

**Too smart to commit?**  
**Effects of personal characteristics on organisational**  
**commitment**  
**and job satisfaction:**  
**evidence from a high-IQ network**

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Dissertation Summary

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# **1 Motivation, Problem Definition, and Objective**

## **1.1 Motivation**

In a time of rapidly changing economic environments, organisations cannot afford to be inefficient and let potential go untapped. Knowledge of how managers can optimise an individual's achievement for ideal performance is highly sought after. Findings such as those of Simonton (2004), which show that individuals who demonstrate achievement excellence proliferate innovations at a widely overproportional rate, illustrate how significant a committed and highly capable workforce is. Equally, individuals strive for job-satisfaction and personal fulfilment. A positive relation between organisational commitment and job performance has been identified in some studies (e.g. Khan, Ziauddin & Ramay, 2010; Imran, Arif, Cheema & Azeem, 2014). How general mental ability contributes to these factors needs further exploration. Beyond the area of management, the results of this research will be beneficial for the underserved discipline of giftedness research with relation to adults, which as Perrone, Jackson, Wright, Ksiazak and Perrone (2007) point out is lacking empirical research.

What motivated this research was a need to empirically explore antecedents of organisational commitment to better understand the conditions in which performance, as well as personal wellbeing, improve. This project strives to make a contribution to the existing knowledge of management research and organisational psychology with a particular focus on the role of intelligence in a professional setting. The findings will help managers to tap the full potential of their employees and co-workers, as well as individuals to better understand their needs to improve their attitudes towards the workplace and their job satisfaction overall. It is of considerable tactical and strategic importance for managers and organisations to establish ideal working conditions in which their employees can thrive, and the findings of this research project will add to this understanding.

This research in the field of organisational commitment contributes to the scientific understanding of effective motivation; its findings will help to increase the welfare of individuals. As a whole, society tends to benefit from high levels of organisational commitment as the cost from absenteeism and turnover is reduced, while the quality of work improves (Mathieu & Zajac, 1990). Understanding what drives higher levels of commitment is therefore of significant relevance to science, management practitioners, and society as a whole. This research project focuses specifically on how organisational commitment, job satisfaction, and intellectual capabilities relate.

As the impact of intelligence on performance and achievement is contended, this research project aims to contribute to the discourse by comparing the self-reported organisational commitment of gifted and talented adults in a professional environment with a control group of professionals that report not to have tested in the upper 2% of a standardised IQ-test. While gifted and talented people by definition<sup>1</sup> account for a minority of the population, it is widely understood that their potential has to be tapped in the best possible way for the benefit of the wider society. That a small group of talented people has a significant impact is a widely replicated finding in management research (Andriani & McKelvey, 2009). A minority of people in any organisation or group will contribute disproportionately to the collective output. Between 80% and 98% of the output is generated by around 20% of the group or organisation, this Pareto Effect (Lipovetsky, 2009) has been found to apply in any domain measuring performance (Andriani & McKelvey, 2009; Chamorro-Premuzic, 2016). As Chamorro-Premuzic (2016) noted, it is a vital few, the most talented, that are the main drivers of any organisation's success. Consequently, talent is not overrated, but if anything, still underrated, and organisations should dedicate more resources to those minorities that make the biggest difference (Chamorro-Premuzic, 2016). Meta-analysis showed that talented individuals have a number of personality traits in common which are attributed to top performance across fields and industries, one of which is ability (Hogan, Chamorro-Premuzic & Kaiser, 2013). Ability is partially domain-specific, however, a key component is learnability with is influenced by IQ (Chamorro-Premuzic, 2016).

Finding ways to use the potential of the most capable part of society in a more appropriate manner to optimise performance and wellbeing should be a priority for any organisation. It is the aim of this research project to contribute to a better understanding of the relationship between organisational commitment, job satisfaction, and intelligence.

## 1.2 Problem definition

Organisations are faced with the challenge to attract and retain talent and to keep those talents motivated. Twenty years after the landmark McKinsey study (Chambers et al.,

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<sup>1</sup> Following Gagné's (2008) differentiated model of giftedness and talent, individuals can be classified as gifted whose natural abilities and potential in one or more of the human domains intellectual, creative, socioaffective and sensorimotor are distinctly above average. Individuals whose developed skills and knowledge in at least one area of human performance are distinctly above average can be classified as talented (Gagné, 2008).

1998), the “war for talent” still continues. The question of how to increase employees’ commitment to the organisation is of central importance to the ongoing policy debate on the development and especially the retainment of the workforce. For management science and for practitioners, exploring the determinants of a committed and satisfied workforce has a direct and relevant implication.

Findings of large-scale studies on workplace surveys (Bonau, 2018; Brown et al., 2011) showed that workplace human resources influence employee commitment and loyalty. Thus, employers have the opportunity to influence their workforce’s commitment and loyalty, and ultimately improve overall performance. By understanding how different HR policies influence employee’s attitude towards the organisation, specifically their commitment to and satisfaction with the organisation, managers are enabled to implement specific practices that foster employee’s feelings of loyalty.

Employee turnover and absenteeism have been found to be predicted by organisational commitment (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). Numerous studies have reported on the negative implications of higher absenteeism and turnover rates for organisations. Disruptions through absence and churn rates cost organisations in productivity and morale, as well as in additional hiring and training costs (Koh & Boo, 2004; Hausknecht & Trevor, 2011). Beyond the benefits of job satisfaction and well-being for the employees, from a financial perspective, it is also in the interest of the company to have a loyal and committed workforce.

Linking commitment with leadership, Yahaga and Ebrahim (2016) showed that positive organisational outcomes that have been linked to commitment include job performance (Chen, Silverthorne, & Hung, 2006; Yousef, 2000), employee satisfaction (Chughtai & Zafar, 2006; Meyer et al., 2002; Yousef, 2000), and lower turnover (Angle & Perry, 1981; Meyer et al., 2002; Powell & Meyer, 2004). How commitment to the organisation develops, and which aspects contribute to stronger commitment and higher job satisfaction is what researchers and management practitioners alike continue to strive to understand. Findings of this research project help to identify steps that can be taken on an organisational level to increase organisational commitment and job satisfaction. Factors that originate within an individual, as well as factors outside the individual, which initiate work-related behaviour have been considered when looking at antecedents of commitment.

