within an individual, a willingness to take risks and a minimum level of career commitment (Madjar, 2011). In short: an employee has to choose to be creative and has to have the proper inner resources that are necessary for it.

Beside inner motivation and resources, individuals need a positive, supportive work context in order to be creative. A supportive work context is of big importance, because a lack of support can make employees feel like their voices are being restrained, leading them to withdraw from bringing in new ideas (Chen, 2021). Employees need to feel safe in order to voice new ideas (Chen, 2021). When there is a higher sense of support and respect, this positively influences creativity in an indirect way (Solansky, 2008; Morgeson et al. 2010). Moreover, because creativity is a stressful process to partake in, employees need to feel like they are treated fairly by their employer, for example by compensation. If they do not perceive a fair treatment, they will experience more stress and are less likely to be openly creative (Janssen, 2003). Supportive leadership plays an important role in the amount of safety, and therefore the amount of creativity that can grow. Leadership support is even more important than team support. The effect that stress can have on an employee expressing creativity, especially when being resisted by team members, is reduced when employees perceive support from an external leader (Chen, 2021; Oedzes, 2018; Janssen, 2003; Janssen, 2004). There are two ways that leaders can improve creativity: directly by creating an environment that is supportive and indirectly by being supportive of those who exercise creativity so that others may follow (Hoch, 2013). Trust is essential in building a supportive work environment, because it works as a motivating force to build and sustain relationships

and therefore increase psychological safety. Trust is also essential in building the resources of an individual to increase their capability of being creative. Therefore, we propose that trust is positively associated with creativity. We will go deeper into the role that trust plays in establishing a safe environment in the paragraph on the mediating role of trust.

*Hypothesis 2: Trust is positively associated with creativity*

### **The Relationship between Shared Leadership and Trust**

We propose that trust mediates the relationship between shared leadership and creativity. Trust is defined as a combination of positive expectations and a suspension of uncertainty. Trust is that which enables people to interact with one another as if there is no vulnerability or uncertainty (de Jong, 2010). Previous research has found that shared leadership is positively associated with trust (Drescher, 2014). When power and influence is shared, there is a chance for trust to build, because of the room that is created for individuals to interact and share resources. As a result, there is an opportunity for more trust to build (Drescher, 2014). Moreover, in order for shared leadership to emerge, both employee and leader have to believe that sharing influence is a constructive act (Carson et al., 2007). This may point to the important role that trust plays in regards to shared leadership. Including preceding arguments, we suggest that the relationship between shared leadership and trust can function as a positive cycle where more trust allows for more shared leadership and vice versa. We assume that shared leadership and trust are positively related:

*Hypothesis 3: Shared leadership is positively associated with trust*

### **The Mediating role of Trust**

Trust may mediate the relationship between shared leadership and creativity. First, it may be through interpersonal trust that employees tend to move toward a common goal. Creative ideas are generally ideas that move toward a solution (Bechtoldt et al., 2010), they



are fitting a goal. Recall that the sharing of common goals may be of importance for the association between shared leadership and creativity. Trust enhances the perception of employees that their efforts have an effect (De Jong, 2010). Moreover, trust strengthens bonds, which in turn causes employees to want to affirm these bonds more by putting in goal oriented effort (De Jong, 2010; Hoch, 2013). When people feel stronger ties with one another and identify with them, they are more likely to invest in one another and lead each other to reach their common goals (Kouzes and Posner 2009; Pearce and Manz 2005). So, employees do not only put in goal-oriented effort themselves when there is trust, they also stimulate this behavior in others. Through trust, because of goal-oriented behavior then, people tend to promote and affirm each other's creative ideas, which increases creativity (Carson et al, 2007; Morgeson et al, 2010). Therefore, we propose that trust mediates the relationship between shared leadership and creativity.

Beside this point, it is through trust that employees feel safe to reflect upon their own or another's actions without the fear of being seen as incompetent or the fear of possibly damaging relationships (De Jong, 2010), which is facilitating creativity. Recall that for the development of creativity, it is crucial to promote each other's ideas and build upon them. The MIP-G model argues that 'minority dissent' and 'constructive controversy' are essential in the deliberate processing of information, which enhances creativity (Oedzes et al., 2019). Minority dissent refers to voicing of ideas of the minority's perspective. Constructive controversy refers to the process of considering opposing views to reconcile differing perspectives together (Oedzes et al., 2019). Both minority dissent and constructive controversy are necessary for the emergence of creativity. For the realization of creative ideas, it is essential to mutually provide and receive feedback, to train and to encourage self-development (Hoch, 2013). This is directly linked to the process of building upon each other's ideas, which is also an essential part of shared leadership. So, through trust, processes such as

reflection and communication of actions and ideas become a possibility. Besides, as mentioned previously, individuals need to have proper internal resources in order to be creative. The process of reflection and communicating feedback, and growing from it, is highly influential for the development of individuals and adaptability is positively related to creativity (Madjar, 2011). For these reasons, we propose trust to mediate the relationship between shared leadership and creativity.

