MASTER THESIS

MISLEADING SMALL GROUPS: MISINFORMATION, SOURCE CREDIBILITY AND THE UNDERLYING INFLUENCES.

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Abstract

Although researchers know that incorrect or misleading information can impact team performance negatively, less is known about how precisely misinformation impacts performance, nor how and when teams are able to overcome this impact. This dissertation investigates the influence of misinformation, the source of the misinformation and the moderating influences of personality and team role. Sixty participants, in groups of four, took part in a time sensitive group task, where they were asked to construct a tower that could support a marshmallow. During the construction, groups were exposed to disruptions, in the form of misinformation. The groups were divided into three conditions; control, researcher misinformation, and member misinformation. These conditions were then further analyzed by investigating the combined personalities of the group members, both between and across conditions, allowing for more insight into the effects caused by misinformation and effects caused by group composition. Misinformation given by an authority figure had a significant effect on performance. However, the same was not found for misinformation given by a group member. The influence of personality and team role did not show a strong moderating influence, although this differed per condition. The significant influence of misinformation given by an authority figure shows that authorities (e.g. law-enforcement and military institutions) are able to exert influence on performance, but that the strategies used must be carefully considered, as misinformation by members does not have a significant influence on performance. Future studies should be directed towards understanding the role of personality in response to misdirection, with regards to performance under different conditions.

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Misleading small groups: Misinformation, Source Credibility and the Underlying Influences.

Causes of diminished performance are often identified in group activities, but the extent of the influence of misinformation stay under researched. Most research on groups concerns improving group cohesion and performance, for example by studying the impact of cultural diversity (Ely & Thomas, 2001) or how members of groups view internal conflicts (Jehn, Rispens, & Thatcher, 2010). Research regarding groups mainly focuses on improving performance, protecting groups from decreased performance, and improving bad performance. While there are strategies that can increase and protect performance by fixing "problem" areas, the underlying causes are often not identified or isolated. In sports, low group cohesion can lead to poor team performance. The implementation of teambuilding strategies are then focused on the group as a whole (Weinberg & Gould, 2011) and not on identifying personality difference that could be the source of the low cohesion. The ability to identify both the causes and the effects of negative performance, can assist in the preparation of the effects of disruption. By being able to predict possible outcomes, it becomes possible to correct and/or counterbalance the effects caused by the disruption. Such a situation could arise when incorrect news is published. By knowing the influence of misinformation, contingency plans can be created ahead of time to counter balance the effect.

In other circumstances, improving performance may not always be the central goal, the goal could be to cause group disruption. For example, this strategy is often used in law enforcement (Innes & Sheptycki, 2004). A challenge for law enforcement is to break up criminal groups in an efficient as possible manner. This can be achieved through the use of undercover

officers (Robins, 2009) or removing members through arrests (Jordan, 2009). In the latter, removing a key member of a group can lead to group restructuring.

Studies of group communication have often indicated that misinformation can impact the performance of groups and teams negatively (eg. Shaw, 1985). The current study therefore aims to investigate the effect of underlying influences (in this study: information source, personality and social role) on the effects of misinformation. Source credibility is well researched (Wathen & Burkell, 2001), but less so in the context of misinformation. The source of the information can influence the perceived importance and this can influence the effect of the information. For example, when the source's credibility is perceived as low, individuals may discount the information (Eagly & Chaiken, 1975), indicating that misinformation, in some cases, has little effect on performance. Additionally, the effect of personality is often tied to performance and group cohesion (Barrick et al., 2003). Personality has also been found to have an influence on information processing, for example, individuals that score high on anxiety are more likely to react to threat cues than their lower scoring counterparts (Mathews, 2012). It can be argued that personality can have an effect on the interpretation of misinformation. Individuals do not only perform a set of tasks within a group, but also bring different characteristics (or social roles) to the group (Aritzeta, Swailes, & Senior, 2007). These social roles have been found to influence group performance (Senior, 1997), as different roles focus on different aspects of information analysis and task processes (Belbin, 1983). It is possible, therefore, that the effect of the group roles can be influenced by the misinformation, as the misinformation can cause a disruption in the information analysis.

1.1 Misinformation

The negative influence of misinformation can be due to a multitude of reasons, including increased task difficulty (Shaw, 1985). While the task may stay the same, the misinformation introduces new stressors that increase the difficulty of processing and putting the correct information together. This increased difficulty in processing could be explained by mis-framing of information, where frames are a collection of ideas around a concept. Van Dijk and Wilke (1995) described the effects of different frames and found that the framing of social dilemmas influenced what participants found more important. This in turn leads to incorrect problem solving strategies (Kerr & Park, 2001). Incorrect information has also been found to have an influence on how different information is remembered, due to a negative suggestion effect, where negative information is remembered better than positive information (Brown, Schilling, & Hockensmith, 1999). This is also in line with Hall and Watson's study (1970), in which management seminar participants were divided into groups, with each group receiving different information. Groups that received instructions showed an increase in group discussion and collective decisions, showing that information can influence group beliefs and performance. These studies provide evidence for a strong relationship between the perceived importance of the information and group performance. However, these studies place emphasis on improving group performance and not promoting negative performance. In the "How to make a group fail" study (Conchie, Taylor, McClelland, & Ellis, 2013), the effects of misinformation was investigated further. Groups of four were instructed to complete the marshmallow challenge (Wujec, 2010), where groups had to build a tower in under 18 minutes, that could support a marshmallow. In line with previous studies, misinformation had a significant influence on group performance. By having the researcher introduce misinformation, the participants were misled on possible ways to

complete the task and this created false assumptions. In this experiment the researchers provided

the misinformation before the task was started. It is therefore hypothesized that:

H1a: *Misinformation will lead to worse group performance.*

When introducing information, it is important to note that the credibility of the source can

also have an influence on the information interaction. According to Wathen and Burkell (2001):

Message credibility is generally agreed to result from an interaction of source

characteristics (e.g., expertise, trustworthiness), message characteristics (related to

message content, encompassing factors such as plausibility, internal consistency, and

quality), and receiver characteristics (e.g., cultural background, previous beliefs).

(p.135)

This combination of factors, found to influence the source credibility, highlights the importance

of investigating some of the surrounding factors. As no two groups are identical, receiver

characteristics, like group composition, personality, and knowledge, can affect not only the

source credibility, but the performance as a whole (Belbin, 1981; Barrick, Mount, & Judge,

2003; Wathen and Burkell, 2001). While the effects of source credibility are well studied,

research on the influence of source credibility under the conditions of misinformation is lacking.

In solely knowing the influence of misinformation, it can be difficult to implement strategies that

utilize misinformation effectively. In 2008 McElroy and Crant studied the source and

frequencies of handicapping. Self-handicapping occurs when a person supplies an explanation of

the results before actually completing a task, in turn influencing the results. Before this study, the

focus was mostly on the individual providing a handicap. In their study the handicap (or

handicapping information) was provided by an actor, thereby creating a new source. McElroy

and Crant found that an external source, that was believed to be credible, had a strong influence

on the performance. Similar results have been found in commercial product research. In a study

by Buda and Zhang (2000), participants who received information from sources perceived as

credible judged products more positively than those who received information from less credible

sources. Thus, it can be argued that, as a researcher can be seen as an authority figure during an

experiment and therefore seen as credible, it is possible that this can influence the decision

making during a task. Changes in opinion have been found to relate to the trustworthiness of the

source. (Hovland & Weiss, 1952). Stasser and Titus (1985) formulated that groups are less than

optimal information users, thus if an idea does not fit the original framing and the source is not

viewed as credible, the information is often ignored. Hence it can be hypothesized that:

      H1b: *Misinformation given by an authority figure will have a significant influence on*

group performance.

      H1c: *Misinformation given by a group member will not have a significant influence on*

group performance.