### 1.3 Objective

The starting point of this research project is the assumption that high levels of organisational commitment predict qualitative and quantitative better performance, and that higher levels of self-reported job-satisfaction would have more positive attitudes towards the organisation as a consequence. Through empirical research, I tested the research question which role intelligence plays in the development of organisational commitment and of job satisfaction. I also analysed these relationships for motivational aspects that might contribute to positive attitudes towards the workplace. Further, the research objectives were to identify factors that contribute to higher levels of organisation commitment and of job satisfaction among highly intelligent employees.

This current study assumed that the type of organisation (e.g., for-profit, or non-for-profit) which professionals are engaged in does not influence the results of organisational commitment and of job-satisfaction significantly. Instead, it is the working environment as such that would impact these attributes. Thus, participants were not targeted by the type of their employer organisation. Rather, the study included individuals in for-profit as well as in not-for-profit organisations. The overarching interest for this research is to deepen the understanding of the circumstances in which highly intelligent people reach their full potential. Therefore, research will be based on the following hypotheses:

#### ***Hypothesis 1***

Intelligence in the sense of intellectual capacity is negatively correlated with organisational commitment.

#### ***Hypothesis 2***

Job satisfaction has a moderating effect between the dimensions of organisational commitment and intelligence.

Figure 1 illustrates the hypothesis visually.

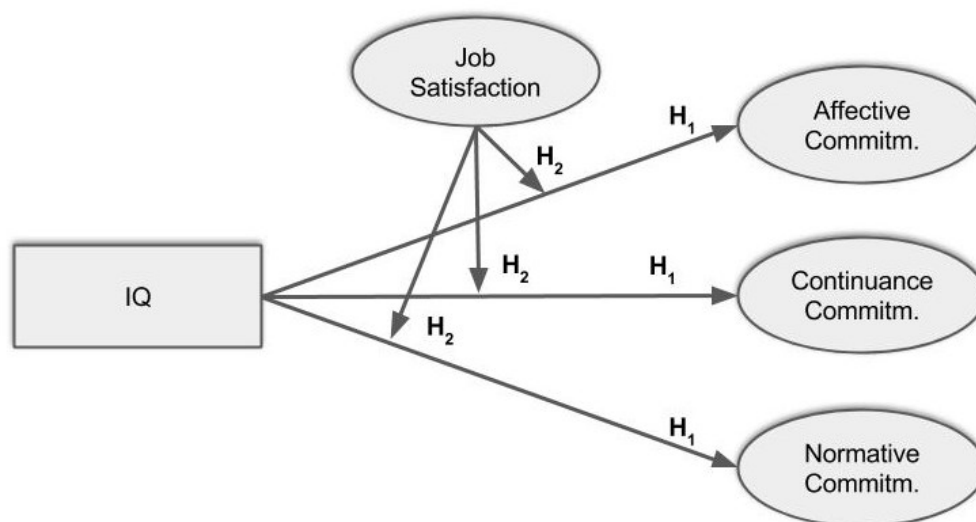


Figure 1. Hypotheses, visualised (own work).

## 2 Underlying Theoretical concepts

### 2.1 Organisational Commitment

Organisational commitment (OC) has received increasing attention in the field of organisational behaviour and, more generally, management research over the course of the past five decades. As a psychological aspect of the link between the interests of the individual and the organisation as a whole, OC is considered as an important contributor to the organisation's success. The benefits of having a workforce that is strongly committed to the organisation have been established by a substantial body of evidence (see Meyer and Maltin, 2010 for a review). Several personal variables and states, as well as qualities of the working environment such as job characteristics or organisational structures have been linked to OC. To predict employees' turnover, absenteeism (Meyer et al., 2002), well-being (Meyer & Maltin, 2010) and performance (Cooper-Hakim & Viswesvaran, 2005; Riketta, 2002), OC has been employed as an antecedent (Mathieu & Zajac, 1990).

Meyer and Allen (1991) distinguish three types of commitment as different components of the psychological state: affective, continuance and normative commitment. Affective commitment (AC) would reflect a desire, while continuance commitment (CC) would stem from a need and normative commitment (NC) from an obligation to maintain in an employment relationship with the organisation (Allen & Meyer, 1990). The Three-components model (TCM) of commitment has since gained wide acceptance. It has been developed to account for the difference of the three components in their relations to desirable work behaviours such as performance (Meyer et al., 2002).

## 2.2 Intelligence

As antecedents of organisational commitment, special focus is placed on the personal characteristic of intelligence and its role in the workplace. While theories on intelligence have been developed and researched for over a century, particularly in recent time the topic has become politically loaded and disputed (see Furnham, 2008, for a review). While certain aspects of the nature and definition of intelligence are disputed, most experts fundamentally agree on the basics (Eysenck, 1998). Salgado and colleagues (2003) looked at over 250 studies with in total over 25,000 participants from Europe, and came to the conclusion that general mental ability measures are the best individual predictors of work performance internationally, despite cultural differences, different demographics and tests used.

## 2.3 Job Satisfaction

A further aspect influencing an employee's behaviour at the workplace is their level of satisfaction with their job. Job satisfaction can be considered as a measure of how an employee evaluates their job, and is often employed as a proxy for the employee's wellbeing at work (Grandey, 2000). Organisational commitment and job satisfaction have traditionally been considered correlated, the question of causality has not been empirically established yet (Llobet & Fito, 2013). It is believed that different aspects of commitment differ in their relationship with job satisfaction. Ganzach (2003) analysed the relationship between intelligence and job satisfaction, and found that intelligence has a strong negative effect on intrinsic job satisfaction which is positively associated with the level of desired job complexity.