Most importantly though, trust may mediate the relationship between shared leadership and creativity, because of its essential role in building a positive work environment with supportive relationships that is necessary for creativity to emerge. Higher levels of shared leadership are associated with higher levels of trust, because of the room that is created, through trust, for the purpose of sharing influences and resources for the team (De Jong, 2010; Drescher, 2014; Chen, 2021). People generally want to affirm the relationships that they value through effective, prosocial behavior (De Jong, 2010). The MIP-G model explains this well: ‘When people act with a prosocial motive, the group climate becomes positive and psychological safety is established. This means that there are less reality constraints and that people are more likely to engage in constructive controversy, to openly express their ideas, to explore opposite perspectives and to allow others to build on such ideas’ (Tjosvold, 1998). Through trust, people open up to important processes that establish creativity within the workplace. Trust provides a safe space for relationships so that other facilitating factors of creativity can come about, like goal focused behavior, reflection, communication and feelings of safety. Trust seems to be beneath it all, the deeper layer of it. We therefore propose that trust is the mediating factor that establishes the relationship between shared leadership and creativity.

*Hypothesis 4: The relationship between shared leadership and creativity is mediated by trust*

## Methods

### Participants

A total of 99 dyadic pairs participated in our study, our sample size is accordingly: N=99 supervisors and N=100 employees. All participants that were recruited are Dutch working people from a variety of sectors. Requirements were that participants had to work at least seventeen paid hours per week, they also had to be at least 18 years of age. Also, the dyad had to be complete, meaning both employee and employer filled out the complete questionnaire. Altogether, we had to cut 136 leaders and 143 employees from the original sample because they did not meet our requirements. For the leaders, we found an average age of 42 years ( $SD = 12.1$ ). 59 were male and 38 were female, 2 chose not to report their gender. For the employees, we found an average age of 33 years ( $SD = 12.3$ ). 41 were male and 56 were female, 3 chose not to report their gender. Participants worked in all different sectors, but mostly in healthcare ( $N = 12$ ), construction ( $N = 10$ ) and hospitality ( $N = 8$ ). There was an average of 17,45 followers per leader ( $SD = 19,4$ , range = 99).

### Design and procedure

Our study is a one wave multi source field study with a dyadic approach. We recruited the participants through a convenience sampling method. All leaders and followers filled out a questionnaire concerning their perception of the dyadic relationship between the two. We connected the questionnaires of the pairs together using a code that ensured anonymity. The code consisted of the last two letters of the last names of both leader and employee. All participants were informed that participation was voluntary and that their data would be handled confidentially. The participants that are included in our study all provided informed consent. Employees and leaders were given different links, each link took them to the questionnaire. Questions in the leader's questionnaire were about their perceptions of their employee and the dyadic relationship between them. Questions in the employee's

questionnaire were about their perceptions of their employer and of their dyadic relationship. Both questionnaires took about 10-15 minutes to complete. Questions were about multiple facets of the working relationship between leader and employee, not all variables included in the questionnaires are relevant for this particular study.

## **Measures**

### ***Shared Leadership (Independent Variable)***

Shared leadership was measured in the employee questionnaire, using subscales that were adapted after Hoch (2013): transformational leadership, individual empowering leadership and participative leadership. The scales were translated into Dutch. The translated version can be found in the appendix. There were six questions concerning transformational leadership. An example of an item is: "My leader shows his appreciation for my effort." Eight questions concerned individual empowering leadership. An example of an item is: "My leader encourages me to learn new things." Lastly, four questions concerned participative leadership. An example of an item is: "My leader and I cooperate to determine what my performance goals should be." The answers were provided on a Likert scale, ranging from 1 (*completely disagree*) to 7 (*completely agree*). Higher scores indicated more shared leadership. The scale was reliable with a Cronbach's Alpha value of .72. This points to a moderate reliability of this scale.

### ***Creativity (Dependent Variable)***

The creativity of employees was measured as innovative work behavior and was reported by leaders. There were three subscales with three questions for each. The subscales consisted of the three components of creativity that were derived from the study of Van der Veegt (2003): idea generation, idea promotion and idea realization. We translated the scales to Dutch, the translated version can be found in the appendix. An example item for the subscale of idea generation is: "How often does your employee come up with creative ideas to improve

in his/her work?" An example item for the subscale of idea promotion is: "How often does your employee mobilize support for creative ideas?" Lastly, an example item for the subscale of idea realization is: "How often does your employee systematically implement innovative ideas?" Leaders had to respond using a 7-point Likert scale where higher scores indicated more creativity. The reliability of the subscale 'innovative work behavior' was Cronbach's  $\alpha = .94$ . This score indicates that reliability for this scale is good.

### ***Trust (Mediator)***

Trust was measured in both the employee and the leader questionnaire. We derived the scale that measured trust from the definition of trust provided by De Jong (2010). There were 5 questions in both the leader and the employee questionnaire for trust. We translated the scale to Dutch, the translated version can be found in the appendix. A 7-point Likert scale was used where higher scores indicated more trust. The questions were the same for both employee and leader. One example item is: "I trust that my leader/employee keeps his/her word." The reliability of the subscale 'trust' was Cronbach's  $\alpha = .91$  for the leaders and Cronbach's  $\alpha = .93$  for the employees. These scores indicate that the reliability for this scale is good. We averaged the response to obtain a score of average mutual trust per dyad.