1.2 Personality

      The influence of personality on group performance has long been a topic of discussion,

starting in the early 1900s and was revived in the early 1980s. Though early studies found little

evidence of an association, personality models were improved and later more significant results

were found (Barrick et al., 2003), especially when personality was assessed using the Five Factor

model (also known as the Big-5). Recently, personality has been found to have an influence on

both individual (Barrick & Mount, 2006) and group performance (Kramer, Bhave, & Johnson,

2014), as measured by group tasks or tests. In 2003 Chamorro-Premuzic and Furnham, found

that certain personality traits (achievement striving, self-discipline, and activity) could explain

about 30% of the variance in university exam scores. This indicates that there is a relationship

between performance and personality. It has also been shown that certain combinations of personality traits can cause a vulnerability to misinformation (Zhu et al., 2010). Though relationships have been found between personality and performance and between personality and misinformation, the three aspects have not been investigated in a combined experiment.

The combination of different personalities can have different influences than an individual personality trait (Barrick & Mount, 2006). A high level of extraversion is a predictor of individual performance in social tasks, but if all individuals of a group score high on extraversion, this can influence tasks that require a fast response negatively (Barry & Stewart, 1997). It has been found that diverse personalities score differently on a variety of tasks. It follows that, a personality trait cannot be seen as a consistent predictor for all tasks (LePine, Buckman, Crawford, & Methot, 2011), as each task contains different elements. For this reason it is important to identify the moderating influence of personality when introducing external influences like misinformation.

When considering group composition, it is possible for groups to be similar (little variance in personality traits), or different (larger variance in traits or in the average mean trait scores); each of these groupings can have different influences under different conditions (LePine et al., 2011). The Similarity-attraction theory (Byrne, 1971) states that groups comprising of similar personalities are more likely to experience a higher sense of well-being, as members are attracted to the similarities they see in each other. However, it can be argued that it is not the similarity of the group that is most important, but rather the variability in personality and the mean trait levels (Homan, Hollenbeck, Humphrey, Van Knippenberg, Ilgen, & Van Kleef, 2008). A group only consisting of highly conscientious individuals might score higher on a trait than a group where all members score low on conscientiousness, although both groups have little

variance. A group can therefore have a supplementary fit (higher mean leads to better performance) or a complementary fit (specific levels of personality trait complement each other by filling in competency gaps; LePine et al., 2011). It is the combination of a high mean and a lack of variance that leads to a good outcome.

Traits like emotionality (Watson & Tellegen, 1985), extraversion (Quigley, 2013), agreeableness (Mount & Barrick, 1995), conscientiousness (Mount & Barrick, 1995) and openness to experience (Pedooem, 2007) are often mentioned in comparisons of performance. Each of these traits has a different influence on performance due to the differing aspects of the task to be performed.

A high score on trait emotionally can promote a more stable group atmosphere that can, enable group members to work together more effectively and in turn improve performance (Watson & Tellegen, 1985). Similarly, high trait agreeableness has been found to influence team cooperation, as members are helpful, trusting and tolerant. In 2006, Peeters, van Tuijl, Rutte, and Reymen, suggested that emotional stability was too broad a concept and concluded that self-esteem played a more important role, as individuals first must have the self-confidence to take the initial step in working together. Moreover, this effect of self-esteem can be seen in extraversion traits, as these individuals tend to be more assertive. Extraversion has often been found to have a positive influence on group performance, especially when considering the leadership of a group (Cavazotte, Moreno, & Hickmann, 2012; Quigley, 2013). Extraversion and openness to experience have been found to correlate strongly with leadership (Quigley, 2013). However, an oversaturation of extraversion in a group has been found to negatively influence the performance of a group. In 1997 Barry and Steward found a curvilinear relationship between the number of extraverts and performance, suggesting that greater variance in extraversion could

assist in the creation of complementary roles, where there are not too many leaders or followers. Whereas groups who score high on openness to experience demonstrate attributes like creativity, intelligence and originality (Pedooem, 2007). High openness to experience has also been linked to better performance on tasks where unexpected communication breakdowns occurs (LePine, 2003). Conscientiousness has also been found to relate strongly to the individual performance (Mount & Barrick, 1995). With a higher conscientiousness, team members tend to contribute more to the overall outcome; one of the reasons for this is the better focus and higher performance are attributed to a higher attention to detail. From this theoretical basis the following hypotheses have been set:

H2: *Personality will have a moderating effect on the performance.*

H2a: *Trait elevation in Emotionality will positively correlate to performance.*

H2b: *Trait elevation in Self-Esteem will positively correlate to performance.*

H2c: *Trait variation in Extraversion will positively correlate to performance.*

H2d: *Trait elevation in Agreeableness will negatively correlate to performance.*

H2e: *Trait elevation in Conscientiousness will positively correlate to performance.*

H2f: *Trait elevation in Openness to Experience will positively correlate to performance.*

1.3 Social Roles

A group is not only defined by the individuals that are part of the group, but also by the interaction between members and roles they take within a group. From a psychosocial perspective, a social role can be defined as the behavior that is expected from an individual within a certain group role (Biddle, 1979). The cognition and behavior associated with the group role is often of large importance to the group performance (Katz & Kahn, 1978). In 1999,

Pichard and Stanton found that groups comprising of different types of roles within a group, performed better on group tasks.

In 1981 Belbin identified different team roles for members of a group. This identification resulted from his earlier research on management teams playing management games. By observing these teams and measuring their performance in terms of winning and losing, Belbin created eight roles (Dulewicz, 1993). It was claimed that he could predict the performance of a group based solely on these roles. In 1993 a ninth role was added to the Belbin team roles. These roles are often used to analyze groups and forms a solid basis for group analyses (Senior, 1991). As authors like Belbin have created social role inventories based on personality traits, this study will not focus on the link between social roles and personality. Instead it will focus on the possible moderating effect that social roles and group composition can have on group performance, when subjected to misinformation. As information analyses and task processes differ between roles (Belbin, 1983), it is possible that group roles can be influenced by the misinformation, as the misinformation can cause a disruption in the information analyses. In 1993, Belbin found that "balanced" groups performed better than "unbalanced" groups, as different group roles can supplement each other. As unbalanced groups contain too many of the same roles, it becomes more difficult to adapt to different strategies. For these reasons it is hypothesized that:

> H3a: *A high variation in Belbin Team roles will positively correlate to performance.*
>
> H3b: *Social roles will have a moderating influence on performance.*

1.4 Current study

In order to study the effect of misinformation on group performance and the moderating influence of personality and team roles, participants were divided into groups of four. Each

group was then allocated to one of three conditions. Personality and social roles were tested

through the use of questionnaires. In order to test the effect of misinformation on groups, all

groups were instructed to complete a time sensitive activity to measure the performance. Each

condition would receive a different form of misinformation. The first condition received no

misinformation and were allowed to complete the task without disruptions. The second group

received examples of possible outcomes at the start of the task. In the final group, two group

members received examples of possible outcomes before the task, unbeknownst to the other

group members.

2. Method

2.1 Participants

Participants were sourced from the student pool of the Faculty of Behavioral Sciences at

the University of Twente. Sixty participants (31.7% male) took part in the study. The ages

ranged from 18 to 30 years ($M = 20.64$, $SD = 2.32$). Of all participants, 58% ($n = 35$) received

their High school diplomas in German and 42% ($n = 25$) in the Netherlands. Participation were

asked to indicate their experienced sincerity in the group, on a seven-point Likert scale ranging

from 1 = "*low experienced group sincerity*" to 7 = "*high experienced group sincerity*". The mean

individual score was 6 (SD = 1.11), suggesting that all participants felt that their team members

were indeed sincere in the task completion. It was decided not to randomize the group, as the

members of groups in general situations often also know each other.

2.2 Design

A 3x1 quasi-experimental design was used for this study, where the misinformation

conditions were compared to performance. The experiment contained one dependent variable

(group performance), one independent variable (misinformation conditions) and two independent

variables derived from participants' responses (personality and the social roles).

