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# Should quartermasters train their coping style and psychological capital?

*The relationship between personality traits, coping style, psychological capital, and ambiguity tolerance.*



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## **Abstract**

The relationship between coping style, psychological capital, personality traits, and ambiguity tolerance were examined to determine if quartermasters should theoretically train their approach oriented coping style and psychological capital to enhance ambiguity tolerance. 62 respondents filled in a questionnaire consisting of the HEXACO-60, PCQ-24, UCL-A and MSTAT-II. The results show that active coping, psychological capital, honesty, emotionality, extraversion and openness to experience are significantly related to ambiguity tolerance. The results also show that active coping explains 19% of the variance in ambiguity tolerance. Psychological capital explains 26% of the variance in ambiguity tolerance and emotionality and openness to experience together explain 44% of the variance in ambiguity tolerance. It is suggested to train both active coping and psychological capital. Furthermore, the results give some new insights in the underlying relation of the PCQ-24 and the UCL.

Keywords: quartermasters, ambiguity tolerance, psychological capital, coping style, personality traits

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## Quartermasters

In 2011 the Dutch Minister of Safety and Justice appointed a quartermaster who was responsible for the transition of the regional police forces to one National Police Force. Last November 2016, the same Minister ordered an enquiry into the functioning of the quartermaster responsible for this transition. This was due to an earlier investigation, by the Department of Safety, Integrity and Complaints, into the illicit and ineffective expenses by the 'Centrale Ondernemingsraad' of the National Police Force (Haenen, 2016). In the earlier investigation that was conducted it was found that the 'Centrale Ondernemingsraad' spent 1.6 million euros on, among other things, parties and a cruise hotel, while at the same time police officers were demonstrating for a better salary (Redactie, 2016). The quartermaster is now under investigation in order to find out if he was in some way responsible or not (Haenen, 2016). Meershoek (2016) claimed that despite the quartermaster's probable faults the political context and complexity of the job should be taken into account. He even argued that the reorganization of the whole Dutch Police Force within the scheduled years, budget and complexity was an impossible task to begin with.

At the time of the latest investigation, I was an intern at the 'Kwartiermakersgilde', a network organization for quartermasters. It made me wonder what kind of skills and personality a quartermaster should have in order to fulfill his or her job successfully.

The founders of the 'Kwartiermakersgilde' contribute to the professionalization of quartermasters and pursue the improvement of quality of quartermastering. Lievers (2013) described an increasing demand for quartermasters. This demand, as Lievers (2013) states, is due to the shift from external consultants to quartermasters in guiding organizational changes. The impact of quartermasters is therefore significant. Quartermasters' assignments are usually projects on a large scale with a large budget, as seen with the Dutch National Police Force. It is therefore important to successfully fulfil your work as a quartermaster. Janssen (2014) describes different sorts of assignments, but they do all have a common approach. The 'Kwartiermakersgilde' would like to meet the increasing demand by developing a post-graduate programme. Thus, background information about the skills a quartermaster needs is necessary. Particularly, skills that can be taught, like coping style and psychological capital, in order to handle complex and ambiguous situations.

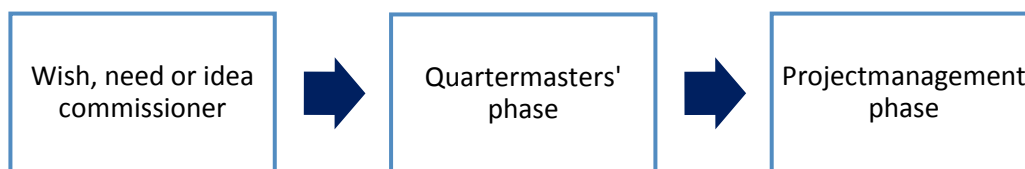
This research is a cross-sectional study that specifically concentrates on the characteristics and skills a quartermaster needs to possess to be able to deal with the high

amount of ambiguity in his work. Therefore, the goal of this study is to explore if, in theory, training both approach oriented coping and psychological capital would enhance ambiguity tolerance. Another intention of this study is to explore if personality traits should be used as a selection tool for a post-graduate program that focuses on improving ambiguity tolerance.

## Quartermastering

Quartermastering is an occupation that is mostly seen in the public sector. A quartermaster is responsible for the preparation and organization of something new and is hired on project basis. Research about quartermasters is scarce. Flikweert (2015) focused on the relationship between the quartermaster and the commissioner. In line with Lievers (2013), she identified that quartermasters do not have a high degree of formal power and need to be inspiring leaders. Furthermore, Flikweert (2015) pointed out the importance of trust between the commissioner and the quartermaster. In other research focussing on quartermasters and their unique job characteristics Lievers (2013) found that there are some substantial differences between project managers and quartermasters. For this study three differences between quartermasters and project managers are important:

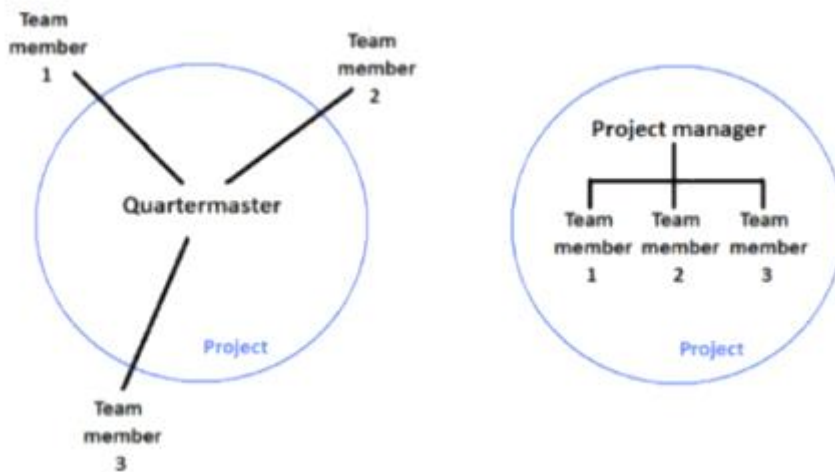
The first difference is the phase in the process when the quartermastering and project management occurs. The quartermasters' phase precedes the project manager's phase, as seen in Figure 1.



*Figure 1.* Different phases in establishing a project with quartermastering, Lievers (2013).

The second difference is shown in Figure 2. The project manager has a team that depends on the project manager, the project manager is the “leader”. A quartermaster depends on his team members, they are equals. The quartermaster aims to involve parties (e.g. team members) in the project. For a project manager, there is a clear hierarchy, e.g. as project manager you lead your team and you have to be accountable to the commissioner. On the other hand, as a quartermaster you and the commissioner have to work together more like equals despite the formal power of the commissioner. This also influences the way you work

with a team. As a quartermaster, you don't have a position of power. Cooperation with others is therefore based on mutual trust and honesty.



*Figure 2.* The differences between quartermastering and project management: networker vs. leader. Adapted from Lievers (2013).

The last important difference Lievers (2013) and Janssen (2014) stated is that a quartermaster has more possibilities than a project manager has. For a quartermaster, there are fewer frames or guidelines than for a project manager. Quartermasters have to create something new where a project manager can follow procedures and guidelines that, in some cases, a quartermaster provided in the previous phase. A quartermaster starts at the point where there is only a wish or need to start a new organization (e.g. National Police Force) or to set up an innovative concept like online authentication and authorisation (e.g. DigiD). It is up to the quartermaster to reach that goal and build something from scratch. This amount of freedom leads to a lot of choices and possibilities that might all work out. We call situations with a great amount of choices and possibilities ambiguous. Ambiguity may be overwhelming and could lead to uncertainty or worse, stress.

### **Ambiguity Tolerance**

Quartermasters need to deal with ambiguous situations. Ambiguous situations can be explained as situations that are multi-interpretable and where there is no perfect way to deal with the situation. As an example, a project manager gets the instruction: at the end of 2017 you and this team need to set up an online course of 7 weeks to prepare master students for employment. Whereas a quartermaster gets the instruction: integrate 'DigiD' and 'eHerkenning'. This last example represents a highly ambiguous situation. In order for a quartermaster to fulfil their job, she or he also needs to effectively deal with these ambiguous

situations. A person's tolerance towards an ambiguous situation is extensively studied. Ambiguity Tolerance (AT) as defined by Stein (1953, as described in Merrotsky, 2013), to quote:

*By 'capacity to tolerate ambiguity' I mean that the individual is capable of existing amidst a state of affairs in which he [or she] does not comprehend all that is going on, but he [or she] continues to effect resolution despite the present lack of homeostasis (Stein, 1953 as quoted in Merrotsky, 2013, p 234).*

Ambiguity tolerance is the dependent variable in this research. Quartermasters might benefit from a high level of ambiguity tolerance, because of the multi-interpretable situations they encounter. Therefore, the following was hypothesized: Quartermasters have a high ambiguity tolerance (Hypothesis 1a).