## **Results**

To analyze the results of the questionnaires in regards to our hypotheses, we conducted descriptive statistics for preliminary information. We also conducted assumption checks to be assured of our choice of analysis. After this, we conducted a multiple regression analysis in SPSS using PROCESS. Results of the descriptive statistics, assumption checks and multiple regression analysis are covered in this same order in the paragraph below.

### **Descriptive statistics**

Table 1 shows the descriptive statistics, including the correlations for all three variables. The descriptive statistics suggest that leaders report that their employees show

somewhat average innovative work behavior. Employees report that their leaders perform shared leadership rather than authoritative leadership. Both leaders and employees report to have above average trust in one other. Table 1 shows a weak negative correlation between innovative work behaviors and shared leadership. The table shows a weak positive correlation between innovative work behaviors and trust. There also is a weak positive correlation between shared leadership and trust. All three correlations were around 0.24.

Assumption checks for regression were conducted to confirm the way of approach, namely a multiple regression analysis. Q-Q plots reveal that data fall within an approximate linear line for all three variables, confirming that the data are normally distributed. The graphs are added to the appendix under Figure 1, 2 and 3. Residual plots reveal, except for one outlier which had to be removed, that residuals were scattered randomly. No pattern was found in the different values of the residuals, revealing that the assumptions of linearity and homoscedasticity were met for all three variables. The residual plots can be found in the appendix under figure 4, 5 and 6. The VIF was found to be 1.05, indicating that the assumption of multicollinearity was met. The VIF can be found in the appendix under table A.

**Table 1:** Means, standard deviations, and correlations of variables: Innovative Work Behavior, Shared Leadership, Trust

	Mean	SD	1.	2.
1. Innovative Work Behavior	3.87	1.18		
2. Shared Leadership	5.57	.52	-0.25	
3. Trust	6.23	.77	0.26	0.22

Note:  $N = 99$ ;  $*p < .05$ ;  $**p < .01$

### **Hypothesis Testing**

We regressed innovative work behaviors on shared leadership and added trust to the model as a mediator. Results for hypotheses one through three can be found in table 2. Results for hypothesis four can be found in table 3. Three additional dyadic pairs had to be taken out because of incomplete results for the dependent variable (N=96).

Our first hypothesis states that there is a positive relationship between shared leadership and creativity. No significant relationship between innovative work behaviors and shared leadership was found. Therefore, our first hypothesis was not supported.

Our second hypothesis states that there is a positive relationship between creativity and trust. It was found that there was a significant relationship between trust and innovative work behaviors. This relationship was positive as expected, indicating that our second hypothesis was confirmed.

Our third hypothesis states that there is a positive relationship between shared leadership and trust. It was found that there was indeed a positive significant relationship between shared leadership and trust. Therefore, our third hypothesis was supported.

Finally, our fourth hypothesis states that the relationship between shared leadership and creativity is mediated by trust. A bootstrapping confidence interval was performed to test our fourth hypothesis, along with the regression model. Looking at the bootstrapping confidence interval, there was no significant effect.

**Table 2.** *Hypotheses Testing*

Hypotheses	Relationship	Estimate	SE	t	p	Conclusion
H1	SL - IWB	-.06	.23	-.24	.81	Not supported
H2	TR - IWB	.43	.15	2.78	.01	Supported
H3	SL - TR	.33	.15	2.17	.03	Supported
H4	SL → TR → IWB	.14	.10	-	-	Not supported*

*Note: N = 96. CI = 95%*

*SL = shared leadership, IWB = innovative work behavior, TR = trust*

*\*this conclusion was based on the Bootstrapping Confidence Interval shown in table 3*

**Table 3.** *Results of PROCESS Mediation Analysis of X on Y, through M*

Effect	Estimate	SE	t	p	LLCI	ULCI
Total Effect	-.06	.23	-.24	.81	-.52	.41
Direct Effect	-.19	.23	-.85	.40	-.65	.26
Indirect Effect	.14	.10	-	-	-.02	.38

*Note: N = 96. CI = 95%, bootstrap samples: 5000*

*X = Shared Leadership, Y = Innovative Work Behavior, M = Trust*

## Discussion

We studied the relationship between shared leadership creativity and suggested that this relationship is explained through trust. However, we found that shared leadership was not related to creativity, which is inconsistent with previous research. We did find that trust was related with both shared leadership and creativity, indicating that trust might be a facilitating factor of both shared leadership and creativity. We did not find grounds for the notion that it is through trust that the relationship between shared leadership and creativity exists. Though



this was contrary to our hypothesis, looking at the fact that we did not find a relationship between shared leadership and creativity in the first place, it is not as surprising.

### **Theoretical Implications**

First, our study reveals that there is no significant relationship between shared leadership and creativity. With this current finding, our study contradicts literature, because previous research did in fact point to such a positive relationship (Hoch, 2013; Drescher, 2014). We too hypothesized that a relationship between shared leadership and creativity exists, because a high quality of information sharing and a healthy power balance, both aspects of shared leadership, are associated with creativity. However, there are some sound reasons as to why we did not find a relationship between shared leadership and creativity.