2.3 Instruments and Measures

Personality. To measure the personalities of the participants, the HEXACO-60 (Ashton

& Lee, 2007) personality inventory was used. The HEXACO-60 is a shortened version of the

original inventory (HEXACO-PI-R) by the same authors (2009). In this inventory participants

must answer 60 questions on a scale of 1 (*strongly agree*) to 5 (*strongly disagree*). It was decided

to use the HEXACO instead of the NEO-PI due to the difference in the honesty-humility and

emotionality traits. As the emotionality trait has also been used in previous group studies

(Watson & Tellegen, 1985), it is of more value than the use of the agreeableness and neuroticism

traits. The HEXACO contains 6 dimensions: honesty-humility, emotionality, extraversion,

agreeableness, conscientiousness, and openness to experience. A reliability analysis was

performed on the HEXACO test, showing the following results: Honesty-Humility, $\alpha = .49$;

Emotionality, $\alpha = .77$; Extraversion, $\alpha = .76$; Agreeableness, $\alpha = .69$; Conscientiousness, $\alpha = .66$;

Openness to Experience, $\alpha = .70$. As the Honesty-Humility alpha score is low, this measure will

not be used in further analyses.

Belbin Team Roles. The Belbin team role for each participant was determined by the

Belbin team role questionnaire. The questionnaire consists of seven questions with nine

statements each, all in regards to the choices that an individual makes during a group activity.

Examples of the questionnaire were: "I think I can quickly see and take advantage of new

opportunities". Each question must be answered by ranking the statements from most to least

suitable. The combined results of the ranking leads to the identification of one of nine team roles (table 1) (Aritzeta, Swailes, & Senior, 2007).

Sociometric Badges. During the group activity, each participant wore a Sociometric Badge (Sociometric solutions®). This device recorded both verbal and nonverbal interaction. Unfortunately the data could not be used due to problems with the software. All data were saved for possible future analyses.

Survival task. In survival task the group must rank a list of 15 items from most to least important to ensure their survival after the sinking of a ship. (e.g. "shaving mirror" and "An ocean fishing kit with pole"). Each group receives 20 minutes to complete the task. The main goal of the task is for the groups to familiarize themselves with each other. The normal time limit of 15 minutes was extended to 20 minutes in this study, to allow for more familiarization time. At the end of the 20 minutes, the group answers are handed in.

Marshmallow Challenge. In the marshmallow task (Wujek, 2008) groups receive 20 spaghetti sticks, 1m string, 1m sticky tape and one marshmallow. The goal is to build a tower that can support the whole marshmallow as high off of the table as possible. 18 minutes is allowed for the task. During the task a timer is placed on the table, to allow the participants to see how much time they have left. A researcher also indicates the time left at 12, 9, 7, 5, 3, 2, and 1 minute, as well as a 10 second count down at the end. At 0 the tower was measured in centimeters and recorded.

Posttest Questionnaire. The posttest questionnaire consisted of 40 questions designed to measure the participants' perceptions in regards to the group interactions, performance and cognitive depletion. All questions were answered on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The compounded questionnaire had five parts: The first five questions were

taken from Carless and De Paola's (2000) group cohesion scale to measure the perceived cohesion (e.g. "I was dissatisfied with the level of dedication from my group, during the task"). The next five questions measured the trust within the group (e.g., "Our team was united in trying to reach its goal"). The third part contained questions in regards to the implicit feelings regarding interpersonal mimicry (e.g., "Our group gelled well together"). The fourth contained three questions about the personal and group contributions. In the final section, 25 question in regards to the state of depletion were asked (Janssen, Fennis, Pruyn, & Vohs, 2008; e.g., "I would not be able to complete the task again").

2.4 Procedure

Pre-experiment

Participants were recruited via email, social media and word of mouth. Participants could indicate when they wished to participate by registering through the online study system of the University of Twente (SONA). After registering, all participants (in groups of four) received confirmation of the time and place of the experiment. At this time groups were divided into one of the three conditions. All participants accepted the terms of the informed consent. Each participant received 3 Course Credits for participation.

Test phase

Upon arrival all participants received a short introduction and the informed consent, the group was then split into two rooms to complete the first questionnaire. All initial questionnaires were identical, except for the member misinformation (MM) groups that received three misinformation pictures. After the completion of the questionnaire, all participant were moved back to one room for the group tasks.

Once all the group members were together, the instructions for the survival task were explained and any questions about the task answered. Each member wore a Sociometric badge to get use to completing an activity while wearing the badge. During the task, the researcher was available to answer questions about uncertainties in regards to what certain items were.

During the marshmallow challenge the different groups received misinformation in different forms. In the researcher misinformation (RM) groups, the group received three photos of possible towers they could build. However, these examples were constructed with the use of superglue and without a time limit. No participants were not informed of this. In the member misinformation (MM) group, only two group members received the same three photos during the first questionnaire. The control group (CG) was only instructed on the task and received no misinformation. The performance on the marshmallow challenge was measured after exactly 18 minutes, by measuring the tower in centimeters.

After the completion of the marshmallow challenge each member completed the final questionnaire. Only after the completion of the final questionnaire were groups debriefed. They also received more information about similar experiments and were informed of their score on the survival task. Many participant were surprised at the results of this task.

Analysis

The dataset was analyzed using IBM SPSS Statistics 21. Before any analyses were completed, the dataset was scanned for any missing or erroneous variables. A total of six missing variables were found in the HEXACO-60 results. As the errors were from different persons and different question, it was possible to reanalyze the answers according to the original HEXACO questionnaire answers. A significance criterion of $p < .05$ was used. A Bonferroni post-hoc test was completed for all ANOVA tests, to ensure robust analyses.

3. Results

3.1 Sample characteristics

To ensure the equality of variance, the data was subjected to a series of tests. An inspection of the skewness and kurtosis measures and standard errors (Cramer, 1998; Cramer & Howitt, 2004; Doane & Seward, 2011) and a visual inspection of the q-q plots showed that the sample data (Tower Height) is approximately normally distributed. Only within the control group (CG) a skewness of -1.08 (SE = .52) was found, this causes a z-score (-2.11) slightly outside the +-1.96 range. After further investigation, the outliers were included, as these scores are not true outliers. A non-parametric Levene's test was used to verify the equality of variance in the samples (homogeneity of variance) ($p > .05$) (Nordstokke & Zumbo, 2010; Nordstokke, Zumbo, Cairns, & Saklofske, 2011).

Age and sex was used to test if the participant pool reflects an accurate sample of the general demography. Both individual aspects, age, $F(2, 57) = 1.42$, $p = .25$, and sex, $F(2, 57) = .52$, $p = .596$, were not significant. In the post-experiment questionnaire 5 questions were related to the experience. These questions are important, as they indicate the level of commitment in regards to the task. These scores can indicate a low levels of effort, commitment or being serious about the task. They can also indicate that the performance is a true measure of the group. Table 3 shows that that all groups experienced similar group conditions. Question 2, "I was unhappy with my team's level of commitment to the task." scores across all three conditions indicated that groups were generally positive about their group's commitment to the tasks, $F(2,57) = 1.27$, $p = .29$ ($M < 4$, $SD < 2.5$), only in the CG a higher variation was found. Question 3, "Our team members had conflicting aspirations for the team's performance." indicated that within the groups nearly all the members had similar ideas in regards to the execution of the tasks, $F(2,57)$

= .49, *p* = .616 (*M* < 2.5, *SD* < 1.6). If scores differed a lot on this question, it could mean that

conflict could arise in the group, leading to a shift in focus from the task to the conflict. Question

10, "We fully trusted one another" shows that the trust within the groups were high, $F(2,57)$ =

.16, *p* = .856 (*M* > 5.2, *SD* < 1.1), this is of special importance as trust did not diminish after only