### **Coping style**

According to Krohne (1989, 1993, in Merrotsky, 2013) uncertainty, as an emotional state, might be caused by a large amount of ambiguity. A large amount of uncertainty leads to stress when not dealing with it properly. But, using effective coping strategies can help reduce the negative effects of stress (Lazarus, 1998 in Urlings, 2014). Coping strategies can be trained, which makes it useful for a post-graduate program. Therefore, coping style is one of the independent variables in this study.

Coping styles can be defined as the behavioral and cognitive efforts individuals use to manage specific stressors. For this research the different coping styles are defined according to Schreurs, Tellegen & van de Wilige (1984). They categorized coping in seven subscales:

- 1) active tackling – is the way in which an individual takes a step back to focus on how to resolve problems.
- 2) seeking social support – is the way in which an individual seeks for comfort and understanding with others.
- 3) palliative reacting – is the way in which an individual seeks distraction from the situation.
- 4) avoiding – is the way in which an individual removes himself from the situation and waits on what is going to happen.



- 5) passive reacting – is the way in which an individual lets himself be consumed by the situation and is unable to take control.
- 6) reassuring thoughts – is the way in which an individual comforts himself by reassuring that it's going to be alright.
- 7) expression of emotions – is the way in which an individual shows his or her emotions.

These subscales can be allocated on the approach-avoidance continuum. This continuum consists of approach-oriented coping, which involves problem-solving; active tackling (in this research active tackling is termed active coping to eliminate any mix-up with the abbreviations), seeking social support and creating outlets for emotional expression. Avoidance-oriented coping involves distracting oneself from a stressful event (e.g. palliative reacting), minimizing threatening events (avoiding), avoid thinking about the situation (e.g. palliative reacting and reassuring thoughts), and substance use (e.g. passive reacting) (Connor-Smith & Flachsbart, 2007; Carver & Connor-Smith, 2010). It was hypothesized that: Quartermasters are expected to have an approach-oriented coping strategy (Hypothesis 1b), because if they don't actively deal with problems or stress, caused by the obstacles during a project, it could be disadvantageous for the result.

### **Psychological capital**

Psychological capital (PsyCap) or Positive Psychological Strengths is a new model in the positive psychology domain. Psychological capital is defined as:

*“an individual's positive psychological state of development that is characterized by: (1) having confidence (self-efficacy) to take on and put in the necessary effort to succeed at challenging tasks; (2) making a positive attribution (optimism) about succeeding now and in the future; (3) persevering toward goals and, when necessary, redirecting paths to goals (hope) in order to succeed; and (4) when beset by problems and adversity, sustaining and bouncing back and even beyond (resiliency) to attain success”*

*(Luthans, Youssef & Avolio, 2007, p 3).*

PsyCap consists of four components: efficacy, optimism, hope and resilience which all can be trained. It focuses on strengths rather than weaknesses. PsyCap's *optimism* is closely related to personality and coping style (Sharpe, Martin & Roth, 2011; Connor-Smith & Flachsbart, 2007), *resilience* might be related to coping style, and *efficacy* and *hope* give an individual the strength to believe in his or her own power even when an ambiguous situation occurs.

Psychological capital is one of the independent variables because quartermasters work alone most of the time and have a particularly difficult job to do. They have to be confident, strong and positive in order to complete their assignment. As a quartermaster, there are a lot of demands and therefore you can experience too much stress if you're not protecting yourself somehow. Furthermore, Luthans, Youssef & Avolio (2007) found that together the four PsyCap variables have a synergistic effect. This means that the power of the four components as a whole is greater than the addition of its individual components. This led to the following hypothesis: Quartermasters have a high psychological capital (Hypothesis 1c).

### **Personality traits**

Personality is an extensively researched concept. Over the last decade numerous researchers formed personality models, based on their academic findings and beliefs. Undoubtedly the most known personality model is the Big Five model (also called the Five Factor model) which is based on lexical research. The Big Five model consists of the following domains: Openness to Experience, Conscientiousness, Extraversion, Agreeableness and Neuroticism (Goldberg, 1990). More recently, new analyses of the lexical data where the Dutch Big Five model is based on, showed the inclusion of a sixth domain (Ashton & Lee, 2001). This additional domain led to a new model: the HEXACO model. This new model is based on the same lexical research as the Big Five model, has an additional dimension (Honesty-Humility), three identical domains (Extraversion, Conscientiousness and Openness to Experience), and two reconstructed domains. The HEXACO domain 'Agreeableness' includes the Big Five domain 'Emotional Stability', whereas the HEXACO 'Emotionality' domain is described as vulnerability and sentimentality versus independence and fearlessness instead of the 'Emotional Stability' domain that is now a part of the 'Agreeableness' domain (de Vries, Ashton & Lee, 2009).

Personality traits differ from coping style and psychological capital because traits are relatively stable, especially for the duration of a post-graduate program (Luthans, Avolio, Avey, Norman, 2007). Personality traits were included in this study for two reasons. The first reason is that personality traits could be important for establishing selection criteria for a post-graduate program. Janssen (2014) described the following various characteristics that quartermasters should have. A quartermaster needs to be:

- A soloist who is good with people
- Creative and think outside the box to reach his or her goals
- Optimistic
- Flexible
- Empathic
- Visionary
- Courageous
- Social

The above characteristics were compared with the adjectives from the HEXACO research as described in the second table in appendix B. A soloist who is good with people & courageous can be seen as emotionally stable. Being social, empathic, good with people and optimistic can be seen as extravert. And being visionary, creative, flexible and thinking outside the box can be seen as open to new experiences. It may seem that the characteristic ‘open to new experiences’ is passive instead of active. But people who score high on open to new experiences are actively seeking those new experiences, which makes it rather active.

The above comparisons led to the following hypothesis: Quartermasters are extravert, open to new experiences, honest and emotionally stable (hypothesis 1d), because they need to be optimistic (extravert), enjoying uncertain situations (open to new experiences), rely on the cooperation with their network (which is based on mutual trust and honesty) and should be confident, independent and determined (emotionally stable).

Secondly, personality traits are strongly associated with the extent to which individuals alter their behavior when a situation changes (Mathot, Wright, Kempnaers & Dingemans, 2012). Research also found a relation between coping strategy and personality traits. Extraversion, conscientiousness and openness to experience are linked to more approach-oriented coping. Another aspect that is linked more with approach-oriented coping and less with avoidance-oriented coping is optimism (Connor-Smith & Flachsbart, 2007; Carver & Connor-Smith, 2010). Furthermore, research also showed a relation between active and persistent coping efforts and optimism, mastery, and self-esteem, which could be seen as PsyCap variables (Taylor & Broffman, 2011). Additionally, Judge, Thoresen, Pucik & Welbourne (1999) found that ambiguity tolerance is related to openness to experience, positive affectivity, self-esteem, self-efficacy, risk tolerance, and coping. Therefore, it is assumed that there is a *positive relation* between ambiguity tolerance and the personality traits (extraversion, openness to experience and honesty), psychological capital, and approach oriented coping (Hypothesis 2a). And a *negative relation* between ambiguity tolerance and the personality trait: emotionality (Hypothesis 2b).

According to Luthans, Youssef & Avolio (2007) personality traits and states differ in such a way that *traits* are relatively stable and difficult to change and *states* are relatively malleable and more open to development. Both traits and states can be found on the state-trait continuum. Luthans, Youssef & Avolio (2007) suggested that the *personality states* construct include concepts like coping style and psychological capital. The goal of the current study is to explore if in theory training approach oriented coping and psychological capital is beneficial for ambiguity tolerance. Training psychological capital is relatively new in comparison with coping style training. Personality traits are more stable, thus less trainable. The relationship between the earlier described coping style, psychological capital and personality traits domains is reasonable, because they all help an individual alter their behavior and cognition when a situation changes. It is assumed that ambiguity tolerance is explained by the trainable psychological capital and approach oriented coping (Hypothesis 3).

**In summary, the three hypotheses in this study are:**

*Hypothesis 1:* a) Quartermasters have a high amount of tolerance towards ambiguous situations; b) Quartermasters have an approach oriented coping style; c) Quartermasters score high on psychological capital; and d) Quartermasters are extravert, open to new experiences, honest and are emotionally stable.

*Hypothesis 2:* a) There is a positive relation between ambiguity tolerance, the personality traits: extraversion, openness to experience and honesty, psychological capital, and approach oriented coping; b) There is a negative relation between ambiguity tolerance and the personality trait: emotionality (see Figure 3).