## **3 Materials and Methods**

I conducted extensive secondary research to analyse existing relevant publications in the domains of organisational commitment, job satisfaction, and the role of intelligence for professional performance. The existing theoretical frameworks laid the foundation for primary research: setting out the objectives, defining the problems, and formulating the hypotheses. Pre-survey interviews, as well as discussions with experts from academia and



professional executives, have helped to further refine this foundation and ensure that the survey was designed effectively and would address the most pressing points.

To conduct the primary research, participants were asked for their self-reported organisational commitment and job-satisfaction, as well as for background information about them personally. Detailed questions covered the different aspects of organisational commitment and job-satisfaction. The survey was conducted in form of an online questionnaire which was distributed to the participants in the three focus countries, Germany, the United Kingdom, and the United States, in December 2016. Of the total participants, 2,586 were members of the high-IQ society Mensa in the national groups of Germany, the United Kingdom or the United States. The three focus countries were selected due to the number of members in their respective national groups, these being Mensa's three biggest national groups. While Mensa is a global network, and gifted and talented people exist across all cultures and societies, the research focused on cultures which broadly share similar economic systems and hence show comparable working conditions characterised by competition. As the entry requirement for a membership in Mensa is a score in standardised intelligence quotient test within the upper two percentile, the group of participants was considered the "high-IQ group". The remaining participants were professionals from the participating countries who did not report to be a member of a high-IQ society. This group functioned as the control group. Table 1 illustrates the characteristics of the sample.

For the analysis of the data from the online survey, exploratory factor analysis using the principal component method was conducted to test the significance of the four factors of the underlying concepts (affective commitment, continuance commitment, normative commitment and job satisfaction), followed by confirmatory factor analysis to test the fitness of the structures. Hierarchical multiple regression analyses were then carried out to test the hypotheses and determine interactions among different independent variables. Further, qualitative results drawn from focus group discussions were added to validate the findings from the quantitative research. Secondary data was then analysed to compare findings from previous studies with the expected results of this research project.

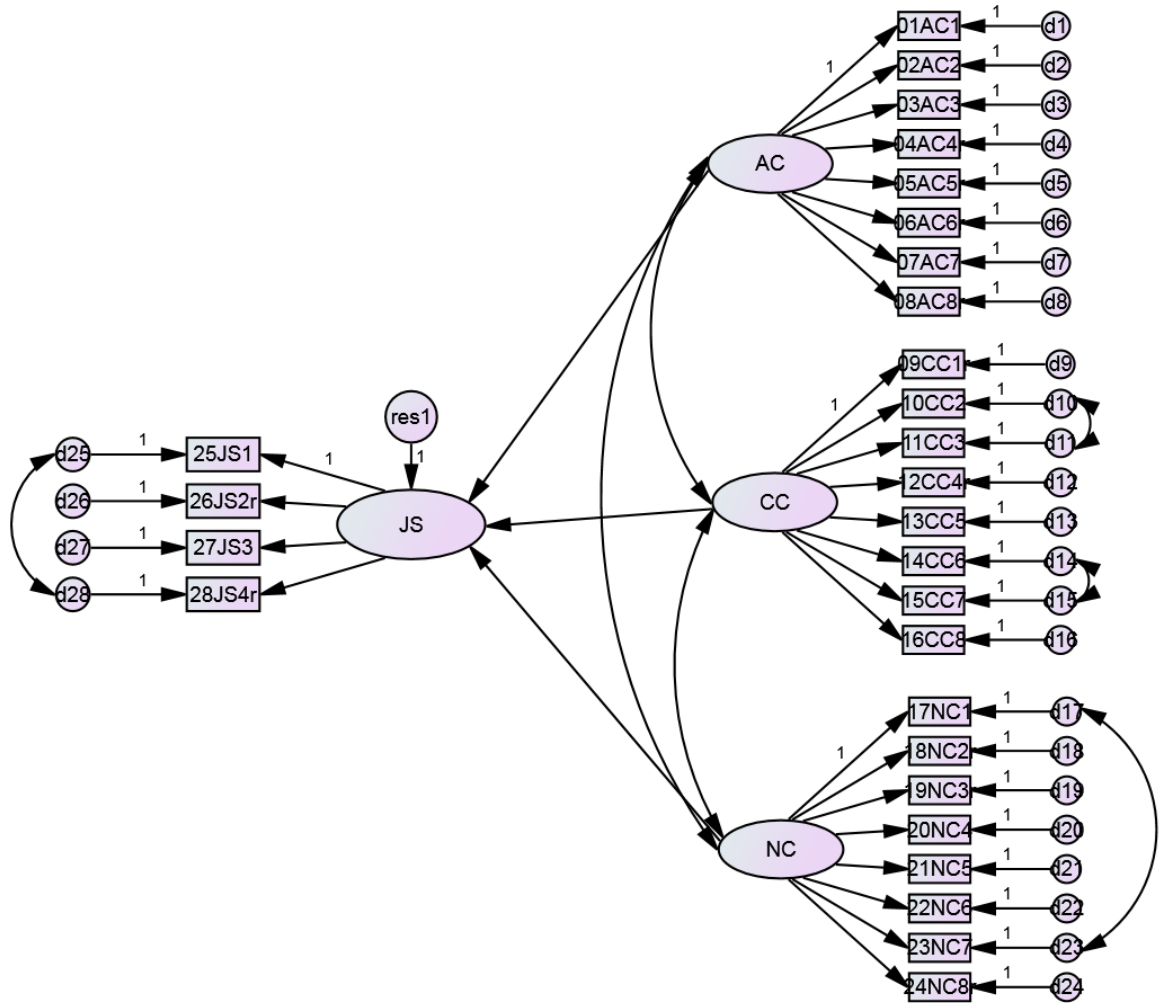
<b>Age</b>		<b>Gender</b>		<b>High IQ</b>	
Label	<i>N</i>	Label	<i>N</i>	Label	<i>N</i>
Under 25:	12	Female:	1044	Yes:	2586
25 to 34:	386	Male:	1578	No:	70
35 to 44:	712	Non-binary:	5		
45 to 54:	742				
55 to 64:	694				
Over 64:	89				
Prefer not to say:	21	Prefer not to say:	29		
<b>Type of Employment</b>		<b>Size of Organisation (Number of employees)</b>		<b>Country</b>	
Label	<i>N</i>	Label	<i>N</i>	Label	<i>N</i>
Full-time:	2160	Less than 5:	225	Germany:	176
Part-time:	193	5 to 49:	422	United Kingdom:	90
Self-employed/ freelancing:	266	50 to 99:	192	United States:	2302
Student:	5	100 to 499:	446	Other:	88
Retired:	32	500 to 999:	199		
		1000 or more:	1172		