Table 3
Manipulation Check Details

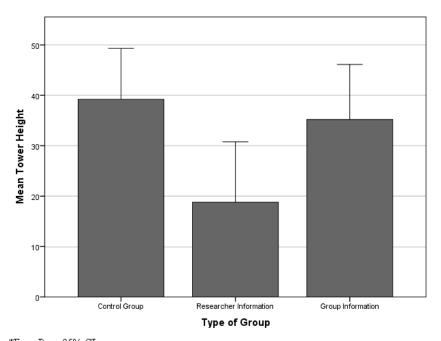|	Type of group								
	Control Group			Researcher Misinformation			Member Misinformation		
	Mean	*SD*	*n*	Mean	*SD*	*n*	Mean	*SD*	*n*
Team commitment	3,65	2,41	20	2,70	1,63	20	3,15	1,50	20
Conflicting aspiration	2,25	1,52	20	2,65	1,35	20	2,45	,89	20
Trust	5,25	1,02	20	5,25	,85	20	5,40	1,05	20
Own input	2,15	1,27	20	1,85	,93	20	2,15	,88	20
Respect	5,95	,83	20	6,00	,65	20	5,80	,70	20

*All questions were ranked from 1 = Not True to 7 = Very True.

two members received the misinformation, as diminished trust can lead to lower performance

(Buda & Zhang, 2000). Question 12, "The team did not give me enough opportunities to

contribute" showed that members felt like they could contribute to the results, $F(2,57)$ = .56, *p* =

.577 (*M* > 2.2, *SD* < 1.9). The final question "We respected each other's abilities" also shows

that members felt valued in their groups, $F(2,57)$ = .41, *p* = .666 (*M* < 5.5, *SD* < .9). If members

of the group did not feel valued, this could indicate that the whole group did not participate in the

task. When considering this data, it can be assumed that all members felt valued and tried their

best during the tasks.

3.2 Hypotheses

Misinformation

Figure 1 shows that there is a significant difference in tower height (performance) between the three conditions. A between-subject ANOVA in which the mean tower height was compared across the three conditions revealed a significant effect of misinformation on the height of the towers, $F(2, 57) = 4.21$, $p = .02$. For this reason the first hypothesis (H1a) can be accepted.

*Error Bars: 95% CI

Figure 1. Mean Tower height per Condition

An independent-samples t-test was to test the between-subject differences between conditions. A significant effect for misinformation was found between the control group and the researcher misinformation group, $t(38) = 2.726$, $p = .01$, with the control group scoring higher than the researcher misinformation group. This shows that misinformation offered by an authority figure has a significant influence on performance, confirming hypothesis H1b.

No significant difference was found between the control group and the member misinformation group, $t(38) = .563, p > .05$, indicating that misinformation given by a member did not significantly influence the performance, hypothesis H1c is therefore accepted.

Personality

To investigate the influence of personality between the conditions, the group-level averages and variances for the relevant HEXACO-60 traits were calculated: social self-esteem group average, emotionality group average, agreeableness group average, conscientiousness group average, openness to experience group average and group variance of extraversion. A test for the moderating influence of the individual personality traits was performed. Significant moderation effects were found for all of the tested traits. Emotionality: $\Delta R^2 = .257, F(3, 60) = 6.2151, p < .001$. Agreeableness: $\Delta R^2 = .0794, F(3, 56) = 2.892, p = .0433$. Conscientiousness: $\Delta R^2 = .3, F(3, 56) = 12.373, p < .0001$. Openness to experience: $\Delta R^2 = .159, F(3, 56) = 9.048, p = .0001$. Extraversion: $\Delta R^2 = .257, F(3, 56) = 39.924, p < .0001$. This shows that personality has a strong moderating influence on the performance, thus hypothesis H2 can be accepted.
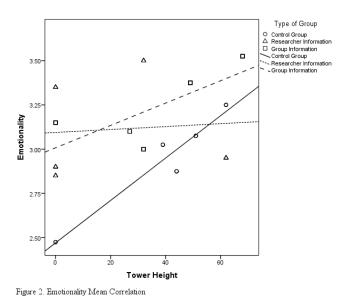
Table 2

Correlation between traits and performance within the complete sample.

		Tower height	Emotionality	Conscientious	Extraversion	Openness	Self Esteem
Tower Height	Correlation	1	.381	-.162	-.082	-.097	-.220
	Sig.		.001	.108	.267	.230	.046
	N	60	60	60	60	60	60

A Pearson product-moment correlation coefficient was computed to assess the relationship between the performance and the individual personality traits (table 2), to identify any direct influences. In figure 2 – 5, the correlation between the personality traits and the three
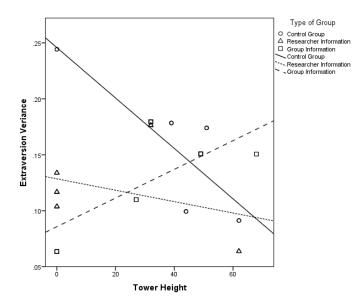
conditions can be seen. In these figures a comparison of the differences in influences can be seen more clearly.

When considering the personality in relation to performance across all conditions, only two traits showed significant correlations. The first hypothesis (H2a) stated that the average group emotionality would positively correlate with group performance. A significant positive correlation between performance and emotionality was indeed found, $r = .381$, $n = 60$, $p = .001$. Hypothesis H1b, whether self-esteem correlates to performance, showed a slightly significant effect ($r = .220$, $n = 60$, $p > .05$). However no between conditions correlation was found. Therefore only hypothesis H2a can be accepted, as there is a direct effect of emotionality. Even though not all of the personality traits had a direct correlation to performance, a between condition analyses was also performed, to investigate the possibility that certain traits only have an influence under certain conditions.

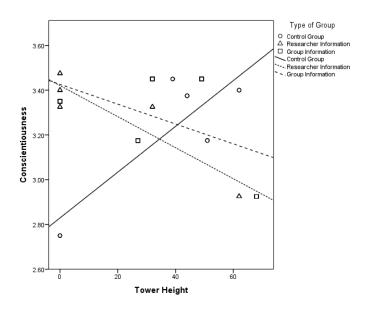Figure 2. Emotionality Mean Correlation

When isolating the three conditions, the emotionality trait showed significant positive correlations between two of the conditions and performance: CG ($p < .001$) and MM ($p = .001$). A significant difference in the variability of extraversion was found between the conditions, $F(2,$

57) = 4.404, *p* = .017. Even though the correlation tests shows significant correlations between all of the conditions, the direction of effect differ between them. The CG shows a negative correlation of *r* = -.733, *n* =20, *p* < .001, the RM shows a similar correlation, *r* = -.693, *n* =20, *p* = .001, but the MM shows a positive correlation of *r* = .668, *n* =20, *p* < .001. Though the significances are strong the conditions have contradicting correlations, hypothesis 2c must thus be rejected. Hypothesis 2d stated that agreeableness would correlate negatively correlate to performance. A between group ANOVA revealed no significant difference for agreeableness between the conditions (*p* > .05). Between both the general and individual levels, no significant correlation can be seen. The hypothesis can thus be rejected.
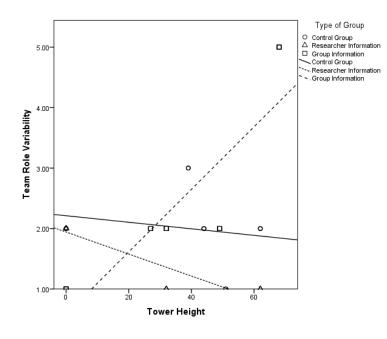

Conscientiousness showed no significant influence when considering all conditions. However when considering the individual conditions, significant correlations can be seen in all conditions. CG: *r* = .836, *n* =20, *p* < .001, RM: *r* = -.905, *n* =20, *p* < .001 and MM: *r* = -.505, *n* =20, *p* = .023. As only one correlation is positive, hypothesis 2e is rejected.

Over all conditions, openness to experience presented no significant correlation ($r = -.097$, $n = 60$, $p = .230$). On an individual condition level only RM showed a negative correlation. The hypothesis can thus be rejected.