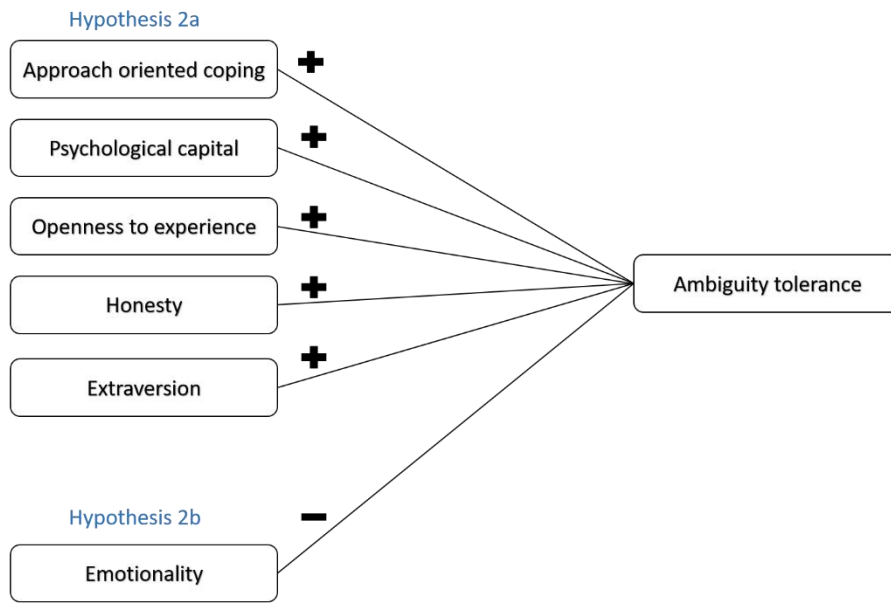


Figure 3. Hypothesis 2a and 2b

*Hypothesis 3:* Ambiguity tolerance is explained by approach oriented coping and psychological capital (see Figure 4).

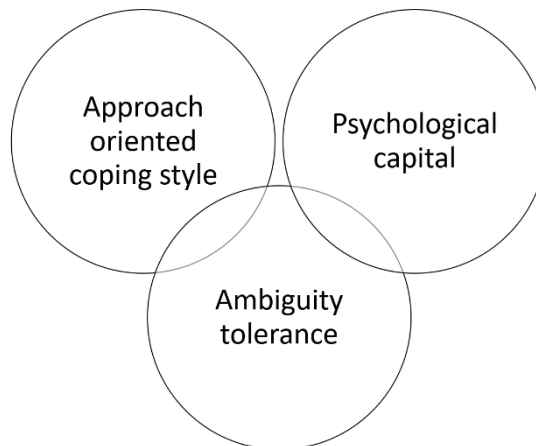


Figure 4. Hypothesis 3

## Method

### Participants and Design

This study was a cross-sectional study. Respondents were recruited through the mailing list of 'het Kwartiermakergilde', personal messages on LinkedIn and through the network of several quartermasters. Questionnaires were sent to 300 quartermasters. The response rate was 20.7% ( $N = 62$ ). The respondents did not receive a reward for completing the survey.

### Respondents

40.3% of the respondents were females; 75.8% were working in the public sector, while 24.2% worked in the private sector; 96.7% had a higher educational degree (bachelor or master), while 3.3% did not specify their educational level; 64.5% had their latest quartermasters' assignment in 2016, while 32.3% had their latest assignment between 2015-2010, for 3.2% the last quartermasters' assignment was before 2010; The mean age of the quartermasters was 49.89 ( $SD = 8.71$ ).

### Norm groups

Due to unavailable norm groups conclusions will be drawn based on the distribution of scores and common sense interpretation. Further elaboration can be found in the discussion.

### The questionnaire

Apart from demographic variables: gender, age, education, sector, employment status, and year of the last quartermasters' assignment (see the Dutch questions in appendix A) the following measures were used.

*Personality traits* were measured with 60 statements based on HEXACO model by Ashton & Lee (2009). The statements were scored on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). To acquire the scale scores the sum of the answers (1-5) was divided by the number of items on that scale. A low score is beneath 3 and a high score is above 3. The HEXACO-60 model is based on the same data as the Big Five model. 'Extraversion', 'Conscientiousness' and 'Openness to experience' are similar domains for both models. The HEXACO domain 'Agreeableness' includes the Big Five domain 'Emotional Stability'. In appendix B the distinction between the Big Five domains and the HEXACO domains including the adjectives in Dutch can be found. The six independent personality traits are: Honesty – Humility ( $\alpha = .64$ ), Emotionality ( $\alpha = .72$ ), Extraversion –

Introversion ( $\alpha = .76$ )<sup>1</sup>, Agreeableness ( $\alpha = .64$ ), Conscientiousness ( $\alpha = .73$ ), and Openness to Experience ( $\alpha = .69$ ).

**Coping styles** were measured with 47 statements based on Utrechtse Coping list by Schreurs, Willige, Brosschot, Tellegen & Graus (1993). Schreurs et al. (1993) categorize coping in seven subscales:

Active coping ( $\alpha = .73$ ), Seeking social support ( $\alpha = .76$ ). Palliative reacting ( $\alpha = .76$ )<sup>1</sup>, Avoiding ( $\alpha = .67$ ), Passive reacting pattern ( $\alpha = .71$ ), Reassuring thoughts ( $\alpha = .74$ ) and Expression of emotions ( $\alpha = .73$ )<sup>1</sup>. The statements were scored on a 4-point Likert scale ranging from 1 (never) to 4 (always). To acquire the scale scores the sum of the answers (1-4) was divided by the number of items on that scale. A low score is beneath 2.5 whereas a high score is above 2.5.

**Psychological capital** was measured with 24 statements based on the Psychological Capital Questionnaire-24 by Luthans, Avolio, Avey & Norman (2007). PSQ-24 defines four scales: Hope ( $\alpha = .85$ ), Optimism ( $\alpha = .73$ )<sup>1</sup>, Self-Efficacy ( $\alpha = .79$ )<sup>1</sup>, and Resilience ( $\alpha = .75$ )<sup>1</sup>. The statements were scored on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). To acquire the scale scores the sum of the answers was divided by the items on the scale. To acquire the total score on psychological capital, the summed scale scores were divided by the number of all items ( $\alpha = .92$ ). A low score is beneath 3 and a high score is above 3.

**Ambiguity Tolerance** was measured with 13 statements based on the Multiple Stimulus Types Ambiguity Tolerance Scale-II (MSTAT-II). This adjusted questionnaire was used because of the limited space in the overall questionnaire as recommended in Furnham & Marks (2013). The original questionnaire has 22 statements. The statements were scored on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). In accordance with the test instructions the scale scores were acquired by summing up the answers scores (1-5). A low score is beneath 39 whereas a high score is above 39. Cronbach's Alpha for the MSTAT-II was .83.

For an overview of the questionnaires, definitions, scale items,  $\alpha$ , and adapted scales see appendix C.

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<sup>1</sup> An item was deleted to increase Cronbach's Alpha (see appendix C)

## Results

The results showed no interesting relations between the demographic variables and the various scales.

### Hypothesis 1

The first hypothesis of this study was divided in four parts: h1a) quartermasters have a high amount of tolerance towards ambiguous situations; h1b) they have an approach oriented coping style; h1c) they score high on psychological capital; and h1d) quartermasters are extravert, open to new experiences, honest and emotionally stable. First, a single sample t-test showed that quartermasters ( $M = 52$ ,  $SD = 6.25$ ,  $N = 62$ ) scored significantly ( $t(61) = 16.34$ ,  $p < .001$ ) higher on Ambiguity Tolerance than the previous defined norm score ( $M = 39$ ). Therefore, quartermasters scored high on ambiguity tolerance and thus Hypothesis 1a is supported.

Second, in comparison with norm score as previously defined ( $M = 2.5$ ) quartermasters score significantly high ( $t(61) = 15.79$ ,  $p < .001$ ) on active coping ( $M = 3.3$ ,  $SD = .37$ ,  $N = 62$ ), significantly low ( $t(61) = -9.97$ ,  $p < .001$ ) on emotional expression ( $M = 1.9$ ,  $SD = .44$ ,  $N = 62$ ) and the same ( $t(61) = -.09$ ,  $p = .922$ ) on social support ( $M = 2.5$ ,  $SD = .43$ ,  $N = 62$ ). Therefore, quartermasters do not have an approach oriented coping style as defined by Connor-Smith & Flachsbart (2007) and Carver & Connor-Smith (2010). Thus, Hypothesis 1b was partly supported.

Third, the results showed that quartermasters scored significantly higher ( $t(61) = 20.55$ ,  $p < .001$ ) on psychological capital ( $M = 4$ ,  $SD = .4$ ,  $N = 62$ ) than the previously defined norm group ( $M = 3$ ). Therefore, quartermasters scored high on psychological capital and thus hypothesis 1c is supported.