*Table 1. Sample Characteristics (Age, Gender, Membership in high-IQ group, Type of employment, Size of organisation, Country of employment).*

The exploratory factor analysis resulted in a model with four factors. Alternative models with different numbers of factors showed a lower fit. The affective commitment factor included all eight items of the affective commitment scale. All eight items of the continuance commitment scale loaded on the continuance commitment factor. Further, all eight items of the normative commitment scale loaded on the normative commitment factor. Of the job satisfaction survey, only four items loaded highly on the job satisfaction factor. Subsequently, three commitment scores and a job satisfaction score were computed by summing (after the reverse keyed items had been recoded) across items that loaded on each factor.

I then conducted a confirmatory factor analysis using structural equation modelling to test the fitness of the hypothesised structure with the factorial components. The originally hypothesised model required respecification based on the information provided by the model fit and the possible areas of model misspecification that transpired from reviewing the modification indices. In line with the theoretical considerations, it seemed

reasonable to allow covariances between measurement errors within factors. The respecification of the comprehensive model improved the model fit values. Figure 2 shows the comprehensive model.



*Figure 2. Respecified comprehensive model of affective commitment, continuance commitment, normative commitment, and job satisfaction*

The unstandardised factor-loading estimates from maximum likelihood estimation and the Bayesian posterior distribution estimates for the respecified comprehensive model were compared. Then, the multiple-group analysis was conducted based on the respecified comprehensive model (Figure 2), with the dichotomous variable “IQ” declared as grouping variable. The model fit results of the multi-group analyses for measurement and structural variance did not differ significantly compared to the configural model, the respecified comprehensive model including job satisfaction was accepted as final structural model as depicted in Figure 2.

## 4 Results and Discussion

### 4.1 Results

The confirmatory factor analysis using structural equation modelling has confirmed the fitness of the hypothesised structure of the model including the three factors of commitment and the job satisfaction factor. The multigroup analysis of the structural equation modelling also confirmed that there are differences between the high-IQ group and the control group with regards to the affective commitment factor, the continuance commitment factor, the normative commitment factor, and the job satisfaction factor.

The results of the multi-group analyses, estimating the mean differences between the high-IQ group and the control group using model identification and factor identification, are interpreted as indicating that individuals with high IQ appear to show lower levels of normative commitment than individuals that do not score within the upper 2 percentile on a standardised IQ test. The findings also suggest that high IQ individuals may experience lower levels of affective commitment and of continuance commitment, although these interpretations, while in line with the theory on organisational commitment, were not found to be statistically significant at a confidence level of 95%.

Looking at the differences between the two groups in the factor score weights (reported in Table 2) shows that for the affective commitment factor, item 3 (“I really feel as if this organisation's problems are my own”, 03AC3) has a much higher score weight for the control group than for the high-IQ group (0.093 and 0.065, respectively). With regards to the continuance commitment factor, item 13 (“Right now, staying with my organisation is a matter of necessity as much as desire”, 13CC5) weighed significantly higher in the high-IQ group than in the control group (0.179 and 0.129, respectively). On the normative commitment factor, the first item (“I think that people these days move from company to company too often”, 17NC1) contributed stronger to the NC factor in the high-IQ group (0.074) than in the control group (0.05). In contrast, the item asking about the satisfaction with the benefits received (item 28, 28JS4r) contributed more strongly to the job satisfaction factor in the control group (0.066) than in the high-IQ group (0.041).

	high-IQ Group				Control Group				Delta			
	AC	CC	NC	JS	AC	CC	NC	JS	AC	CC	NC	JS
01AC1	0.089	0	0.007	0.024	0.083	-0.004	0.008	0.014	0.006	0.004	-0.001	0.01
02AC2	0.077	0	0.006	0.021	0.07	-0.003	0.006	0.012	0.007	0.003	0	0.009
03AC3	0.065	0	0.005	0.017	0.093	-0.004	0.009	0.015	-0.028	0.004	-0.004	0.002
04AC4r	0.036	0	0.003	0.01	0.041	-0.002	0.004	0.007	-0.005	0.002	-0.001	0.003
05AC5r	0.123	0	0.01	0.033	0.13	-0.006	0.012	0.022	-0.007	0.006	-0.002	0.011
06AC6r	0.185	0	0.015	0.05	0.176	-0.008	0.016	0.029	0.009	0.008	-0.001	0.021
07AC7	0.126	0	0.01	0.034	0.113	-0.005	0.01	0.019	0.013	0.005	0	0.015
08AC8r	0.126	0	0.01	0.034	0.106	-0.005	0.01	0.018	0.02	0.005	0	0.016
09CC1r	0	0.072	0.002	-0.006	-0.002	0.079	0.005	-0.004	0.002	-0.007	-0.003	-0.002
10CC2	0	0.07	0.002	-0.006	-0.001	0.045	0.003	-0.002	0.001	0.025	-0.001	-0.004
11CC3	0	0.08	0.002	-0.007	-0.002	0.08	0.005	-0.004	0.002	0	-0.003	-0.003
12CC4r	0	0.034	0.001	-0.003	-0.001	0.03	0.002	-0.001	0.001	0.004	-0.001	-0.002
13CC5	0	0.179	0.006	-0.015	-0.004	0.129	0.009	-0.006	0.004	0.05	-0.003	-0.009
14CC6	0	0.128	0.004	-0.011	-0.005	0.169	0.011	-0.008	0.005	-0.041	-0.007	-0.003
15CC7	0	0.045	0.001	-0.004	-0.002	0.072	0.005	-0.003	0.002	-0.027	-0.004	-0.001
16CC8	0	0.102	0.003	-0.009	-0.003	0.098	0.006	-0.005	0.003	0.004	-0.003	-0.004
17NC1	0.006	0.003	0.074	-0.003	0.005	0.005	0.05	-0.004	0.001	-0.002	0.024	0.001
18NC2r	0.007	0.004	0.095	-0.003	0.008	0.008	0.081	-0.007	-0.001	-0.004	0.014	0.004
19NC3r	0.009	0.006	0.121	-0.004	0.013	0.013	0.135	-0.012	-0.004	-0.007	-0.014	0.008
20NC4	0.01	0.006	0.135	-0.005	0.011	0.011	0.116	-0.01	-0.001	-0.005	0.019	0.005
21NC5	0.006	0.004	0.084	-0.003	0.006	0.006	0.064	-0.006	0	-0.002	0.02	0.003
22NC6	0.006	0.004	0.075	-0.003	0.008	0.008	0.086	-0.008	-0.002	-0.004	-0.011	0.005
23NC7	0.002	0.002	0.033	-0.001	0.002	0.002	0.018	-0.002	0	0	0.015	0.001
24NC8r	0.006	0.004	0.079	-0.003	0.008	0.008	0.083	-0.007	-0.002	-0.004	-0.004	0.004
25JS1	0.011	-0.006	-0.002	0.051	0.01	-0.004	-0.005	0.073	0.001	-0.002	0.003	-0.022
26JS2r	0.024	-0.013	-0.003	0.108	0.014	-0.006	-0.007	0.106	0.01	-0.007	0.004	0.002
27JS3	0.02	-0.011	-0.003	0.091	0.011	-0.005	-0.006	0.085	0.009	-0.006	0.003	0.006
28JS4r	0.009	-0.005	-0.001	0.041	0.009	-0.004	-0.005	0.066	0	-0.001	0.004	-0.025