Team role

To calculate the variance with the groups for Belbin roles, each group received a score: 1 (no matching roles), 2 (2 roles in common), 3 (2x2 matching roles), 4 (3 matching roles) and 5 (all roles were the same). A between group ANOVA showed a significant variation between the groups, $F(2, 57) = 3.677$, $p = .031$. Further inspection showed a significant difference between the RM and MM ($p = .024$). A Pearson's Correlation also showed a significant negative correlation between a variance in team roles and performance, when ignoring the misinformation, $r = -.275$, $n = 60$, $p < .05$. When investigating the correlations at group level, the RM ($r = -.925$, $n = 20$, $p < .001$) showed a significant negative correlations, whereas the MM ($r = .867$, $n = 20$, $p < .001$) showed a significant positive correlation. This variation in results shows

that the Hypothesis (H3a), a variance in team roles will lead to positive performance, must be rejected. A test for the moderating influence of the social roles on performance was performed, showing no significant moderation, $\Delta R^2 = .089$, $F(2, 57) = 2.776$, $p > .05$. Therefore hypothesis H3b must be rejected.

4. Discussion

This dissertation aimed to investigate the influence and effects of misinformation, the source and the moderating influences of personality and team roles. The answers to these questions can increase the efficiency of misinformation strategies and offers new insight into the effects of misinformation.

It was assumed that misinformation would have a negative influence on the performance of the groups. The results from the manipulation where the researchers offer misinformation, were indeed in line with previous findings (Conchie et al., 2013). It appears that the misinformation is accepted as credible and therefore leads the group down an incorrect frame of thought. As the time available is relatively short, this subjects the group to more pressure once it is clear that their original idea will not succeed. This raised the question, what has a greater

effect: the source of the information or the information itself? For this reason one condition (MM) received the same information via two group members. In this condition the average tower height was less than without misinformation, but not significantly so. This result can be due to two reasons. The first possible explanation could be in regards to the source credibility (Wathen & Burkell, 2001). As group members are not seen as experts in the field, their ideas are judged to be the same as the rest of the group. A second possibility would be that the members that received the misinformation did not share the misinformation, as the verbal communication was not measured, it was not possible to test this possibility. This could be due to the fact that they were not aware that other members did not see the same information or the misinformation did not fit their own ideas (Stasser & Titus, 1985). The influence of the source can have a large implication on both future research and current misinformation strategies.

In addition to the misinformation and its source, many other factors can have an influence on the performance. Personality has often been a source of performance prediction (Barrick et al., 2003). In the current study certain personality traits were found to have a significant moderating influence on the performance, however after closer inspection many factors correlate to individual situations and have different effects within the different conditions.

From the results we can see that emotionality did indeed have an effect. However in the RM condition this effect was not visible anymore. A possible reason for this is that most scores in this condition were very low due to the misinformation component. As this trait influences the atmosphere (Watson & Tellegen, 1985), a possible alternative would be that the added pressure on the group negatively influenced this atmosphere and that even a higher emotionality score could not rectify the balance. An interesting result here was that there was a significant

difference in mean score between the CG and MM, this could explain why the correlation was higher in the CG and so doing supports the findings for emotionality.

In the current study no correlation was found between average levels of self-esteem and performance. This is in accordance with the 2003 self-esteem study by Baumeister, Campbell, Krueger and Vohs that found a correlation between high levels of self-esteem and happiness. This correlation did not necessarily lead to better performance. It can be theorized that long-term group happiness can influence performance due to a more positive atmosphere. However, in short-term tasks this effect will not have enough time to influence the performance.

In the current study, strong significant effects were found for all conditions, however, the directions were not the same for all. In two conditions extraversion had a negative effect on the performance, only in the MM group did it have a positive influence. One possible reason for this is that both the CG and RM groups contained one group variance that contradicted the other scores. As the sample size was limited, it is possible that an individual score could skew the results. A second important factor is that the variance does not take the mean of the variance into consideration. It is thus possible that two variances are similar, but were the mean of one is much higher than the other. If the variances are grouped low, it could mean that there were no members who showed high levels of extraversion in turn causing lower scores, as theorized by Barry and Steward (1997).

In the current study, no significant effect was found for agreeableness. A possible reason for this could be that the participants have just met and are still acclimatizing to the new situation. O'Leary-Kelly, Martocchio, and Frink (1994) found that intact teams are generally influenced less by extraneous variables than newly formed teams. It can thus be argued

agreeableness can have an influence on established groups, but the effect is cancelled in newly formed groups, as many other variable have a stronger influence here.

The results for conscientiousness were similar to that of extraversion. This effect was only found in the CG. Similar to the extraversion test, individual outliers in the conditions could be the reason for the skewed results. Conscientiousness is also related strongly to goal setting (Barrick, Mount, & Strauss, 1993). In the current study, goal setting can be very difficult as the experience is new and expectations are unclear. It thus difficult to create an idea of what the group should achieve.

In the current study, openness to experience only showed one significant effect. In the RM condition a marginal negative correlation was found. A possible explanation for the results could be that higher levels of creativity lead to more eccentric options. As groups rarely build prototypes (Wujec, 2010) it is plausible that the first designs are too ambitious and in this was leading to failing in the last seconds.

The final hypothesis investigated the influence of variation in team roles and hypothesized that a larger variance would lead to better performance. Pichard and Stanton (1999) found that a variance in team roles meant a larger set of available skills were at hand. In the current study no evidence of this was found. The main reason for the lack of evidence was a too large a variance in the groups, as there are very few control groups to measure the variance against. A possible reason for high variance is in the random selection of groups.

From the results it can thus be seen that misinformation does have a role on performance, but just as important is the source of the information. The effects of personality are still not completely clear, there is however evidence that personality does have an influence under certain conditions.

4.1 Limitations

The current study addressed a number of topics surrounding the topic of misinformation, but not without a number of limitations. The limitations can be split up into two groups, test related and participant related.

Regarding test related limitations, the marshmallow challenge offers a very solid basis for the investigation of group interaction. There are however a number of limitations that must be considered when using this form of testing. One of the characteristics of the marshmallow challenge is that many groups fail to build any tower; this is a limitation that was also found by Conchie et al. (2013). On one side this gives an indication of which teams did really well and which did not, but as many teams fail, the results can be influenced by this. A large performance gap between failing (0 cm) and succeeding (20+ cm) can often be seen. This can lead to weighted scores and creates a false picture of the true performance. This style of testing works very well with testing the influence of misinformation, though it is advised to take special note when adding conditions like personality as smaller influences can be missed. This is a limitation that cannot be removed while using the marshmallow challenge. Similar to the limitation findings of Conchie et al. (2013), the marshmallow challenge only caused less variability in the data and only limited the strength of the effects, not the significance of the disruption effect. Future research using different performance measures could offer more detailed information about the differences between low scoring groups. Using verbal and non-verbal communication could also be a good way to identify some of the smaller influences that are missed by using the marshmallow challenge. This can also assist in identifying the role distribution. Testing the influence of member introduced misinformation, there are two important factors: ensuring and testing that the information is given through to the rest of the group. As the misinformation

members do not know that they are the only ones receiving the information, it can occur that they do not share the information. A post test questionnaire can be used to check if the information was given to the rest of the group.

The second part of the limitations revolves around participants. In the current study the sample size in combination with the marshmallow challenge caused a limitation, as the data can easily be influenced by failed towers. The data were thus easily skewed, as each condition only contained 5 groups. This is a limitation that is often found in research (Barrick, Mount, & Strauss, 1993), and could explain why only a limited number of personality interactions were found. When testing the variance of personality or team roles, it is thus advised to use a purposive sample as this will allow the researcher to determine the group structure. Testing factors like the influence of misinformation, the ideal would be to replicate real world situations. In these real world situations group members already know each other and do not need time to get use to other members.