Finally, the single sample t-test showed that quartermasters scored significantly higher, than the previous defined norm score ( $M = 3$ ), on extraversion ( $t(61) = 17.47$ ,  $p < .001$ ;  $M = 4$ ,  $SD = .43$ ,  $N = 62$ ), honesty ( $t(61) = 14.90$ ,  $p < .001$ ;  $M = 3.9$ ,  $SD = .46$ ,  $N = 62$ ), and openness to experience ( $t(61) = 13.16$ ,  $p < .001$ ;  $M = 3.8$ ,  $SD = .49$ ,  $N = 62$ ), and quartermasters scored significantly lower on emotionality ( $t(61) = -7.35$ ,  $p < .001$ ;  $M = 2.5$ ,  $SD = .52$ ,  $N = 62$ ) than the previous defined norm score. Therefore, quartermasters scored high on extravert, open to new experiences, honest and emotionally stable and thus hypothesis 1d was also supported.



Table 1 Means, Standard Deviations, Range, *t*- and *p*-value of Ambiguity tolerance, Coping styles, Psychological capital and Personality traits (N = 62).

	<i>M</i>	<i>SD</i>	Range	<i>t</i>	<i>p</i>
Ambiguity Tolerance	52	6.25	34-65	16,34	.000
Active Coping	3.3	.37	2.3-3.9	15.79	.000
Emotional Expression	1.9	.44	1-3	-9.97	.000
Social Support	2.5	.43	1.5-3.5	-.09	.922
Palliative reacting	2.2	.40	1.5-3.4	-6.37	.000
Avoiding	1.7	.34	1-2.6	-18.73	.000
Passive reacting pattern	1.5	.04	1-2.3	-23.41	.000
Reassuring thoughts	2.4	.07	1-2.6	-2.03	.047
Psychological Capital	4.0	.40	3-4.9	20.55	.000
Extraversion	4.0	.43	2.8-4.9	17.47	.000
Honesty	3.9	.46	2.5-5	14.90	.000
Openness to experience	3.8	.49	2.3-5	13.16	.000
Emotionality	2.5	.52	1.6-3.7	-7.35	.000
Agreeableness	3.2	.45	2.3-4.1	4.20	.000
Conscientiousness	3.5	.51	2.2-4.7	7.68	.000

## Hypothesis 2

The second hypothesis of this study stated that there would be a positive significant relation between ambiguity tolerance, the personality traits: extraversion, openness to experience and honesty, psychological capital, and approach oriented coping. And a significant negative relation between ambiguity tolerance and the personality trait: emotionality. Hypothesis 1b, quartermasters have an approach oriented coping style, is as above described not fully supported. Therefore, only active coping, as described by Schreurs et al. (1984) is used in the upcoming analyses. The correlations between the variables are presented in table 2. The strong significant correlation ( $r = .73$ ) between psychological capital and active coping is remarkable. Furthermore, extraversion, openness to experience and honesty, psychological capital and active coping are all positively significantly correlated with ambiguity tolerance. Therefore, hypothesis 2a is supported. Emotionality is negatively correlated with ambiguity tolerance. Therefore, hypothesis 2b is also supported.

Table 2 *Pearson's correlations*

	AT	AC	Hon	Emo	Ext	Agre	Con	Open	PsyCap
Ambiguity Tolerance	1	,43**	,28*	-,54**	,32*	,20	,07	,47**	,49**
Active Coping		1	,33**	-,45**	,37**	,12	,20	,25*	,73**
Honesty			1	-,29*	,26*	,12	,22	,19	,38**
Emotionality				1	-,42**	,03	-,01	-,36**	-,54**
Extraversion					1	,17	,02	,07	,45**
Agreeableness						1	,21	-,01	,06
Conscientiousness							1	-,08	,22
Openness to Experience								1	,26*
Psychological Capital									1

\*\*  $p < .01$ , \*  $p < .05$

### Hypothesis 3<sup>2</sup>

The third hypothesis of this research states that ambiguity tolerance is explained by approach oriented coping and psychological capital. A multiple regression analysis (stepwise) was conducted. Active coping and psychological capital were used as independent variables and ambiguity tolerance was the dependent. Active coping and psychological capital were entered first, because of the possibility to train them. The results are shown in table 3.

Because of the earlier described relationship between personality characteristics, active coping and psychological capital an extra multiple regression model was conducted (model 3). The variables honesty, emotionality, extraversion and openness to experience, which all have a significant correlation with ambiguity tolerance were added as independent variables, whereas ambiguity tolerance stayed the dependent variable (see table 3 model 3).

The multiple regression analysis showed that when only active coping style is used as a predictor of ambiguity tolerance (model 1,  $F(1, 60) = 13.59$ ,  $p < .001$ ), active coping style accounts for 19% of ambiguity tolerance. However, when psychological capital is included (model 2,  $F(2, 59) = 10.06$ ,  $p < .001$ ), this value increases to 26% of the variance in ambiguity tolerance and active coping is no longer significant. Furthermore, when the personality factors with a significant relationship with ambiguity tolerance are included (model 3,  $F(6, 55) = 7.02$ ,  $p < .001$ ), this value increases to 44% of the explained variance in ambiguity tolerance. In model 3 active coping and psychological capital are no longer significant. Honesty and extraversion are similarly not significant predictors, but the results do show that emotionality and openness to experiences are significant predictors of ambiguity tolerance.

<sup>2</sup> Prior to the Multiple Regression Analysis the assumptions for linearity & homoscedasticity (residuals vs predicted), normality ( $F$  robust), multicollinearity (VIF), and independence (design) were checked. All conditions were met.

Table 3 *Linear model of predictors of Ambiguity Tolerance, with 95% confidence intervals reported in parentheses.*

	<b>b</b>	<b>SE B</b>	<b>β</b>	<b>t</b>	<b>p</b>
<b>Step 1</b>					
Active Coping	7.17 (3.28, 11.06)	1.95	.43	3.69	<i>p</i> = .000
<b>Step 2</b>					
Active Coping	2.44 (-3.08, 7.95)	2.75	.15	.89	<i>p</i> = .380
Psychological Capital	6.02 (.89, 11.16)	2.57	.39	2.35	<i>p</i> = .022
<b>Step 3</b>					
Active Coping	1.08 (-3.96, 6.11)	2.51	.07	.43	<i>p</i> = .669
Psychological Capital	2.84 (-2.27, 7.95)	2.55	.18	1.11	<i>p</i> = .270
Honesty	.45 (-2.59, 3.49)	1.52	.03	.30	<i>p</i> = .766
Emotionality	-3.13 (-6.25, .00)	1.56	-.26	-2.00	<i>p</i> = .050
Extraversion	1.09 (-2.36, 4.54)	1.72	.08	.63	<i>p</i> = .529
Open to Experiences	3.86 (1.05, 6.67)	1.40	.30	2.75	<i>p</i> = .008

*Note.*  $R^2 = .19$  for Step 1;  $\Delta R^2 .07$  for Step 2;  $\Delta R^2 .18$  for Step 3

## Relation between Psychological capital and active coping

A principal component analysis was conducted to explore the strong significant correlation ( $r = .73$ ) between active coping and psychological capital. The principal component analysis was conducted on the 25 questionnaire items of active coping and psychological capital with oblique rotation (direct oblimin). The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis,  $KMO = .86$  ('Meritorious' according to Hutcheson & Sonfroniou, 1999), and all KMO values for individual items were greater than .66, which is above the acceptable limit of .5 (Field, 2013). An initial analysis was run to obtain eigenvalues for each factor in the data. Six factors had eigenvalues over Kaiser's criterion of 1 and in combination explained 63.45% of the variance. The scree plot was ambiguous and showed inflexions that would justify retaining either 2 or 4 factors. Four factors were retained because of the small sample size and the convergence of the scree plot and Kaiser's criterion on this valuable. Table 4. shows the factor loadings after rotation. The items that cluster on the same factor suggest that factor 1 represents work related confidence, factor 2 represents problem solving, factor 3 represents self-efficacy, and factor 4 represents optimism.