We used a slightly different definition of shared leadership compared to previous research, which could be accounting for our nonsignificant results. Whereas most of it was equal, we used a definition of shared leadership within the bounds of a vertical relationship between leader and follower, meaning that the leader remains ultimately responsible for all leadership aspects, though sharing his/her power. Other researchers have let go of these traditional bounds, defining shared leadership more so as a team property where the ultimate responsibilities of leadership are shared among multiple or all team members (Carson, 2007; Drescher, 2014). Another possible explanation for this gap between our study and previous research concerning the relationship between shared leadership and creativity is that there are other factors that are influencing the relationship between shared leadership and creativity. As creativity is a demanding and complex activity to take part in, this is very much a plausibility. A factor that might be interfering this relationship is task interdependence: when tasks are highly interdependent, it is harder for employees to be creative. Within literature, we see that task interdependence interferes with levels of shared leadership, as well as with levels of creativity (Wu, Comican, Chen, 2020; Chen et al., 2021). Perhaps it is because task

interdependence makes for good opportunities for conflict. Perhaps it is because task interdependence is associated with employees having relatively more influence on one another, which can be a form of informal leadership and have a negative effect on creativity (Oedzes, 2019), since it negatively affects feelings of safety (Chen, 2021). Either way, there is reason to assume that task interdependence may moderate the relationship between shared leadership and creativity. Beside task interdependence, shared goal orientation may have more of a confounding influence than expected previously. Shared goal orientation is of importance for the relationship between shared leadership and creativity. However, its prominent place in literature in regards to performance and creativity (De Jong, 2010; Hoch, 2013; Chen, 2021) suggests that shared goal orientation may in fact be a confounding factor in this relationship, rather than merely an aspect of shared leadership. Literature points to the fact that it is *through* shared vision and common goal orientation that creativity is established, indicating that shared goal orientation may be a mediator between shared leadership and creativity. Concluding, since creativity is complex and highly demanding, it is very much likely that other factors are interacting with creativity. Lastly, it may be that there are theoretical reasons as to why we found no significant relationship between shared leadership and creativity. With the sharing of leadership comes a heightened responsibility for the employee (Chen, 2021). Assuming that heightened responsibility equals a heightening of stress for most people, this may interfere with creativity, as creativity often already is a stressful activity in itself (Janssen, 2004). Following this line of thinking, it may be that because of the extra responsibility that the employee perceives as a result of shared leadership, their capacity to be creative actually decreases.

Our study relates to previous research by extending it in the context of trust and creativity. It shows that trust is positively associated with creativity. In line with literature, we proposed that supportive environments in the workplace allow people to feel safe, which

allows them to be openly creative. The MIP-G model emphasizes that creativity comes about when people show prosocial behavior, which positively affects the work environment, which in turn positively affects the amount of participation in decision making processes, in constructive controversy and in minority dissent (Oedzes et al., 2019). The study of Chen, 2021, proposed that when the work environment is positive, employees enter the decision making process, which makes them more openly creative. Studies often implicitly suggest that trust is related to creativity. Our findings *explicitly* indicate that trust indeed positively relates to creativity. Our findings build on the previous theory of the MIP-G model and on multiple studies, including that of Chen, 2021, by showing that trust is of importance for the amount of creativity that is openly expressed by employees. Trust increases the want that people have to affirm bonds, the want for them to show prosocial behavior and the positivity of the work environment. Therefore, it makes sense theoretically that we found a positive relationship between trust and creativity.

Our findings also confirm previous research in the sense that trust is positively associated with shared leadership. Based on literature, we proposed that a positive cycle exists where higher levels of trust make for higher levels of shared leadership and vice versa (Carson, 2007; Drescher, 2014). We confirmed literature with the findings that a positive relationship between shared leadership and trust exists. However, more research is needed to confirm the belief on the causality for the relationship between trust and shared leadership, since our study is correlational in nature.

Concerning our hypothesis that trust mediates the relationship between shared leadership and creativity, we found no such effect. Previously mentioned reasons can be the cause for this. Perhaps confounding variables are of influence, interfering with the mediating effect of trust in this relationship, or the definition of shared leadership that we used is at play. However, it would not be justified to conclude that a mediating effect of trust between shared

leadership and creativity exists, though confounded or otherwise influenced. Based on our results, we should take in account that it is plausible that no mediation of trust between shared leadership and creativity exists.

### **Practical Implications**

Our study adds to the practical field in the sense that its focus is on the lower levels of the organization, namely employee and leader, the individual. Most of the research on creativity in the workplace has been conducted on higher levels of the organization (Garvin, 2008). We found that trust is of importance for the creativity of the employee. Since we found a significant relationship between trust and creativity, we emphasize the importance of paying attention to trust between leader and employee when wanting to improve on creativity or innovation as an organization. Moreover, trust is associated with shared leadership, indicating that if an organization does consider working with the format of shared leadership, it is important to pay attention to trust building as well.

### **Strengths and limitations of our Study**

Our study has one very important strength: the dyadic nature of it. Because of this dyadic nature, we can have a full understanding of the relationship between employer and employee, instead of merely a one-sided perspective. Moreover, our study was conducted on a specific group of people, namely the Dutch working class. This makes our results highly generalizable to this group. It also makes the results more practical to apply.