4.2 Implications of current findings

The insight gained from the misinformation conditions confirmed the negative influence misinformation has on group performance and also showed that the source of the information is of importance. This offers more insight into the results gained from the experiment by Conchie at al. (2013). This aspect can also be of great value for law enforcement strategies, as it shows that merely planting misinformation through group members may not be enough. During wartime misinformation can also be used greatly to misdirect an enemy. An example of this was seen during the Second World War, when the British forces dropped a corpse with a briefcase off the coast of Spain. The briefcase contained fake information, causing the pro-German Spaniard to pass on the misinformation. Even though source credibility did not play a large role in this

example, the influence of source credibility could be used in the future. Spreading

misinformation through a channel that might seem official could yield more effective results.

The findings also carry some implications for future studies. As was mentioned, the

selection of participants is of utmost importance as randomization can obstruct the analyses of

contributing factors. The marshmallow challenge is ideally suitable for this type of study,

however it is important to note the shortcomings, for example the large amount of failed towers

that can influence the data incorrectly. By keeping this in mind, it is possible to set up the data

collection so that the study does not solely rely on tower height as a performance measure.

In conclusion, by manipulating misinformation, performance can be influenced, in many

different scenarios: from commerce, to safety and even in education.

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Appendices

Appendix A

Table 1

Team Role Descriptors, Strengths and Allowed Weaknesses

Team role	Descriptors	Strengths	Allowed weaknesses
Completer-Finisher	Anxious, conscientious, introvert, self-controlled, self-disciplined, submissive and worrisome.	Painstaking, conscientious, searches out errors and omissions, delivers on time.	Inclined to worry unduly. Reluctant to delegate.
Implementer	Conservative, controlled, disciplined, efficient, inflexible, methodical, sincere, stable and systematic.	Disciplined, reliable, conservative and efficient, turns ideas into practical actions.	Somewhat inflexible. Slow to respond to new possibilities.
Team Worker	Extrovert, likeable, loyal, stable, submissive, supportive, unassertive, and uncompetitive.	Co-operative, mild, perceptive and diplomatic, listens, builds, averts friction and calms the waters.	Indecisive in crunch situations.
Specialist	Expert, defendant, not interested in others, serious, self-disciplined, efficient.	Single-minded, self-starting, dedicated; provides knowledge and skills in rare supply	Contributes on a narrow front only. Dwells on technicalities.
Monitor Evaluator	Dependable, fair-minded, introvert, low drive, open to change, serious, stable and unambitious.	Sober, strategic and discerning, sees all options, judges accurately.	Lacks drive and ability to inspire others.
Coordinator	Dominant, trusting, extrovert, mature, positive, self-controlled, self-disciplined and stable.	Mature, confident, a good chairperson, clarifies goals, promotes decision making, delegates well.	Can be seen as manipulative. Offloads personal work.
Plant	Dominant, imaginative, introvert, original, radical-minded, trustful and uninhibited.	Creative, unorthodox, solves difficult problems.	Too preoccupied to communicate effectively.
Shaper	Abrasive, anxious, arrogant, competitive, dominant, edgy, emotional, extrovert, impatient, impulsive, outgoing and self-confident.	Challenging, dynamic, thrives on pressure, has drive and courage to overcome obstacles.	Prone to provocation. Offends people's feelings.
Resource Investigator	Diplomatic, dominant, enthusiastic, extrovert, flexible, inquisitive, optimistic, persuasive, positive, relaxed, social and stable.	Extrovert, communicative, explores opportunities, develops contacts.	Over-optimistic. Loses interest after initial enthusiasm.

Source: Belbin (1993a, p. 22).

Appendix B: Informed Consent

To whom it may concern,

I hereby declare that I have been informed in a manner which is clear to me about the nature and method of the research as described in the aforementioned information. My questions have been answered to my satisfaction. I agree of my own free will to participate in this research. I reserve the right to withdraw this consent without the need to give any reason and I am aware that I may withdraw from the experiment at any time.

If my research results are to be used in scientific publications or made public in any other manner, then they will be made completely anonymous. My personal data will not be disclosed to third parties without my express permission. If I request further information about the research, now or in the future, I may contact Theo du Plessis (+31 65 356 9496).

If you have any complaints about this research, please direct them to the secretary of the Ethics Committee of the Faculty of Behavioral Sciences, at the University of Twente, mevr. J. Rademaker (telefoon: 053-4894591; e-mail:j.rademaker@utwente.nl, Postbus 217, 7500 AE Enschede).
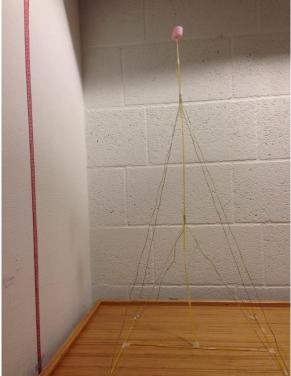

Signed in duplicate:

…………………………… …………………………
Name subject Signature

I have provided explanatory notes about the research. I declare myself willing to answer to the best of my ability any questions which may still arise about the research.

…………………………… …………………………
Name researcher Signature

Appendix C: Misinformation Photos

Default Question Block

Dank u wel voor uw medewerking aan het onderzoek over groepsdynamiek. Het eerste onderdeel betreft een vragenlijst.

Deze vragenlijst bestaat uit drie delen en zal ongeveer 15 minuten in beslag nemen. Let op: u kunt niet meer terug naar een vorige pagina, daarom is het belangrijk dat u alle vragen beantwoordt.

Aan het einde van het onderzoek zal nog worden gevraagd in welke groep u zal deelnemen.

Bij voorbaat dank.

Deel 1:

Wat is uw geslacht?

○ Man

○ Vrouw

Wat is uw leeftijd?

[   ]

Wat is uw hoogst afgeronde opleiding?

○ Basisschool

○ MAVO / VMBO / LBO

○ HAVO

○ VWO

○ MBO

○ HBO

○ WO

○ Anders, namelijk ....

[   ]

Groep nummer:

[   ]

Deel 2:

Op de volgende 4 pagina's vindt u 60 uitspraken over uzelf. U wordt verzocht de uitspraken te lezen en aan te geven in hoeverre u het met deze uitspraken eens dan wel oneens bent. Geef uw antwoord in de ruimte naast de vraag met behulp van de volgende antwoordcategorieën:

1 = Helemaal mee oneens
2 = Mee oneens
3 = Neutraal (Noch mee eens, noch mee oneens)
4 = Mee eens
5 = Helemaal mee eens

U wordt vriendelijk verzocht op elke vraag antwoord te geven, zelfs als u niet helemaal zeker van uw antwoord bent.

Vraag 1 - 15:

	Helemaal mee oneens	Mee oneens	Neutraal	Mee eens	Helemaal mee eens
1. Ik zou me vervelen bij een bezoek aan een kunstgalerie.	○	○	○	○	○
2. Ik maak vooraf plannen en regel alvast zaken om te vermijden dat ik op het laatste moment nog dingen moet doen.	○	○	○	○	○
3. Ik houd zelden een wrok tegen iemand, zelfs niet als ik erg slecht behandeld ben.	○	○	○	○	○
4. Alles bij elkaar heb ik wel een tevreden gevoel over mijzelf.	○	○	○	○	○
5. Ik zou bang worden als ik in slecht weer zou moeten reizen.	○	○	○	○	○
6. Ik zou niet vleien om op het werk opslag of promotie te krijgen, zelfs al zou het succes hebben.	○	○	○	○	○
7. Ik kom graag meer te weten over de geschiedenis en politiek van andere landen.	○	○	○	○	○
8. Ik span me vaak tot het uiterste in als ik een doel tracht te bereiken.	○	○	○	○	○
9. Mensen vertellen me soms dat ik te kritisch op anderen ben.	○	○	○	○	○
10. Ik geef zelden mijn mening in groepsbijeenkomsten.	○	○	○	○	○
11. Ik maak me soms zorgen over onbenulligheden.	○	○	○	○	○
12. Als ik niet gepakt zou worden, dan zou ik er geen probleem mee hebben om een miljoen Euro te stelen.	○	○	○	○	○
13. Ik zou graag iets kunstzinnigs doen, zoals een boek schrijven, een lied componeren of een schilderij maken.	○	○	○	○	○
14. Als ik aan iets werk, besteed ik weinig aandacht aan kleine details.	○	○	○	○	○
15. Mensen vertellen me soms dat ik te koppig ben.	○	○	○	○	○

Vraag 16-30:

	Helemaal mee oneens	Mee oneens	Neutraal	Mee eens	Helemaal mee eens
16. Ik heb liever een baan waarin men veel met andere mensen omgaat dan één waarin men alleen dient te werken.	○	○	○	○	○
17. Na een pijnlijke ervaring heb ik iemand nodig om me te troosten.	○	○	○	○	○

me te troosten.