Table 4 *Summary of exploratory factor analysis results for the SPSS Active Coping (Q15) and Psychological Capital questionnaire (Q20).*

	Item	Rotated Factor Loadings			
		1	2	3	4
<b>Q20_18</b>	Ik kan goed zonder hulp van anderen werken als dat nodig is	<b>,58</b>			
<b>Q20_13</b>	Ik vind dat ik succesvol ben op mijn werk	<b>,55</b>			
<b>Q20_20</b>	Moeilijke momenten in het werk kan ik best aan, want ik heb al voor hetere vuren gestaan	<b>,55</b>		-,41	
<b>Q20_19</b>	Gewoonlijk neem ik stressvolle dingen in het werk er gewoon bij	<b>,55</b>			
<b>Q20_21</b>	Op mijn werk kan ik veel dingen tegelijk afhandelen	<b>,50</b>			<b>,47</b>
<b>Q20_14</b>	Ik kan veel manieren bedenken om mijn huidige werkdoelen te bereiken	<b>,45</b>	<b>,43</b>		
<b>Q20_15</b>	Ik bereik de doelstellingen die ik in mijn werk voor mezelf gesteld heb	<b>,31</b>			
<b>Q15_18</b>	Een probleem van alle kanten bekijken	-,32	<b>,78</b>		
<b>Q15_22</b>	Verschillende mogelijkheden bedenken om een probleem op te lossen		<b>,72</b>		
<b>Q15_32</b>	De zaken eerst op een rij zetten		<b>,67</b>		
<b>Q15_23</b>	Doelgericht te werk gaan om een probleem op te lossen		<b>,57</b>		

Q20_12	Er zijn veel manieren om problemen op te lossen		<b>,51</b>		
Q20_17	Normaal gesproken kan ik in mijn werk goed omgaan met moeilijkheden		<b>,50</b>		
Q20_25	Ook al kost het mij veel tijd en energie, ik bereik op mijn werk wat ik wil			<b>-,91</b>	
Q20_23	Op mijn werk bereik ik mijn doel, ook wanneer er zich onverwachte situaties voordoen			<b>-,70</b>	
Q20_26	Als er iets nieuws op mij afkomt op het werk weet ik altijd wel hoe ik dar mee om moet gaan			<b>-,60</b>	
Q20_22	Als er zich op mijn werk moeilijke problemen voordoen weet ik die op te lossen	<b>,44</b>		<b>-,56</b>	
Q20_4	Ik ga uit van een goede afloop, ook als er dingen onzeker zijn in mijn werk			<b>-,55</b>	<b>,35</b>
Q20_10	Ik vertrouw erop dat ik altijd een oplossing kan vinden, als ik mij in een moeilijke situatie bevind in mijn werk		<b>,38</b>	<b>-,51</b>	
Q20_7	Ik ben optimistisch wat betreft mijn toekomst als het over mijn werk gaat				<b>,80</b>
Q20_9	Mijn motto in het werk is: achter de wolken schijnt de zon				<b>,75</b>
Q20_6	Ik bekijk mijn werk altijd van de zonnige kant				<b>,72</b>
Q15_13	Problemen als een uitdaging zien	<b>-,32</b>		<b>-,37</b>	<b>,63</b>
Q20_11	Op dit moment streef ik mijn werkdoelen op energieke wijze na				<b>,53</b>
Q15_21	Kalm blijven in moeilijke situaties				<b>,43</b>
eigenvalues		9.85	2.22	1.44	1.31
% of variance		39.4	8.88	5.76	5.26
$\alpha$		.85	.79	.86	.82

Note: the highest factor loadings per item appears in bold

## Discussion

The main goal of this research was to explore if, in theory, training both approach oriented coping and psychological capital would enhance ambiguity tolerance. Another intention of this study was to explore if personality traits should be used as a selection tool for a post-graduate program that focuses on improving ambiguity tolerance.

### Hypothesis 1

First, it was expected that there was a positive relationship between approach oriented coping style, high psychological capital, personality traits and ambiguity tolerance in quartermasters. Therefore, it was hypothesized: that quartermasters have a high amount of tolerance towards ambiguous situations (h1a); that they have an approach oriented coping style (h1b); that they score high on psychological capital (h1c); and that quartermasters are extravert, open to new experiences, honest and score low on emotionality (h1d). Hypothesis 1a, c and d were supported suggesting that quartermasters obtain a high ambiguity tolerance, a high psychological capital and all expected personality traits.

#### *Approach oriented coping*

Hypothesis 1b was partly supported. Which suggests that quartermasters do have an active coping style but not an approach oriented coping style. This result might be explained by the way the respondents interpreted the questions. The concept emotional expression could be interpreted in two manners; not being able to control your emotions and therefore expressing them in a non-appropriate way (e.g. throwing a chalkboard eraser to the colleague looking on his phone while shouting at him) or expressing your emotions in order to benefit the process (e.g. I notice that you're looking on your phone every 2 minutes during our meeting, that makes me feel ignored and I would appreciate it if you would stop doing that). Emotional expression as a part of approach oriented coping is viewed as the way in which an individual shows his emotions (Connor-Smith & Flachsbart, 2007; Carver & Connor-Smith, 2010). But the questionnaire items state: 'showing your irritation' and 'getting mad at the person who is responsible for creating the problem' (Schreurs et al., 1993). Regarding the concept of social support seeking an explanation might be that quartermasters are strongly independent due to their type of work and, therefore, don't always have the need or the opportunity to confide in others. For the purpose of this research the decision was made to only use active coping style for further analysis.

## **Hypothesis 2**

Second, it was expected that there were direct positive relationships between the independent variables; the personality traits: extraversion, openness to experience and honesty, psychological capital and active coping and ambiguity tolerance (dependent) (Hypothesis 2a). A direct negative relationship between the personality trait: emotionality (independent) and ambiguity tolerance (dependent) was also expected (Hypothesis 2b). All hypothesized effects were found.

### *Active coping style and psychological capital*

The results suggest that when a quartermaster has a higher level of psychological capital or a stronger active coping style, the tolerance towards ambiguous situations will be higher. This is in line with research conducted by Judge et al. (1999).

### *Personality traits*

The results also showed that when a quartermaster is more open to new experiences his tolerance towards ambiguous situations will increase. One explanation may be that people who are open to new experiences are more curious for the unknown and tend to use their imagination freely (Lee & Ashton, 2009). This might result in actively seeking unknown and ambiguous situations. When training ambiguity there could be a difference between quartermasters with high and low scores on openness to experience. Longitudinal research is needed to further explore the relationship. Correspondingly, emotionality has a strong, but negative, relation with ambiguity tolerance as well. It may be a possible explanation that quartermasters who are emotionally stable feel little worry in stressful situations, they have little need to share their concerns with others and are not deterred by the prospect of harm (Lee & Ashton, 2009 as described in appendix C).

## **Hypothesis 3**

Third, it was expected that ambiguity tolerance is explained by approach oriented coping and psychological capital (hypothesis 3). A partial effect was found, so this hypothesis was partly supported. The results show that the prediction of active coping style towards ambiguity tolerance could be fully explained by the prediction of psychological capital towards ambiguity tolerance and that the prediction of psychological capital towards ambiguity tolerance could be fully explained by openness to experiences and emotionality. An

explanation could be that the connection between personality traits and states are not as black and white as earlier stated (Luthans, Youssef & Avolio, 2007). It could be possible that personality traits are an umbrella term whereas coping style and psychological capital are subordinate concepts. As an example, emotionality is one of six personality trait domains on the HEXACO model. The results in table 2 showed a strong negative correlation between emotionality, active coping and psychological capital. This strong negative relation could have several reasons. One reason could be that all three variables measure the same concept. Another reason could be that coping style and psychological capital are somehow part of emotionality. Perhaps, this might also explain the non-significant proportion of variance explained by active coping and psychological capital when emotionality was included in the model. The strong relationship between active coping and psychological capital might suggest that the UCL and PCQ-24 could be measuring the same construct.

### **UCL and PCQ-24**

Therefore, the last result that needs to be discussed is that the UCL active coping items and the PCQ-24 items could perhaps measure the same construct. The analysis showed that the UCL active coping items could easily be combined with the PCQ-24 items. This could suggest that both questionnaires measure the same construct. As an example, Q15\_22 states: 'Think of different ways to solve a problem', whereas Q20\_12 states: 'There are many ways to solve a problem'. This might be due to the translation of the PCQ-24 questionnaire from English to Dutch which resulted in a different nuance in the question. An alternative explanation might be that coping is the behavioral component whereas psychological capital is the cognitive component of the same construct. It could be that measuring with an online questionnaire instead of a behavioral assignment someone's actual coping style is not measured only the coping style that someone thinks he has.

### **Limitations**

An important note that should be kept in mind when interpreting the results of this study is the small sample size ( $N = 62$ ). Not much was known about the context of the quartermasters. It could have been helpful if there was more detailed information about the assignments of the quartermasters, especially with regard to the small sample size. Most of the statistical tests were robust against this small sample size, but drawing conclusions about quartermasters in the population should therefore be done with extra care. This research is a cross-sectional study therefore no causal relations could be tested. Future longitudinal



research is needed to test the direction and the effects of training psychological capital and active coping in relation to ambiguity tolerance.

The length of the questionnaire is also a limitation. The participants criticized about the time it took to fill out the questionnaire (15-20 minutes) and this might have led to less participants. For future research, it is recommended that only the relevant parts of the questionnaires are used.

A further shortcoming of this research is that the participants were acquired online. The survey was accessible to anyone and there was no external motivator. Therefore, the results only show something about the quartermasters that entered themselves in the study, this is called voluntary response bias. The results might be overrepresented with quartermasters who are more outgoing, curious, and assume they're successful as a quartermaster. For future research, it is suggested to acquire respondents who do the work of a quartermasters instead of focusing on respondents who call themselves quartermasters.