*Table 2. Group differences in factor score weights.*

To test Hypothesis 1, bivariate Pearson correlation analysis was conducted to test for correlation between membership in the high-IQ group and the three components of commitment and job satisfaction. Membership in the high-IQ group was found to be weakly associated with the affective commitment score in a negative direction, although the linear relationship was not found to be statistically significant ( $p > .05$ ). High IQ was found to have a linear relationship with the continuance commitment score as well as with the normative commitment score that is marginally statistically significant ( $p = .056$ ). In both cases, the direction of this relationship is negative, though the strength of these relationships is weak ( $r = -0.031$ ). The relationship between membership in the high-IQ group and job satisfaction was found to be statistically significant ( $p < .05$ ) and positive, though again the magnitude of this association is rather small ( $r = 0.033$ ).

Highly significant relationships were found between job satisfaction and the three components of organisational commitment ( $p < .000$ ). The relationship between job satisfaction and continuance commitment was found to be negative, i.e. greater continuance commitment is associated with lower job satisfaction, though the strength of this association is small ( $r = -0.095$ ). Affective commitment and normative commitment were both found to be positively correlated with job satisfaction. The relationship between affective commitment and job satisfaction was found to be moderate ( $r = 0.498$ ), and the relationship between normative commitment and job satisfaction weak ( $r = 0.131$ ). Table 3 depicts the correlation coefficients and significance level of correlations between the different predictors and affective commitment, continuance commitment, normative commitment, and job satisfaction.

	Correlation: affective commitment		Correlation: continuance commitment		Correlation: normative commitment		Correlation: job satisfaction	
Variable	Pearson	Sig.	Pearson	Sig.	Pearson	Sig.	Pearson	Sig.
AC Score	--	--	-0.007	n.s.	0.369	***	0.498	***
CC Score	-0.007	n.s.	--	--	0.138	***	-0.095	***
NC Score	0.369	***	0.138	***	--	--	0.131	***
JS Score	0.498	***	-0.095	***	0.131	***	--	--
IQ	-0.017	n.s.	-0.031	0.056	-0.031	0.056	0.033	*
Age	0.054	***	0.04	*	0.101	***	-0.016	n.s.
Sex	-0.058	***	-0.045	**	-0.01	n.s.	-0.002	n.s.
Type of Employment	0.063	**	-0.067	***	0.019	n.s.	-0.063	***
Size of organisation	-0.246	***	0.035	*	-0.122	***	0.019	n.s.
*** $p < .001$ , ** $p < .01$ , * $p < .05$ , n.s. = not significant. AC = Affective Commitment, Continuance Commitment, NC = Normative Commitment, JS = Job satisfaction.								

Table 3. Correlation coefficients and significance levels of correlations between dependent variables and predictors.

Forward hierarchical multiple regression analyses were conducted to determine the proportion of variance in the three components of organisational commitment declared by job satisfaction compared to other dispositional aspects, especially high-IQ, but also by the participants' gender, age, the size of their employer by number of employees, and the type of their employment (full-time, part-time, self-employed/freelancing, etc.). Stepwise regression analyses were then conducted using the *enter* method, to force the high-IQ variable to be in the model despite not explaining a significant increment in variance. Results of these analyses are shown in Table 4, and would indicate that job satisfaction has a moderating effect on the (negative) relationship between high IQ and affective commitment, and that it actually strengthens it rather than weakening it (Hypothesis 2). Although not statistically significant at the confidence level of 95%, findings would suggest that job satisfaction could have a slightly moderating (weakening) effect on the relationship between high IQ and continuance commitment, and on the relationship between high IQ and normative commitment.