However, our study also has some important limitations to mention. First, our study is correlational in nature, meaning that causality cannot be established based on this study. As mentioned previously, we also used a slightly different definition of shared leadership compared to previous research. This could mean that our construct in fact measures something other than shared leadership. This is an important flaw, because it can be a cause for confusion in literature on the concept of shared leadership, or worse, it can produce

incorrect information. Beside this, we had some problems with our sample. It is generally harder to find people that are willing to participate in a study that is dyadic. We had to exclude quite a lot of dyads because of incomplete information, leaving us with a relatively small sample size. Because of this smaller sample size, our study may lack power. Moreover, it is plausible that mostly people who are content with the relationship with their employer/employee participated. We also used a convenience sample, meaning that we as a team used our personal network for finding participants. Both of these reasons represent sources of bias. In the paragraph below, we propose future research suggestions that can account for these limitations.

### **Future Research**

We propose multiple ways in which research can be conducted based on our current study. First, replication of our study using a bigger sample is necessary. We would suggest introducing a small bonus for participants to make participating more attractive. Beside this, a replication of this current study with an adapted definition of shared leadership, namely to shared leadership as a team property, is recommended. Research also needs to be extended to include other possible factors that are related to creativity, trust and shared leadership. We propose that shared goal orientation should be studied as a mediator within the current model of shared leadership, trust and creativity. We propose that task interdependence should be studied as a moderator within this model as well. However, studying the topic of creativity is important in a broader sense than restricted by this current model of study alone. Much knowledge can be gained by studying the topic of creativity.

We will shortly introduce another leadership style beside shared leadership that is important to elaborate on in future research regarding the topic of creativity. Leadership style is an important influencer on the amount of creativity in an organization. Leaders have the power to create a safe space where employees feel free to express themselves and their ideas

and to reflect upon them (Chen, 2021; Garvin, 2008). Regarding shared leadership, there are certain aspects that are positively related to creativity, like the sharing of distinct information (Hoch, 2013) and a perceived power balance (Chen, 2021). However, other parts of shared leadership may in fact not be related to higher levels of creativity, or even negatively related, as was explained in the paragraph on theoretical implications. Perhaps, shared leadership is not the most ideal form of leadership for creativity to thrive under, but participative or supportive leadership is. We know that supportive, participative and empowering leadership have a positive effect on creativity (Hoch, 2013). Participative and supportive leaders aim for employees to feel free from threat, and motivate them to take part in the decision making process (Oedzes, 2019; Chen, 2021). Further research is necessary to investigate this possible relationship.

### **Conclusion**

We studied the relationship between shared leadership and creativity, hypothesizing that this relationship exists and is mediated by trust. We found that trust is indeed positively related to both shared leadership and creativity. However, no relationship was found between shared leadership and creativity. Subsequently, no mediating effect was found for trust within the relationship of shared leadership and creativity.

Several explanations for the non-significant findings of our study may be that there are confounding variables influencing the relationship between shared leadership and creativity. We proposed task interdependence and shared goal orientation to be of influence for this relationship. The lacking significance may also be due to our definition of shared leadership that slightly differs from previous research. Lastly, there are limitations to our design that may influence our findings. Specifically, our study may lack power because of its small sample size. Besides, it may be biased because we used a convenience sample and because generally, people with a good relationship with their coworker are more likely to participate. Future

research should be centered around replicating this current study, in order to extend shared leadership as a team property and to improve statistical power. Moreover, confounding factors like task interdependence and shared goal orientation should be taken into account. Possibly, creativity and trust can be studied in the context of participative or supportive leadership instead of shared leadership.