Furthermore, someone's personality is not entirely stable over the course of their life. It is variable over the lifespan. For this research personality traits were viewed as stable, because the duration of a post-graduate program is not long enough to change relative stable traits.

### **Norm groups**

Another limitation is that the results of the respondents were not compared with the overall population because of the unavailability of relevant norm groups. This unavailability had several reasons. The HEXACO expert in Holland explained that the HEXACO-60 has no norm group, because the 60-item test is not compatible as a diagnostic tool due to the low reliability of the factor scales. However, the HEXACO-60 is without doubt appropriate for research purpose. For the UCL-A there are three available norm groups, but the COTAN (committee of quality of surveys in Holland) states that the norm groups are outdated and therefore are not a good representation of the Dutch population. For the MSTAT-II and the PCQ-24 no relevant norm groups could be found. Even when looking at other studies who used one of the tests, still no information was found about when someone has a high scores and when someone has a low score. Therefore, the interpretation of the item scores were based on common sense. This is not the ideal situation; what if someone scored the mean value? Shouldn't there be additional categories apart from high or low? For future research it is recommended to search for relevant and qualified norm groups when selecting existing questionnaires.

## **Implications for future research**

As mentioned above future research should contain a longitudinal experiment with (preferably at least 120) respondents who do the work of a quartermaster. This experiment should focus on examining the effects of training active coping and psychological capital in order to improve ambiguity tolerance. There are four groups needed: a control group with no treatment, one treatment group who will train active coping, one treatment group who will train psychological capital and one treatment group who will train both active coping and psychological capital. Two measurement moments are necessary: a pre- and post-measurement. The researcher should look at the difference between ‘before’ and ‘after’ measurement and total improvement and check for the different personality traits to test if a selection is necessary for a post-graduate program and if the total improvement is related to personality traits. Another interesting research topic might be the relationship between emotionality, openness to experience, coping style and psychological capital.

It is also recommended to research if training active coping style and psychological capital in quartermasters who score high on openness to experience and low on emotionality is indeed beneficial for increasing ambiguity tolerance. Perhaps, there is a ceiling effect that should be taken into account (e.g. people who are emotionally stable and truly open for new experiences might have a higher ambiguity tolerance basis, and thus may not benefit, as much, from training active coping style and/or psychological capital).

## **Practical implications**

For the current research purpose the focus was on active coping style and psychological capital, because they can be trained. When looking at the total amount of variance explained by active coping style and psychological capital, and the strong correlation between active coping style and psychological capital, the results show that:

- 1) Psychological capital predicts a quarter of the variance in ambiguity tolerance. Whereas active coping style predicts one fifth of the variance in ambiguity tolerance.
- 2) When active coping style is trained, then indirectly psychological capital is trained as well and vice versa (due to the high correlation).

These results suggest that with a strong active coping style and a high psychological capital the tolerance for ambiguous situations is also high. The strong correlation between active coping style and psychological capital suggests that when one skill is trained, indirectly the

other skill is trained as well. The effect of training is never the full 100%. Therefore, training two skills who are strongly related and indirectly training each other is more profitable than only training one of the skills. Therefore, it is advised to train both active coping style and psychological capital in order to increase ambiguity tolerance.

### **Advice for the ‘kwartiermakergilde’**

*Should psychological capital and active coping both be trained to enhance ambiguity tolerance?*

With all the limitations in mind it could be proposed that training both active coping and psychological capital would enhance ambiguity tolerance. This might be a possible strategy, due to the strong relationship between psychological capital and active coping. If psychological capital is trained, then indirectly active coping style is trained as well and vice versa. Therefore, it is advised to train both active coping style and psychological capital in order to increase ambiguity tolerance. Though, further experimental research is needed to test this effect.

### *Should personality traits be used as a selection tool for a post-graduate program?*

In this phase of the research towards a post-graduate program for becoming a quartermaster, with all the limitations in mind, there is not enough information known that would justify the advice to select or not. A bigger sample is needed to test if personality traits, as described by HEXACO, can be used as selection criteria. Those results have to be compared with relevant norm-groups. It could be assumed that personality traits cannot be used as a selection tool, but perhaps it could be useful to predict the effect of the training provided. As an example: people who are open to new experiences might benefit less from training active coping and psychological capital because of a ceiling effect they might encounter. Future research with a pre- and post-measurement as described above is advised.

### **Conclusion**

The current study about the relationship between personality traits, states and ambiguity tolerance brought some new insights into the field of research about quartermasters. It has been shown that quartermasters' ambiguity tolerance could be statistically explained by active coping style and psychological capital. Therefore, it is assumed that training active coping style and psychological capital might enhance ambiguity tolerance. Also, these results give some new insights in the underlying relation of the PCQ-24 and the UCL. So, when you experience difficulties with multi-interpretable situations, just remember that an active coping style and high psychological capital might help you conquer those challenges.

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## Appendix

### Appendix A - Questionnaire

Beste Kwartiermaker,

Hartelijk dank voor uw bereidheid om deze vragenlijst in te vullen. Uw participatie zal bijdragen aan het onderzoek naar Kwartiermakers en de eigenschappen die een kwartiermaker succesvol maken. Dit onderzoek wordt gedaan in opdracht van het '[Kwartiermakersgilde](#)'. Het invullen van deze vragenlijst zal ongeveer 10 minuten in beslag nemen. De lijst bestaat uit 5 onderdelen. U wordt vriendelijk verzocht op elke vraag antwoord te geven, zelfs als u niet helemaal zeker van uw antwoord bent. Uw antwoorden zullen anoniem worden verwerkt en strikt vertrouwelijk worden behandeld. Er zijn geen goede of foute antwoorden: geef dus aan wat u zelf het best passende antwoord lijkt. U kunt op elk moment de vragenlijst afbreken. Mocht u vragen hebben, dan kunt u contact met mij opnemen door een email te sturen naar: [schmidt@kwartiermakersgilde.nl](mailto:schmidt@kwartiermakersgilde.nl). De bevindingen van het onderzoek zullen dit najaar op de website van het Kwartiermakersgilde verschijnen en meegestuurd worden in de nieuwsbrief. Daarnaast kunt u aan het einde van de vragenlijst uw e-mailadres invullen zodat u het verslag via de mail ontvangt. Het onderzoek valt onder verantwoording van dhr. dr. Steensma, sectie Sociale & Organisatie Psychologie van de Universiteit Leiden. Bij vragen, klachten of behoefte aan meer informatie, kunt u een mail sturen naar [steensma@fsw.leidenuniv.nl](mailto:steensma@fsw.leidenuniv.nl).

Hartelijke groet, Julia Schmidt

Ik geef toestemming om aan dit onderzoek mee te doen.

- Ja



## Demografische variabelen

Wat is uw geslacht?

- Vrouw
- Man
- Ik prefereer niet te antwoorden

Wat is uw leeftijd?

Wat is uw hoogst voltooide opleiding?

Middelbare school

MBO

HBO

WO

Anders namelijk

In welke branche bent u voornamelijk werkzaam als kwartiermaker?

- Onderwijs
- Zorg
- Politiek
- Financieel
- Transport
- Ruimtelijke ordening,
- Vastgoed
- Overige, namelijk

In welke sector bent u op dit moment werkzaam?

- Publieke
- Commerciële

Huidige arbeidssituatie:

- Loondienst
- Zelfstandig professional
- Ondernemer
- Werkeloos
- Gepensioneerd
- Overig, namelijk

Over het algemeen ben ik:

- Kwartiermaker
- Projectmanager

Mijn laatste kwartiermakersopdracht was

- Ik ben op dit moment als kwartiermaker actief
- 0 tot 5 jaar geleden
- 6 tot 10 jaar geleden
- 11 jaar of langer geleden

Voor het resultaat dat ik bereik als kwartiermaker geef ik mijzelf het volgende cijfer:

Voor het proces dat ik als kwartiermaker neerzet geef ik mijzelf het volgende cijfer:

## Q12 HEXACO-60

Hieronder vindt u een aantal uitspraken. Geef aan in hoeverre deze uitspraken op u van toepassing zijn (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.
16. Ik heb liever een baan waarin men veel met andere mensen omgaat dan één waarin men alleen zelfstandig dient te werken.
17. Na een pijnlijke ervaring heb ik iemand nodig om 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.
31. Ik heb nooit met veel plezier in een encyclopedie/op wikipedia 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 en of luxegoederen.
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.
46. De meeste mensen zijn levenslustiger en dynamischer dan ik over het algemeen ben.
47. Ik raak erg geëmotioneerd als iemand die me na staat 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 ermee weg zou komen.