Coefficients of Regression Analysis (Enter method) for Affective Com.						
Variable	Model 1		Model 2		Model 3	
	B	Sig.	B	Sig.	B	Sig.
Factor CC	-0.066	0.001	-0.008	0.654	0.005	0.758
Factor NC	0.521	0.00	0.427	0.00	0.381	0.00
IQ	-0.364	0.690	-1.144	0.152	-0.969	0.209
JS Factor			1.063	0.00	1.092	0.00
Age					0.209	0.046
Sex					-0.445	0
Type of Employment					0.293	0.012
Size of organisation					-0.953	0.00
Model Fitness	$R^2 = .14, F > 143, p = .000$		$R^2 = .342, F > 344, p = .000$		$R^2 = .395, F > 216, p = .000$	
Coefficients of Regression Analysis (Enter method) for Continuance Com.						
Variable	Model 1		Model 2		Model 3	
	B	Sig.	B	Sig.	B	Sig.
Factor AC	-0.061	0.001	-0.009	0.654	0.007	0.758
Factor NC	0.202	0.00	0.194	0.00	0.19	0.00
IQ	-1.227	0.160	-1.029	0.237	-1.163	0.182
JS Factor			-0.23	0.00	-0.257	0.00
Age					0.253	0.033
Sex					-0.331	0.01
Type of Employment					-0.485	0.00
Size of organisation					0.18	0.03
Model Fitness	$R^2 = .024, F > 21, p = .000$		$R^2 = .033, F > 22, p = .000$		$R^2 = .044, F > 15, p = .000$	

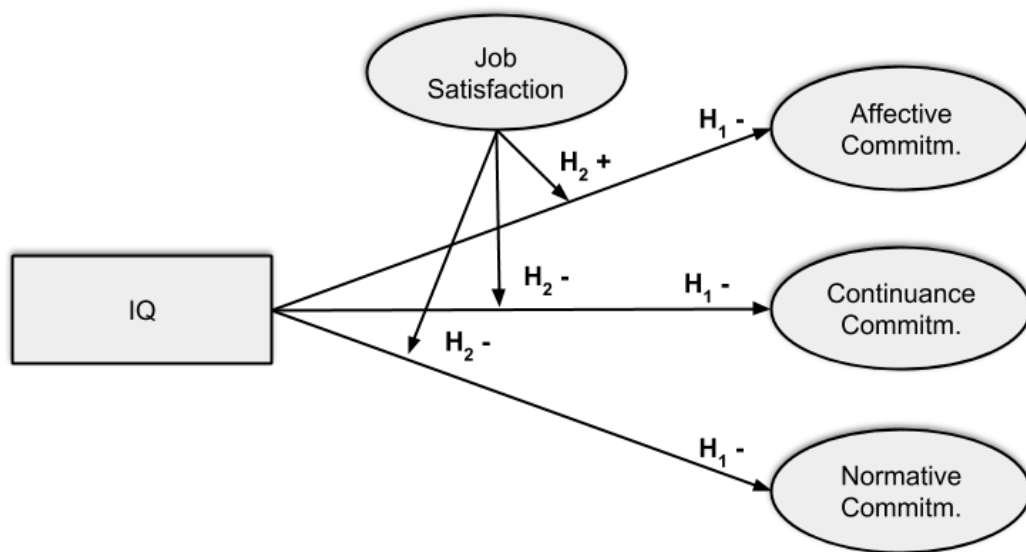


<b>Coefficients of Regression Analysis (Enter method) for Normative Com.</b>						
<b>Variable</b>	<b>Model 1</b>		<b>Model 2</b>		<b>Model 3</b>	
	<b>B</b>	<b>Sig.</b>	<b>B</b>	<b>Sig.</b>	<b>B</b>	<b>Sig.</b>
Factor AC	0.267	0.00	0.286	0.00	0.276	0.00
Factor CC	0.113	0.00	0.109	0.00	0.108	0.00
IQ	-0.74	0.258	-0.667	0.308	-0.938	0.153
JS Factor			-0.088	0.01	-0.074	0.04
Age					0.369	0.00
Sex					0.046	0.65
Type of Employment					-0.076	0.44
Size of organisation					-0.103	0.10
Model Fitness	$R^2 = .156, F > 163, p = .000$		$R^2 = .158, F > 124, p = .000$		$R^2 = .165, F > 65, p = .000$	

*Table 4. Regression coefficients as a result of stepwise multiple regression analyses testing for moderating effects of job satisfaction.*

The results of the stepwise regression analyses using the enter method indicate that, at a less conservative confidence level of 80%, membership in the high IQ group would be a significant predictor of affective commitment when job satisfaction was included in the model (  $B = -1.144, p < .2$ ). Membership in the high-IQ group was also found to be a significant predictor of continuance commitment (  $B = -1.163, p < .2$ ) and of normative commitment (  $B = -.937, p < .2$ ) at a confidence level of 80% when job satisfaction as well as the demographic variables gender, age, type of employment and size of the organisation were added to the model. The respective beta coefficients for membership in the high-IQ group were negative in all three models that predicted the three types of commitment. This indicates that being a member of the high-IQ group predicts lower levels of the three types of commitment, as theorised in hypothesis 1. Job satisfaction has been found to have a slightly moderating effect in weakening the (negative) relationship between high IQ and continuance commitment, as well as the (negative) relationship between high IQ and normative commitment, while job satisfaction was found to strengthen the (negative)

relationship between high IQ and affective commitment (hypothesis 2). Figure 3 visualises the results of the hypotheses testing.



*Figure 3. Results of hypothesis testing (own work).*

When testing which factors contributed to the three types of commitment in the high-IQ group using regression analysis, age was found to contribute positively to affective commitment, continuance commitment, and to normative commitment in the high-IQ group, suggesting that older employees with high IQ would report higher levels of all three types of commitment than younger employees with high IQ. On the contrary, age was found to have a negative effect on affective commitment among the control group. It is important to note here that tenure of the respondent within the organisation has not been considered in the analysis, although a correlation between age of the respondent and their tenure cannot be ruled out. In the high-IQ group, the gender of the employee was found to have a significant impact when predicting affective commitment and continuance commitment, in that being male would affect the reported levels of commitment negatively compared to being female and highly intelligent. Gender was also found to be a predictor for continuance commitment as well as for normative commitment among the control group, though at a lower confidence level, as being female would predict higher levels of commitment than being male. Type of employment was only found to be a predictor of affective commitment and of continuance commitment in the high-IQ group, while it was not found to be a significant predictor in the control group. Among the highly intelligent, affective commitment was found to be positively affected by more flexible working

arrangements, whereas continuance commitment would actually be negatively influenced. Size of the organisation showed the highest negative regression weight among the factors that were tested, indicating that with increase in organisation size by number of employees, affective commitment would decrease among the high IQ employees. Among the control group, size of the organisation was also found to contribute in a statistically significant manner to affective commitment, and the direction of this relationship was found to be negative. This suggests that affective commitment and normative commitment would be lower in larger organisations for both employees in the high-IQ group as well as the control group.