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Appendix

Figure 1: Normality Check for Trust

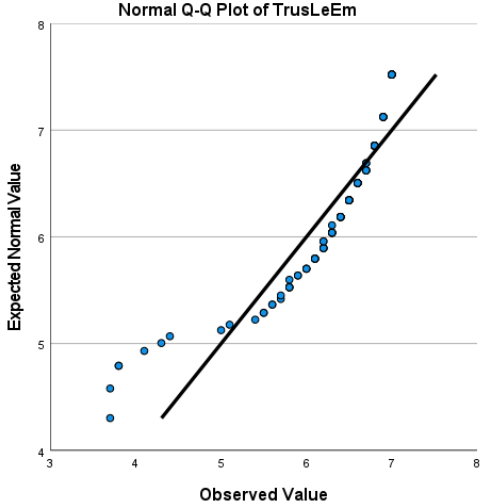


Figure 2: Normality Check for Shared Leadership

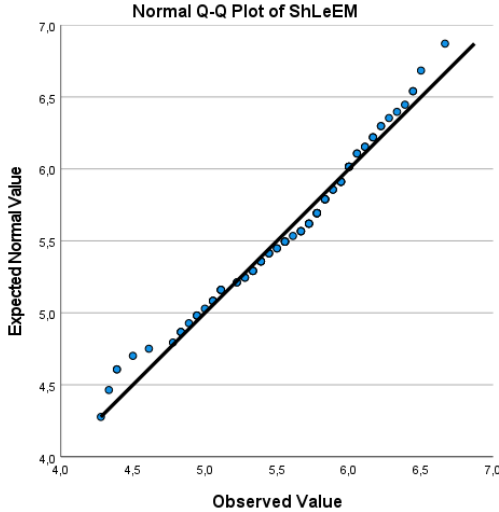


Figure 3: Normality Check for Innovative Work Behavior

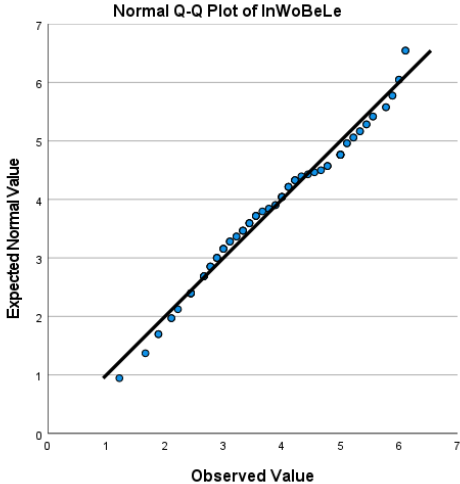


Figure 4: Residual Plot Innovative Work Behavior - Shared Leadership

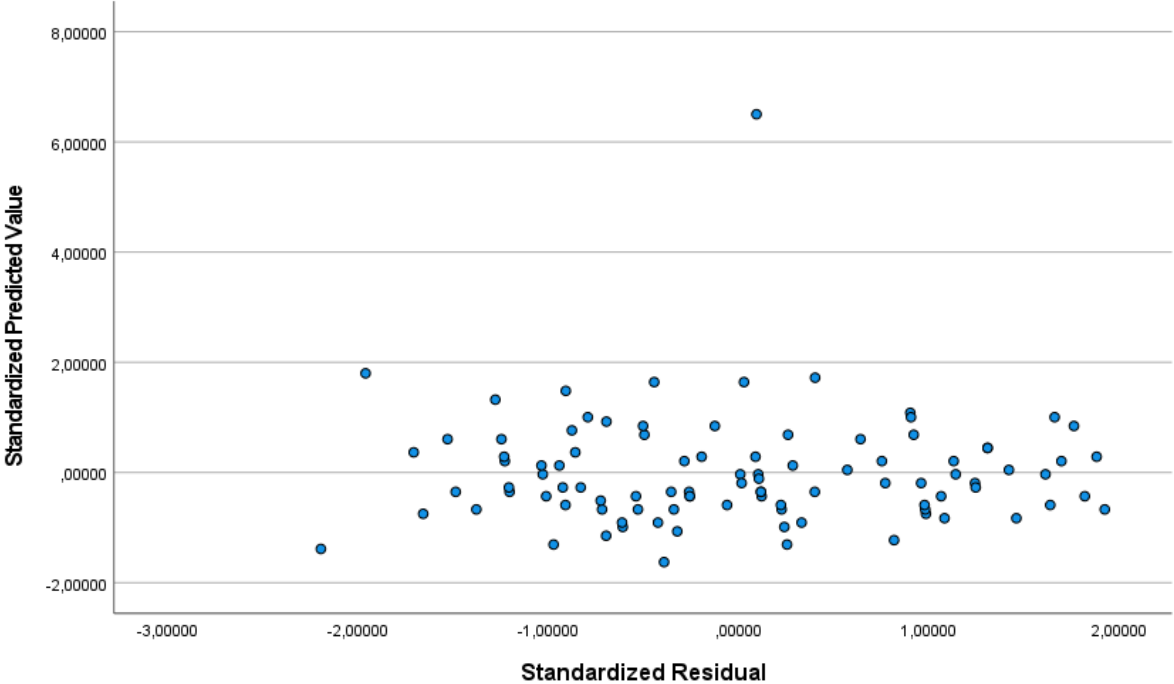


Figure 5 : Residual Plot Innovative Work Behavior - Trust

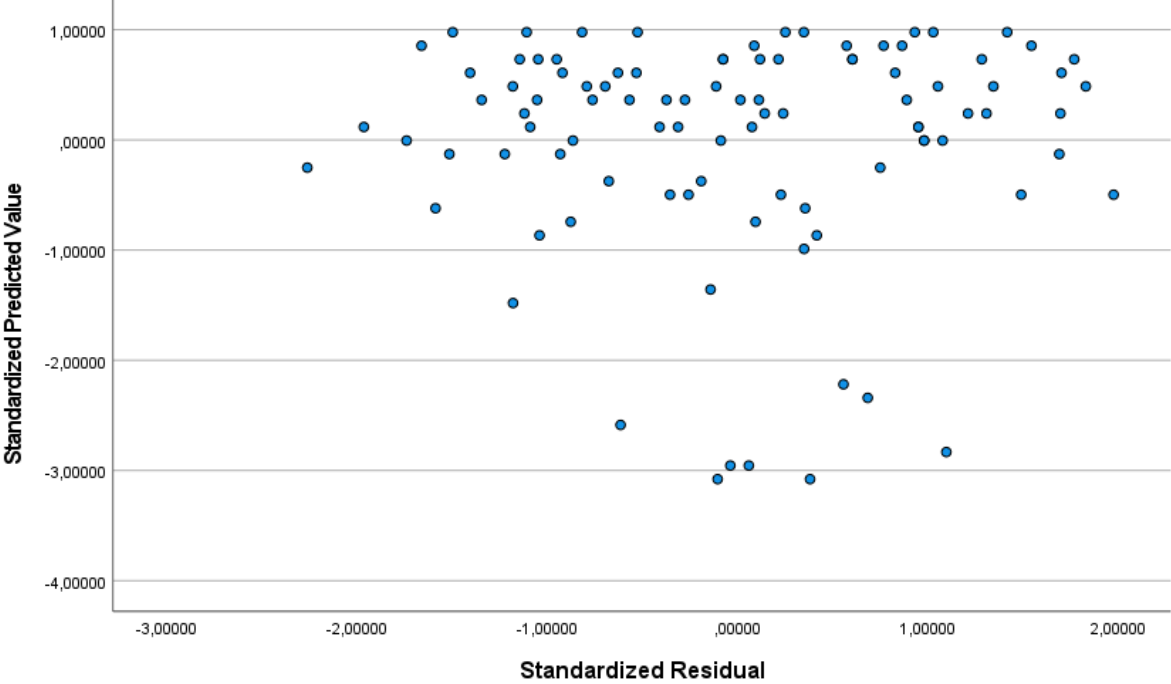


Figure 6: Residual Plot Shared Leadership - Trust

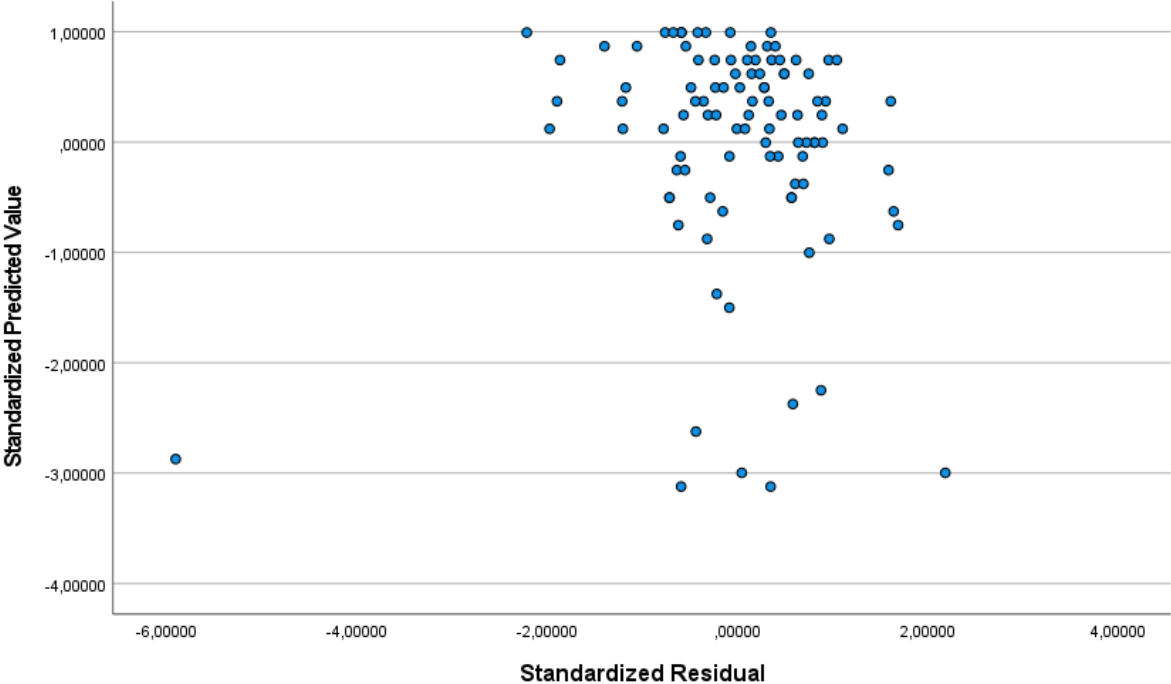


Table A: Multicollinearity Check

*Coefficients<sup>a</sup>*

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2,30	1,43		1,61	,11		
	ShLeEM	-,20	,23	-,09	-,85	,40	,95	1,05
	TrusLeEm	,43	,15	,28	2,78	,01	,95	1,05

<sup>a</sup>. Dependent Variable: InWoBeLe

**Multiple Regression - mediation by PROCESS**

Run MATRIX procedure:

\*\*\*\*\* PROCESS Procedure for SPSS Version 4.2 \*\*\*\*\*

Written by Andrew F. Hayes, Ph.D. [www.afhayes.com](http://www.afhayes.com)  
 Documentation available in Hayes (2022). [www.guilford.com/p/hayes3](http://www.guilford.com/p/hayes3)

\*\*\*\*\*

Model : 4  
 Y : InWoBeLe  
 X : ShLeEM  
 M : TrusLeEm

Sample  
 Size: 96

\*\*\*\*\*

OUTCOME VARIABLE:  
 TrusLeEm

Model Summary

R	R-sq	MSE	F	df1	df2	p
,2185	,0477	,5895	4,7132	1,0000	4,0000	,0325

Model

	coeff	se	t	p	LLCI	ULCI
constant	4,3997	,8458	5,2017	,0000	2,7203	6,0792
ShLeEM	,3276	,1509	2,1710	,0325	,0280	,6272