18. Veel geld bezitten vind ik onbelangrijk.

19. Ik vind het tijdverlies om aandacht te besteden aan radicale ideeën.

20. Ik neem beslissingen op basis van 'hier-en-nu' gevoelens in plaats van zorgvuldig beraad.

21. Mensen vinden me een heethoofd.

22. De meeste dagen voel ik me blij en optimistisch.

23. Ik voel tranen opkomen als ik anderen zie huilen.

24. Ik vind dat ik meer recht op respect heb dan de gemiddelde persoon.

25. Als ik de gelegenheid had, zou ik graag een klassiek concert bijwonen.

26. Ik haal me soms problemen op de hals omdat ik slordig ben.

27. Mijn houding ten aanzien van mensen die mij slecht behandeld hebben is "vergeven en vergeten".

28. Ik heb het gevoel dat ik een impopulair persoon ben.

29. Als het gaat om fysiek gevaar, ben ik een angsthaas.

30. Als ik iets van iemand wil, lach ik om diens slechtste grappen.

Vraag 31 - 45:

	Helemaal mee oneens	Mee oneens	Neutraal	Mee eens	Helemaal mee eens
31. Ik heb nooit met veel plezier in een encyclopedie gekeken.	○	○	○	○	○
32. Ik verricht zo min mogelijk werk, maar net genoeg om rond te komen.	○	○	○	○	○
33. Ik heb de neiging andere mensen mild te beoordelen.	○	○	○	○	○
34. Als ik anderen ontmoet, ben ik meestal diegene die het contact op gang brengt.	○	○	○	○	○
35. Ik maak me veel minder zorgen dan de meeste mensen.	○	○	○	○	○
36. Ik zou nooit ingaan op een poging tot omkoping, zelfs niet als het om een erg hoog bedrag ging.	○	○	○	○	○
37. Mensen vertellen me vaak dat ik een levendige verbeelding heb.	○	○	○	○	○
38. Ik probeer altijd zo nauwkeurig mogelijk te werken, zelfs al kost het me extra tijd.	○	○	○	○	○
39. Ik ben gewoonlijk vrij flexibel in mijn opvattingen als mensen het met mij oneens zijn.	○	○	○	○	○
40. Het eerste dat ik altijd doe als ik ergens nieuw ben, is vrienden maken.	○	○	○	○	○
41. Moeilijke situaties kan ik aan zonder emotionele steun van anderen nodig te hebben.	○	○	○	○	○
42. Ik zou veel plezier beleven aan het bezit van dure luxe goederen.	○	○	○	○	○

43. Ik houd wel van mensen met onconventionele ideeën.

44. Ik maak veel fouten omdat ik niet nadenk voordat ik iets doe.

45. De meeste mensen hebben de neiging sneller boos te worden dan ik.

Vraag 46 - 60:

	Helemaal mee oneens	Mee oneens	Neutraal	Mee eens	Helemaal mee eens
46. De meeste mensen zijn levenslustiger en dynamischer dan ik over het algemeen ben.	○	○	○	○	○
47. Ik raak erg geëmotioneerd als iemand die belangrijk voor mij is voor een lange tijd weg gaat.	○	○	○	○	○
48. Ik wil dat mensen weten hoe belangrijk ik ben.	○	○	○	○	○
49. Ik beschouw mezelf niet als een artistiek of creatief type.	○	○	○	○	○
50. Mensen noemen me vaak een perfectionist.	○	○	○	○	○
51. Zelfs als mensen veel fouten maken, zeg ik zelden iets negatiefs.	○	○	○	○	○
52. Soms heb ik het gevoel dat ik een waardeloos persoon ben.	○	○	○	○	○
53. Zelfs in crisissituaties blijf ik rustig.	○	○	○	○	○
54. Ik zou niet net doen alsof ik iemand mag om te zorgen dat die persoon mij een dienst bewijst.	○	○	○	○	○
55. Ik vind het saai om over filosofie te discussiëren.	○	○	○	○	○
56. Ik doe liever dingen spontaan dan vast te houden aan een plan.	○	○	○	○	○
57. Als mensen mij vertellen dat ik het mis heb, is mijn eerste reactie dit aan te vechten.	○	○	○	○	○
58. Als ik met andere mensen samen ben, ben ik vaak de woordvoerder van de groep.	○	○	○	○	○
59. Ik raak niet snel geëmotioneerd, zelfs niet in situaties waarin anderen erg sentimenteel worden.	○	○	○	○	○
60. Ik zou in de verleiding komen om vals geld te gebruiken als ik er zeker van was dat ik er mee weg zou komen.	○	○	○	○	○

Deel 3:

Op de volgende pagina's vindt u 7 vragen over uw rol in een team.
· Rangschik alle antwoorden van 1 (meest van toepassing) tot 9 (minst van toepassing)
· Denk niet te lang na, maar vul gewoon in wat u het eerst te binnen schiet.

1. Ik houd van mijn werk, omdat:

- ik ervan houd om situaties te analyseren en zoveel mogelijk keuzemogelijkheden af te wegen

- ik geïnteresseerd ben in het vinden van praktische oplossingen - oplossingen die echt werken.

- ik ervan houd het gevoel te hebben, dat ik goede samenwerkingsrelaties kweek.

- ik een sterke invloed uitoefen (en wil uitoefenen) op de besluitvorming.

- ik dan allerlei mensen kan ontmoeten die iets interessants te bieden hebben

- ik ervan houd mensen tot overeenstemming te brengen over bepaalde te ondernemen stappen.

- ik me in mijn element voel, als ik me met volle aandacht kan wijden aan mijn taak.

- ik graag terreinen vind die mijn verbeeldingskracht prikkelen.

- ik mijn kennis dan kan gebruiken.

2. Kenmerkend voor mijn benadering van het werken in een groep is:

- dat ik het (in stilte) interessant vind mijn collega's beter te leren kennen.

- dat ik niet bang ben de opvattingen van anderen te bestrijden of een minderheidsstandpunt te verdedigen.

- ik meestal wel de argumenten vind om onjuiste voorstellen van tafel te krijgen.

- dat ik meen, dat ik het vermogen bezit om plannen, die in de praktijk moeten worden gebracht, in werking te zetten.

- dat ik het vermogen bezit het voor de hand liggende uit de weg te gaan en met onverwachte dingen op de proppen te komen.

- dat ik aanstuur op een beetje perfectionisme bij elke groepsopdracht.

- een uitermate toegewijde houding.

- dat ik ervan houd om nuttige contacten te leggen buiten de eigen groep.

- dat ik, hoewel ik wel geïnteresseerd ben in alle meningen, zonder aarzelen vaststel wat er gebeuren moet als er een beslissing moet worden genomen.

3. Wanneer ik eenmaal betrokken ben in een project, samen met anderen:

- lukt het me mensen in een richting te sturen, zonder hen onder druk te zetten.

- is het mijn waakzaamheid die ons ervoor behoedt onzorgvuldigheden te begaan en zaken over het hoofd te zien.