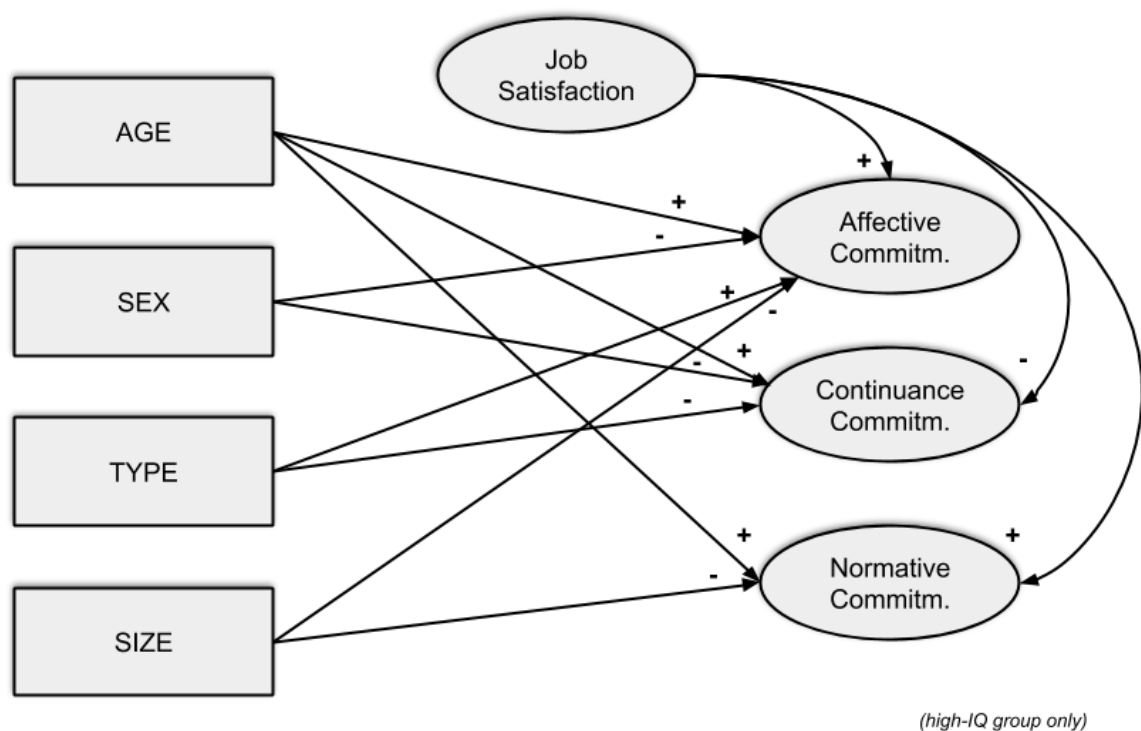


Figure 4. Relationship between predictors and independent variables among the high-IQ group.

## 4.2 Focus group discussion

Participants in the post-survey focus group discussion gave relevant feedback on the way the survey was conducted, as well as on the theoretical concepts underlying the study. The following section states my considerations and discussions of the focus group's questions and comments.

The question whether loyalty to an organisation as opposed to the team or supervisors existed is reflected in the scientific debate on different targets of commitment, as mentioned in the literature review. Commitment to different targets can occur simultaneously and are not mutually exclusive. Rather, they are different forms of commitment. This research project focuses on commitment to the organisation; analysing differences in commitment to other targets such as teams could be the topic of further research outside of the scope of this project.

One participant suggested translating the questionnaire. It has been considered initially to translate the questionnaire into German for participants from Germany. However, to ensure more reliable comparability between the sample, and given that the pre-survey feedback from German reviewers has not given rise to concern on potential difficulties in gaining a thorough understanding of the questionnaire, it was decided that the original design of the questionnaire in English will be used for the German participants.

A participant raised concerns on privacy and data protection. The Google form used for the questionnaire was hosted through a G Suite account managed by an organisation based in the EU, so that EU data protection regulations are addressed.

Positively and negatively phrased items were mixed in the original organisational commitment scales and the job satisfaction survey to increase response reliability. The internal consistency of the survey responses after recoding also does not suggest that participants overlooked the negatively phrased questions.

I have considered including tenure in the analysis, but dismissed it because the focus of this research project should be on personal characteristics that are immanent in the participant, not related to the organisation.

## **5 Conclusion**

### **5.1 Recommendations for employers and employees**

The findings from this research and their interpretations can inform management practitioners and individuals employed in organisations. Allen (2016) suggests that practitioners could conduct a commitment audit to take stock of the existing and of the desired commitment profiles among their employees, as well as a plan to minimise discrepancies between the two profiles. As a first step, this requires the organisation to identify and define what kind of behaviours, and consequently what kind of commitment

profiles, are deemed most desirable. Rather than designing jobs and filling them with people, good leaders find talented people and then create the jobs around them.

However, this requires leaders to be able to recognise talented and capable individuals. A recent survey from the professional services network Deloitte found that leaders actually feel ill prepared to identify and source talent (Stephan, Brown & Erickson, 2017). Rather than recruiting by checking credentials, hiring managers should confirm candidates' skills. Verifying skills as part of the selection process would also counteract the effect known as Dunning-Kruger effect (Kruger & Dunning, 1999), according to which poor performers lack self-evaluative insights into the shortcomings of their performance, while top performers tend to underestimate their own performances (Schlösser et al., 2013). And even when top performers roughly know how well they are doing in an absolute sense, they underestimate how special their performance is compared to their peers, thus underestimating how well they are doing (Schlösser et al., 2013).