\*\*\*\*\*

OUTCOME VARIABLE:  
 InWoBeLe

Model Summary

R	R-sq	MSE	F	df1	df2	p
,2776	,0771	1,3095	3,8835	2,0000	93,0000	,0240

Model

	coeff	se	t	p	LLCI	ULCI
constant	2,3047	1,4306	1,6110	,1106	-,5361	5,1455

ShLeEM	-,1953	,2305	-,8472	,3991	-,6529	,2624
TrusLeEm	,4267	,1537	2,7760	,0067	,1215	,7320

\*\*\*\*\* TOTAL EFFECT MODEL \*\*\*\*\*

OUTCOME VARIABLE:

InWoBeLe

Model Summary

R	R-sq	MSE	F	df1	df2	p
,0246	,0006	1,4029	,0568	1,0000	94,0000	,8122

Model

	coeff	se	t	p	LLCI	ULCI
constant	4,1822	1,3048	3,2052	,0018	1,5915	6,7729
ShLeEM	-,0555	,2328	-,2382	,8122	-,5177	,4067

\*\*\*\*\* TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y \*\*\*\*\*

Total effect of X on Y

Effect	se	t	p	LLCI	ULCI
-,0555	,2328	-,2382	,8122	-,5177	,4067

Direct effect of X on Y

Effect	se	t	p	LLCI	ULCI
-,1953	,2305	-,8472	,3991	-,6529	,2624

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TrusLeEm	,1398	,1013	-,0150	,3820

\*\*\*\*\* ANALYSIS NOTES AND ERRORS \*\*\*\*\*

Level of confidence for all confidence intervals in output:  
95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:  
5000

----- END MATRIX -----

## Appendices

### Shared leadership – scale

Geef alstublieft aan in hoeverre u het eens bent met de stellingen.

[1 Helemaal mee oneens; 7 Helemaal mee eens; 4 niet mee eens, niet mee oneens]

1. Mijn leidinggevende geeft een duidelijk beeld van waar ons team voor staat.
2. Mijn leidinggevende is gedreven door hogere doelen of idealen.
3. Mijn leidinggevende laat waardering zien voor mijn inspanningen.
4. Mijn leidinggevende moedigt mij aan om ideeën te heroverwegen die nooit eerder in twijfel getrokken zijn.



5. Mijn leidinggevende maakt gebruik van veel verschillende perspectieven om problemen op te lossen.
6. Mijn leidinggevende moedigt mij aan om meer te doen dan alleen dat wat van mij verwacht wordt (bijv. extra inspanning).
7. Mijn leidinggevende moedigt mij aan om zelf oplossingen te zoeken voor mijn problemen in het werk.
8. Mijn leidinggevende dringt aan om zelf verantwoordelijkheid voor het werk te nemen.
9. Mijn leidinggevende moedigt mij aan om nieuwe dingen te leren.
10. Mijn leidinggevende moedigt mij aan om mezelf een schouderklopje te geven wanneer ik een nieuwe uitdaging heb behaald.
11. Mijn leidinggevende moedigt mij aan om samen te werken met andere teamleden.
12. Mijn leidinggevende adviseert mij om mijn werk af te stemmen met anderen, die onderdeel uitmaken van het team.
13. Mijn leidinggevende dringt erop aan om als een team samen te werken met anderen, die deel uitmaken van het team.
14. Mijn leidinggevende verwacht dat de samenwerking met de andere teamleden goed verloopt.
15. Mijn leidinggevende besluit samen met mij wat mijn prestatiedoelen zijn.
16. Mijn leidinggevende en ik werken samen om te kiezen wat mijn prestatiedoelen moeten zijn.
17. Mijn leidinggevende en ik gaan samen om de tafel om overeenstemming te krijgen over mijn prestatiedoelen.
18. Mijn leidinggevende werkt met mij samen om mijn prestatiedoelen te ontwikkelen.

#### **Innovative work behavior - scale**

Hoe vaak komt het voor dat uw medewerker in zijn/haar werk ....

##### *[Idee-Generatie]*

1. Nieuwe werkwijzen, technieken of instrumenten bedenkt.
2. Met originele oplossingen komt voor werkproblemen.
3. Creatieve ideeën bedenkt voor verbeteringen.

##### *[Idee-Promotie]*

4. Steun mobiliseert voor vernieuwende ideeën.
5. Bijval oogst voor vernieuwende ideeën.
6. Sleutelfiguren enthousiast maakt voor vernieuwende ideeën.

##### *[Idee-Realisatie]*

7. Vernieuwende ideeën uitwerkt tot werkbare toepassingen.
8. Vernieuwende ideeën planmatig invoert.
9. De invoering van vernieuwende ideeën grondig evalueert.

#### **Trust - scale**

Geef alstublieft aan in hoeverre u het eens bent met de stellingen.

[1 Helemaal mee oneens; 7 Helemaal mee eens; 4 niet mee eens, niet mee oneens]

1. Ik kan op mijn medewerker rekenen voor hulp als ik problemen heb met mijn werk.
2. Ik heb er vertrouwen in dat mijn medewerker rekening met mijn belangen houdt bij het nemen van werk-gerelateerde beslissingen.
3. Ik heb er vertrouwen in dat mijn medewerker mij op de hoogte brengt van onderwerpen die belangrijk zijn voor mijn werk.
4. Ik reken erop dat mijn medewerker zich aan zijn/ haar woord houdt.
5. Ik vertrouw mijn medewerker.