- stuur ik op daden aan, om er zeker van te zijn, dat er in de vergadering geen tijd verloren gaat of dat hoofdzaken uit het oog worden verloren.

- ben ik degene die inhoudelijke kennis aandraagt en zelfstandig initiatieven neemt.

- kan men er van op aan dat ik iets origineels bedenk.

- ben ik altijd bereid een goed idee te ondersteunen als dat in het belang van het team is.

- ben ik altijd uit op nieuwe ideeën en ontwikkelingen.

- geloof ik dat mijn beoordelingsvermogen een belangrijke bijdrage levert om tot de juiste beslissingen te komen.

- kan men er van op aan, dat alle belangrijke zaken ook uitgevoerd worden.

4. Wat ik meen bij te dragen aan een team, is dat

- ik denk, dat ik vaak nieuwe mogelijkheden weet te ontdekken en daarvan gebruik kan maken.

- ik goed overweg kan met een breed scala van mensen.

- ik mijn eigen specialisme inzet.

- ik vele ideeën opwerp

- dat ik scherp weet te signaleren wanneer iemand iets waardevols kan bijdragen tot de doelstellingen van het team.

- ik help zaken af te ronden - waarschijnlijk omdat mijn persoonlijke efficiëntie groot is.

- ik bereid ben impopulair te zijn (voor een tijdje) als dat leidt tot resultaten die uiteindelijk de moeite waard zijn.

- ik meestal goed in de gaten heb wat haalbaar is en realistisch

- ik redenen kan aanwijzen voor alternatieve handelswijzen, zonder daarbij mijn objectiviteit te verliezen

5. Tekortkomingen, die ik mogelijk heb, bij het werken in teams:

- Ik voel me alleen maar op mijn gemak als bijeenkomsten goed gestructureerd en onder controle zijn en op een goed geleide manier verlopen

- Ik geef soms te snel toe aan anderen, waarvan ik meen dat ze een goed gezichtspunt hebben, zonder dat het voldoende is doorgesproken

- Ik heb de neiging teveel te praten als ik op nieuwe ideeën stuit.

- Mijn objectiviteit maakt het me moeilijk vlot en enthousiast met anderen mee te gaan.

- Ik word soms als drammerig en autoritair beschouwd als er iets gebeuren moet

- Ik vind het moeilijk om vanaf het begin voorop te lopen, misschien omdat ik wat overgevoelig ben voor de sfeer in de groep.

- Ik verlies me nogal eens in (technische) details

- Ik ga gemakkelijk op ideeën in die bij mij zijn opgekomen en daardoor verlies ik contact met dingen die gaande zijn.

- Ik maak me onnodig druk over details en over de kansen dat dingen wel eens mis kunnen gaan.

6. Als mij plotseling een moeilijke opdracht wordt toegespeeld, met een beperkte tijd en met onbekende mensen:

- zou ik mij het liefst in een hoekje terugtrekken om iets te bedenken om uit de impasse te raken, voordat ik met iets op de proppen kom.

- zou ik meteen diegenen opzoeken om mee samen te werken, die zich het meest positief opstellen.

- zou ik onmiddellijk een manier zoeken om de omvang van de taak te verkleinen, door vast te stellen welke personen het best een bijdrage kunnen leveren.

- zou mijn gevoel voor wat dringend is en wat niet, er wel voor zorgen dat we niet met het werkschema achterop raken.

- geloof ik, dat ik kalm zou blijven en mijn vermogen om objectief te denken bewaar.

- zou ik - ondanks de druk - op een geleidelijke manier naar het doel toe werken.

- zou ik de leiding wel op mij willen nemen, als ik merk dat de groep geen vooruitgang boekt.

- zou ik onmiddellijk discussies aangaan om nieuwe denkwijzen te stimuleren en het een en ander op gang te brengen.

- trek ik dat gene naar met toe dat in het verlengde van mijn werkveld ligt.

7. Problemen waarmee ik te kampen heb, als ik in een groep werk zijn:

- dat ik het overzicht verlies

- dat ik vaak ongeduldig ben ten opzicht van hen, die de voortgang in de weg staan.

- dat anderen mij bekritiseren omdat ik te analytisch ben en te weinig intuïtief.

- dat mijn bezorgdheid, dat de dingen goed gebeuren, ertoe leidt dat de voortgang wel eens belemmerd wordt.

- dat ik mij gauw verveel en door enkele dingen die mij prikkelen, weer op gang gebracht moet worden.

- dat ik het moeilijk vind op gang te komen als de doelstellingen niet duidelijk geformuleerd zijn.

- dat ik soms niet zo sterk ben in het verhelderen van de ingewikkeldheden die me door het hoofd spelen.

- dat ik er steeds op uit ben aan anderen dingen te vragen, die ik zelf niet kan.

- dat ik vaak aarzel mijn gedachten op tafel te brengen, als ik daarmee veel oppositie oproep.

Dit is het einde van de vragenlijst, hartelijk bedankt voor het invullen.

Het tweede onderdeel van het onderzoek over groepsdynamiek betreft de deelname aan een opdracht, waarvoor u zich heeft ingedeeld. U ontvangt nog een e-mail ter bevestiging.

Group Dynamics

Start

Group Dynamics

1.

Geeft u alstublieft antwoord op de volgende vragen over u en uw team door het nummer van de schaal op te schrijven dat het beste uw mening weergeeft.

	Volledig mee oneens					Volledig mee eens	
Op dit moment zou een nieuwe uitdaging me aanspreken.	○	○	○	○	○	○	○
Ik was ontvreden met het niveau van toewijding aan de taak van mijn team.	○	○	○	○	○	○	○
Ons teamlid had conflicterende aspiraties voor de prestaties van het team.	○	○	○	○	○	○	○
We verwachten van elkaar open en eerlijk te zijn.	○	○	○	○	○	○	○
Als ik op dit moment een moeilijke taak zou worden gegeven, dan zou ik makkelijk opgeven.	○	○	○	○	○	○	○
Ik kan geen informatie meer opnemen.	○	○	○	○	○	○	○
Ik denk dat mijn groep goed klikte.	○	○	○	○	○	○	○
Ik heb veel energie.	○	○	○	○	○	○	○

Ik stond centraal in het succes van het team.	○	○	○	○	○	○	○
We rekenden op elkaar om volledig inzet te geven.	○	○	○	○	○	○	○
Ik voel me uitgeput.	○	○	○	○	○	○	○
Het team heeft me niet genoeg mogelijkheden gegeven om bij te dragen.	○	○	○	○	○	○	○
We respecteerden elkaars kwaliteiten.	○	○	○	○	○	○	○
Op dit moment, zou het me veel moeite kosten om me op iets te concentreren.	○	○	○	○	○	○	○
Ik voel je kalm en rationeel.	○	○	○	○	○	○	○
Ik zou iedere moeilijke taak willen opgeven.	○	○	○	○	○	○	○
Ik voel me scherp en gefocused.	○	○	○	○	○	○	○
Het voelt alsof mijn energie weg is.	○	○	○	○	○	○	○
We vertrouwden elkaar volledig.	○	○	○	○	○	○	○
Ik voel me gemotiveerd.	○	○	○	○	○	○	○
Als ik op dit moment door iets zou worden verleid, dan zou het erg moeilijk zijn het te weerstaan.	○	○	○	○	○	○	○
Ons team zal elkaar weer ontmoeten buiten deze taak.	○	○	○	○	○	○	○
Ik heb iets plezierigs/aangenaams nodig om me beter te doen voelen.	○	○	○	○	○	○	○
Ik voelde dat ik de groep leidde.	○	○	○	○	○	○	○
Ons team handelde eensgezind in het proberen zijn doel te bereiken.	○	○	○	○	○	○	○
Alle teamleden gedroegen zich oprecht.	○	○	○	○	○	○	○

Bedankt voor het invullen