## Q15 UCL

Hieronder vindt u een aantal mogelijkheden voor het omgaan met problemen. Geef aan in hoeverre u deze mogelijkheden gebruikt wanneer een probleem zich voordoet. (zelden of nooit, soms, vaak, zeer vaak)

1. Je bedenken dat er nog wel ergere dingen kunnen gebeuren
2. Proberen te ontspannen
3. Je volledig afzonderen van anderen
4. Je ergernis laten blijken
5. De zaken somber inzien
6. Je met andere dingen bezighouden om niet aan een probleem te hoeven denken
7. Laten zien dat je kwaad bent op degene die verantwoordelijk is voor het probleem
8. Toegeven/zwichten om moeilijke situaties te voorkomen
9. Je neerleggen bij de gang van zaken
10. Je zorgen met iemand delen
11. Direct ingrijpen als er moeilijkheden zijn
12. Tegen jezelf zeggen dat het allemaal wel mee zal vallen
13. Problemen als een uitdaging zien
14. Je zorgen tijdelijk verdrijven door even ertussen uit te gaan
15. De kat uit de boom kijken
16. Spanningen proberen te verminderen door bijvoorbeeld meer te roken, drinken, eten of beweging nemen
17. Afleiding zoeken
18. Een probleem van alle kanten bekijken
19. Moeilijke situaties zoveel mogelijk uit de weg gaan
20. Optimistisch blijven over de toekomst
21. Kalm blijven in moeilijke situaties
22. Verschillende mogelijkheden bedenken om een probleem op te lossen
23. Doelgericht te werk gaan om een probleem op te lossen

24. Piekeren over het verleden
25. Opgewekt gezelschap zoeken als je je zorgen maakt of van streek bent
26. Proberen je te onttrekken aan de situatie
27. Je spanningen afreageren
28. Wachten op betere tijden
29. Iemand om hulp vragen
30. Rustgevende middelen gebruiken als je je gespannen voelt of nerveus bent
31. Wegvluchten in fantasieën
32. De zaken eerst op een rij zetten
33. Je geheel en al in beslag laten nemen door problemen
34. Aan andere dingen denken die niet met het probleem te maken hebben
35. Op de een of andere manier proberen je wat prettiger te voelen
36. Je indenken dat anderen het ook weleens moeilijk hebben
37. Je indenken dat na regen zonneschijn komt
38. Je gevoelens tonen
39. Troost en begrip zoeken
40. Moeilijkheden over je heen laten komen
41. De humoristische kant van problemen zien
42. Laten merken dat je ergens mee zit
43. Met vrienden of familieleden het probleem bespreken
44. De zaak op z'n beloop laten
45. Je niet druk maken: meestal komt alles op z'n pootjes terecht
46. Je niet in staat voelen om iets te doen
47. Jezelf moed inspreken bij moeilijkheden

## Q17 MSTAT\_II

Hieronder vindt u een aantal algemene uitspraken. Geef aan in hoeverre deze uitspraken op u van toepassing zijn (helemaal mee oneens, mee oneens, neutraal, mee eens, helemaal mee eens).

1. Ik houd niet van ambigue situaties.
2. Ik zou het liever voorkomen dat ik een probleem moet oplossen dat bekeken moet worden vanuit verschillende invalshoeken.
3. Ik probeer situaties die dubbelzinnig/ ambigue zijn te vermijden.
4. Ik geef de voorkeur aan bekende situaties boven onbekende situaties.
5. Problemen die van meerdere kanten bekeken moeten worden zijn een beetje bedreigend voor mij.
6. Ik vermijd situaties die voor mij te ingewikkeld zijn om gemakkelijk te begrijpen.
7. Ik verdraag ambigue situaties.
8. Ik geniet ervan om problemen aan te pakken die complex genoeg zijn om dubbelzinnig/ ambigue genoemd te worden.
9. Ik probeer problemen uit de weg te gaan waarvoor er niet één beste oplossing lijkt te bestaan.
10. Over het algemeen geef ik de voorkeur aan onbekendheid boven bekendheid.
11. Ik kan ambigue situaties niet goed verdragen.
12. Ik vind het moeilijk om een keuze te maken wanneer de uitkomst onzeker is.
13. Ik geef de voorkeur aan een situatie waarin er sprake is van ambiguïteit.

## Q20 PCQ-24

Hieronder vindt u een aantal algemene uitspraken. Geef aan in hoeverre deze uitspraken op u van toepassing zijn (helemaal mee oneens, mee oneens, neutraal, mee eens, helemaal mee eens).

22. Als er zich op mijn werk moeilijke problemen voordoen, weet ik die op te lossen
46. Ik bespreek met gemak problemen met mensen buiten het bedrijf
23. Op mijn werk bereik ik mijn doel, ook wanneer er zich onverwachte situaties voordoen
24. Als ik obstakels op mijn werk tegenkom, vind ik altijd wel een manier om ze te omzeilen
25. Ook al kost het mij veel tijd en energie, ik bereik op mijn werk wat ik wil
26. Als er iets nieuws op mij afkomt op het werk weet ik altijd wel hoe ik daar mee om moet gaan.
4. Ik ga uit van een goede afloop, ook als er dingen onzeker zijn in mijn werk
5. Als er iets fout kan gaan in mijn werk, dan gaat het ook fout
6. Ik bekijk mijn werk altijd van de zonnige kant
7. Ik ben optimistisch wat betreft mijn toekomst als het over mijn werk gaat
8. Zaken in mijn werk lopen nooit zoals ik dat zou willen
9. Mijn motto in het werk is: achter de wolken schijnt de zon
10. Ik vertrouw erop dat ik altijd een oplossing kan vinden, als ik mij in een moeilijke situatie bevind in mijn werk
11. Op dit moment streef ik mijn werkdoelen op energieke wijze na
12. Er zijn veel manieren om problemen op te lossen
13. Ik vind dat ik succesvol ben op mijn werk
14. Ik kan veel manieren bedenken om mijn huidige werkdoelen te bereiken
15. Ik bereik de doelstellingen die ik in mijn werk voor mezelf gesteld heb
16. Als ik een tegenslag heb in mijn werk, heb ik er moeite mee om er weer bovenop te komen en verder te gaan
17. Normaal gesproken kan ik in mijn werk goed omgaan met moeilijkheden
18. Ik kan goed zonder hulp van anderen werken als dat nodig is
19. Gewoonlijk neem ik stressvolle dingen in het werk er gewoon bij



20. Moeilijke momenten in het werk kan ik best aan, want ik heb al voor hetere vuren gestaan

21. Op mijn werk kan ik veel dingen tegelijk afhandelen

Hartelijk dank voor het invullen van de vragenlijst. Met deze informatie heeft u bijgedragen aan de professionalisering van het vak van de kwartiermaker. Voor verdere vragen kunt u contact opnemen met Julia Schmidt via [schmidt@kwartiermakersgilde.nl](mailto:schmidt@kwartiermakersgilde.nl).

Hieronder kunt u aangeven of u geïnteresseerd bent om het gehele onderzoek via de mail te ontvangen. De gehele scriptie zal ook op de website van het Kwartiermakersgilde te vinden zijn; [www.kwartiermakersgilde.nl](http://www.kwartiermakersgilde.nl).

Wilt u de gehele scriptie per e-mail ontvangen? Vul dan hieronder uw e-mailadres in.

Heeft u nog opmerkingen?

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## Appendix B - Comparison Big Five & HEXACO

The thirty adjectives of the Big Five and HEXACO models in the Dutch lexical research that scored the highest (de Vries, Ashton & Lee, 2009). The negative scores are italic.

**Tabel 1** De 30 hoogstladende bijvoeglijke naamwoorden van de opeenvolgende factoren in een Big Five en HEXACO oplossing in Nederlands lexicaal onderzoek