In line with the self-determination theory aspects of need for autonomy, need for competence, and need for relatedness (Deci & Ryan, 1985; Ryan & Deci, 2000), a recent study (Wellins, Bernthal, & Phelps, 2015) of more than 1,000 employees found that commitment levels fell significantly when employees did not feel like their work was challenging them. Wellins and colleagues (2015) recommended managers to show care, concern, and appreciation for employees.

Concerning recommendations for employees, the findings from the factor analysis and from the correlation analysis suggest that size of the organisation correlates negatively with affective commitment, with normative commitment, and with job satisfaction. Thus, highly intelligent employees would report lower levels of affective commitment, normative commitment, and satisfaction with the job in bigger organisations. Consequently, it might be recommendable for highly intelligent employees to choose organisations with fewer employees, to feel more emotionally attached to the organisation, a higher moral obligation towards the organisation, and higher overall job satisfaction.

Typically, highly intelligent employees score highly on Openness to experience in the Big-Five personality traits model (Mussel & Spengler, 2015; Ackerman & Heggstad, 1997). The findings with regards to high-IQ employees' lower levels of organisational commitment seem to confirm, that highly intelligent employees have fewer concerns with leaving their organisation for better alternative offers. Hofert (2018) recommends complex tasks and jobs that provide responsibilities that are changing and challenging to highly

intelligent employees. As such, highly intelligent individuals with a high Openness to experience would be particularly suitable for industries that are dynamic and move fast.

Further, as the correlation analysis on item level and the factor analysis of the high-IQ group have shown, more flexible working arrangements such as part-time employment or freelancing are related to higher levels of affective commitment. This means that more flexibility in arranging their employment for the employee would actually lead to higher emotional attachment to the organisation.

#### 5.4 Generalisability and Limitations of this study

The applicability of the survey is restrained by different sizes of the groups that were compared. The control group was smaller than the high-IQ group, which could have affected the results of the analyses. In addressing this issue, special efforts were made to receive more responses from participants that did not state to be a member of a high-IQ network or tested in the upper two percentile in an IQ test. However, the number of respondents from the high-IQ network exceeded the expected response rate by far, which made it difficult to find as many participants for the control group. For the sake of brevity of the survey, a total of only nine questions measuring job satisfaction have been taken from Spector's job satisfaction survey (Spector, 1997). The Job Satisfaction Survey is a nine-facet scale, covering the aspects of pay, promotion, supervision, fringe benefits, contingent rewards, operating procedures, co-workers, the nature of work, and communication (Spector, 2016). One question for each facet was included in the questionnaire. As a result of the exploratory factor analysis and the confirmatory factor analysis, four of the items were found to load on the job satisfaction factor, while five items of the nine job satisfaction items had to be dropped. The consistency of the entire job satisfaction model could not be confirmed. Consequently, only the facets of pay satisfaction, promotion, supervision, and fringe benefits were included in further analysis. As with any correlation analysis, it is important to consider that correlation does not explain causation. While correlations have been identified between different levels of commitment, and membership in the high-IQ group, this cannot automatically be understood as intelligence driving commitment differences.

## 5.5 Suggestions for future research

Repeating this study with a bigger control group would help to find more statistically reliable results when comparing the high-IQ group with the control group. For a deeper understanding of the role different facets of job satisfaction play for the development of organisational commitment, future studies could include the entire job satisfaction scale rather than a shortened version. While the type of employment accounted for self-employed and freelancing respondents, commitment might develop differently among business owners and respondents who run their own organisation or work on a contractual basis. Future research could explore further how antecedents of commitment differ among this group of the workforce. This present study did not consider cultural aspects and the impact of socialisation on individual's propensity to commit to an organisation. A stark majority of participants have been socialised in Western cultures. However, normative commitment might be more relevant and distinguishable from affective commitment in non-Western cultures where the mindset of an obligation to be loyal to the organisation might be more pronounced due to collectivistic cultural values (Wasti, 2005; Meyer & Parfyonova, 2010). Future research could analyse differences in organisational commitment and job satisfaction among highly intelligent employees in non-Western cultures. Beyond cultural differences, this current study did not analyse tenure as factor for organisational commitment or job satisfaction. Future research could explore whether tenure has an impact on the development of organisational commitment among high-IQ employees and individuals who did state to have been tested in the upper two percentile on a standardised IQ test. Additionally, beyond commitment to the organisation, future research could test different commitment targets among high IQ employees, such as commitment to the team, the manager, or the goal of the work as suggested by the focus group discussion.

## 5.3 Novel contribution to extant literature

As a result of this research, aspects of commitment theory emerged which contribute to extant management literature. To the knowledge of the author, this is the first study that tested all three components of organisational commitment following Meyer and Allen's (1991) model for intelligence as a determinant of commitment. Beyond confirming the reliability of the concept of organisational commitment through factor analysis, this study also contributes to the understanding of how individual differences such as cognitive

ability, but also age and gender, help develop different components of commitment to the organisation. Additionally, this research project illustrates how theories on motivational states such as self-efficacy and self-determination theory can be linked to the different components of organisational commitment and intelligence.

It is also the first study with a comparable sample size to analyse the relationship between intelligence and job satisfaction. Further, the findings expand the existing understanding of the relationship between job satisfaction and the three components of organisational commitment. The results show that improving employees' job satisfaction could result in higher levels of commitment among highly intelligent individuals.

This project makes a contribution to the existing knowledge of management research and organisational psychology with a particular focus on the role of intelligence in a professional setting. As such, beyond contributing to management science, this research project also adds to the understudied discipline of giftedness research with relation to adults.

In the practical application of this research project, the findings help managers to tap the full potential of their employees, and it helps individuals to better understand their needs to maximise their job satisfaction.



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### Reviewing

Manuscript reviewer for *Cogent Social Sciences*, part of Taylor & Francis, p-ISSN: 2331-1886  
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