Benaming Big Five	Bijvoeglijke naamwoorden
I Vriendelijkheid	mild, goedmoedig, verdraagzaam, toegankelijk, goedhartig, <i>bazig</i> , goed-aardig, <i>autoritair</i> , gemoedelijk, buigzaam, <i>baasachtig</i> , geduldig, <i>opvliegend</i> , vreedzaam, tolerant, bedaard, bescheiden, menslievend, <i>heerszuchtig</i> , gewillig, vredelievend, <i>fel</i> , zachtmoedig, <i>driftig</i> , inschikkelijk, meegaand, flexibel, zachtaardig, goedig, aardig
II Emotionele Stabiliteit	zelfverzekerd, stabiel, evenwichtig, onzeker, <i>kwetsbaar</i> , <i>paniekerig</i> , <i>overgevoelig</i> , <i>onevenwichtig</i> , <i>instabiel</i> , <i>labiel</i> , <i>zenuwachtig</i> , <i>hypergevoelig</i> , <i>nerveus</i> , <i>tobberig</i> , <i>emotioneel</i> , <i>schrikachtig</i> , <i>besluiteloos</i> , <i>besluitvaardig</i> , <i>afhankelijk</i> , <i>angstig</i> , vastberaden, <i>onstandvastig</i> , rationeel, koelbloedig, resoluut, nuchter, onafhankelijk, onverstoorbaar, <i>wisselvallig</i> , <i>bikkelhard</i>
III Extraversie	<i>gesloten</i> , <i>introvert</i> , <i>zwijgzaam</i> , uitbundig, opgewekt, spontaan, openhartig, <i>terughoudend</i> , <i>ontoegankelijk</i> , <i>somber</i> , open, vrolijk, <i>gereserveerd</i> , enthousiast, <i>mensenschuw</i> , joviaal, <i>stug</i> , <i>eenzelvig</i> , blijmoedig, blijgeestig, optimistisch, levendig, <i>neerslachtig</i> , extrovert, vlot, <i>afstandelijk</i> , <i>pessimistisch</i> , temperamentvol, <i>schuw</i> , monter
IV Consciëntieusheid	zorgvuldig, ijverig, precies, secuur, plichtsgetrouw, gedisciplineerd, vlijtig, stipt, nauwgezet, ordelijk, degelijk, punctueel, <i>nonchalant</i> , <i>rebels</i> , accuraat, gezagsgetrouw, <i>roekeloos</i> , <i>losbandig</i> , <i>lui</i> , <i>onverantwoordelijk</i> , <i>onbezonnen</i> , <i>gemakzuchtig</i> , <i>onbedachtzaam</i> , doodernstig, serieus, <i>lichtzinnig</i> , <i>onbesuisd</i> , <i>laks</i> , braaf, gehoorzaam
V Autonomie	kritisch, <i>oppervlakkig</i> , diepzinnig, <i>stiekem</i> , <i>onkritisch</i> , <i>gedwee</i> , karakterloos, <i>leugenachtig</i> , <i>huichelachtig</i> , <i>onnozel</i> , <i>sullig</i> , <i>kruiperig</i> , <i>kleingeestig</i> , <i>onoprecht</i> , <i>grootdoenerig</i> , <i>kleinburgerlijk</i> , <i>schijnheilig</i> , <i>praalziek</i> , oprecht, scherpzinnig, <i>slaafs</i> , <i>lijdzaam</i> , <i>preuts</i> , <i>gezapig</i> , <i>dweepziek</i> , <i>halfzacht</i> , <i>burgerlijk</i> , <i>blufferig</i> , <i>onbetrouwbaar</i> , <i>gevoelloos</i>

**Tabel 1** Vervolg

Benaming HEXACO	Bijvoeglijke naamwoorden
I Extraversie	<i>introvert, uitbundig, gesloten, opgewekt, zwijgzaam, spontaan, openhartig, somber, vrolijk, open, blijmoedig, terughoudend, enthousiast, blijgeestig, ontoegankelijk, joviaal, optimistisch, levendig, eenzelvig, gereserveerd, mensenschuw, neerslachtig, monter, stug, vlot, pessimistisch, droefgeestig, extrovert, afstandelijk, temperamentvol</i>
II Verdraagzaamheid	<i>opvliegend, fel, driftig, goedmoedig, heetgebakerd, bedaard, heethoofdig, geduldig, mild, verdraagzaam, agressief, goedig, opstandig, gewillig, gemoedelijk, zachtaardig, vreedzaam, zachtmoedig, goedhartig, toegeeflijk, explosief, goedaardig, meegaand, buigzaam, koppig, onredelijk, rustig, doodgoed, bazig, autoritair</i>
III Emotionaliteit	<i>stabiel, zelfverzekerd, evenwichtig, overgevoelig, kwetsbaar, instabiel, labiel, onevenwichtig, hypergevoelig, onzeker, emotioneel, paniekerig, vastberaden, tobberig, nuchter, zenuwachtig, besluitvaardig, nerveus, bikkelhard, resoluut, koelbloedig, besluiteloos, schrikachtig, sentimenteel, dromerig, onverstoorbaar, angstig, afhankelijk, keihard, onafhankelijk</i>
IV Consciëntieusheid	<i>zorgvuldig, secuur, precies, ordelijk, gedisciplineerd, vlijtig, ijverig, nauwgezet, stipt, plichtsgetrouw, nonchalant, punctueel, onbedachtzaam, degelijk, lui, accuraat, onverantwoordelijk, roekeloos, onbezonnen, rebels, gemakzuchtig, laks, losbandig, onbesuisd, perfectionistisch, gezagsgetrouw, onverschillig, lichtzinnig, serieus, wispelturig</i>
V Openheid voor Ervaringen	<i>diepzinnig, onkritisch, oppervlakkig, burgerlijk, gedwee, origineel, filosofisch, preuts, volgzam, scherpzinnig, fantasieloos, bekrompen, geestig, spitsvondig, kunstzinnig, kleinburgerlijk, doodverlegen, kritisch, creatief, wijsgerig, bedeesd, conservatief, conventioneel, ironisch, onderdanig, nederig, inventief, veelzijdig, karakterloos, geraffineerd</i>
VI Integriteit	<i>blufferig, grootdoenerig, verwaand, dikdoenerig, oprecht, pocherig, snobistisch, praalziek, opschepperig, zelfgenoegzaam, hooghartig, trouw, arrogant, hoogmoedig, hebberig, doodeerlijk, doortrapt, hautain, sluw, eerlijk, geslepen, zelfingenomen, betrouwbaar, behulpzaam, stiekem, zelfvoldaan, pedant, slinks, leugenachtig, inhalig</i>

NB Negatief ladende bijvoeglijke naamwoorden zijn cursief weergegeven.

## Appendix C - Table 5

Overview of the questionnaire items, concept definitions, Cronbach's Alpha and adjusted Cronbach's Alpha.

Questionnaire	Concept	Definition	Scale items questionnaire	$\alpha$	Adapted scales	$\alpha$		
Q17	MSTAT-II (Multiple Stimulus Types Ambiguity Tolerance Scale-II)	AT Ambiguity Tolerance	individual's range of responses to and degree of comfort with uncertainty and/or complexity	1*,2*,3*,4*,5*,6*,7,8,9*,10,11*,12*,13	.83			
Q15	UCL (Utrechtse Coping List)	AC	Active Coping	the way in which an individual takes a step back to focus on how to resolve the problem	11,13,18,21,22,23,32	.73		
		PR	Palliative reaction	the way in which an individual seeks distraction from the situation	2, 6,14,16,17,25,34,35	.73	-2	.76
		SS	Social support	the way in which an individual seeks for comfort and understanding with others	10,29,38,39,42,43	.76		
		PRP	Passive reaction pattern	the way in which an individual lets himself consume by the situation and is unable to take control.	3,5,24,30,31,33,46	.71		
		RT	Reassuring Thoughts	the way in which an individual comfort himself by reassuring that it's going to be alright.	1,12,36,37,47	.74		
		A	Avoidance	the way in which an individual removes himself from the situation and waits on what is going to happen.	8,9,15,19,26,40,44,45	.67		
		EE	Emotional Expression	the way in which an individual show their emotions.	4,7,27	.62	-27	.73
Q20	PCQ-24 (Psychological Capital Questionnaire-24)	SE	Self-efficacy	the confidence you're able to accomplish a task successfully.	22,23,24,25,26,46	.71	-24, -46	.79
		OPT	Optimism	having faith in your own ability to improve a situation	4,5*,6,7,8*,9	.60	-5, -8	.73
		HO	Hope	having the willpower and pathways to attain one's goals.	10-15	.85		
		RE	Resilience	the ability to bounce back and beyond when faced with adversity.	16*,17,18,19,20,21	.72	-16	.75
		PsyCap	Total	Combination of the four above scales.	22,23,25,26,4,6,7,9-15,17-21	.92		
Q12	HEXACO-60	Hon	Honesty - Humility	Avoid manipulation and feel no special entitlement to elevated social status.	6,12*,18,24*,30*,36,42*,48*,54,60*	.64		
		Emo	Emotionality	Experience fear and anxiety, feel attached with others, and feel a need for emotional support from others.	5,11,17,23,29,35*,41*,47,53*,59*	.72		
		Ext	Extraversion - Introversion	Feels positive about themselves, feels confident in groups. Enjoy social interaction and are enthusiastic.	4,10*,16,22,28*,34,40,46*,52*,58	.74	-58	.76
		Agr	Agreeableness	Are willing to compromise and cooperate with others, don't hold grudges and are lenient in judging others.	3,9*,15*,21*,27,33,39,45,51,57*	.64		
		Con	Conscientiousness	Are organized, strive for accuracy and perfection and deliberate carefully when making decisions.	2,8,14*,20*,26*,32*,38,44*,50,56*	.73		
		Open	Openness to Experience	Are inquisitive about various domains of knowledge, take interest in unusual ideas or people.	1*,7,13,19*,25,31*,37,43,49*,55*	.69		

Note: \* reversed item scores