



Emotion and Leadership in Higher Education

Five Case Studies

Kathy Evelyn Charles

MASTER'S THESIS
January 2020

Master of Business Administration
Educational Leadership

ABSTRACT

Tampereen ammattikorkeakoulu
Tampere University of Applied Sciences
Master's Degree Programme in Educational Leadership

CHARLES, KATHY EVELYN:
Emotion and Leadership in Higher Education
Five Case Studies

Master's thesis 56 pages, appendices 17 pages.
January 2020

Higher education (HE) in the United Kingdom (particularly England) has arguably transitioned into a fully marketized service sector during the last 25 years. This change, along with generalisation of expertise and a shift towards distributed leadership and has placed mid-level academic leaders in contexts where they may experience emotional labour and emotional dissonance previously limited to the traditional service sector.

This study uses a parallel mixed methods approach underpinned by phenomenology to explore five case studies of leadership in UK HE. The foci are: exploring how academic leaders manage their emotions; the extent to which emotional management is related to their personality; and how academic leaders could be better prepared for leadership roles.

Findings reveal that personality appears to play little role in understanding how leaders manage their emotions. Leaders learn to adopt advice seeking and support behaviours, and purposefully mute their emotional expression in order to maintain positive affect in their followers. These findings suggest some support for the behavioural approach to leadership.

Stories of leadership generated by the participants are used to form the basis of a suggested training resource for new academic leaders with a recommendation on greater organisational context in training programmes. Further longitudinal research is recommended in order to appreciate the dynamic complexity of leadership, and limitations of the research are discussed with a specific focus on the methodology chosen.

Key words: emotion, leadership, management, higher education, training

Contents

1	INTRODUCTION	5
1.1	Research topic	5
1.2	Research questions	8
1.3	Research approach.....	8
1.4	Structure of thesis	9
2	THEORETICAL FRAMEWORK	10
2.1	Literature review.....	10
2.1.1	What is leadership?	10
2.1.2	Psychological factors in leadership.....	14
2.1.2.1	Emotion	14
2.1.2.2	Personality	19
2.1.3	Leadership development	22
2.2	Synthesis of theories.....	25
3	METHODOLOGY.....	27
3.1	Methodological approach	27
3.2	Participants	28
3.3	Measures	29
3.4	Ethics	30
3.5	Analysis methods	31
4	RESULTS OF DATA COLLECTION	32
4.1	Participants	32
4.1.1	Individual profiles.....	32
4.1.2	Participant 1	33
4.1.3	Participant 2	34
4.1.4	Participant 3	35
4.1.5	Participant 4	36
4.1.6	Participant 5	36
4.2	Synthesis of results	37
4.2.1	Managing emotion	37
4.2.2	The relationship between personality and emotion.....	40
4.2.3	Preparing for leadership	42
4.2.4	Emotional aspects of knowledge production	44
5	DISCUSSION	46
5.1	Research questions	46

5.2	The training materials.....	49
5.3	Conclusions	54
5.4	Critical evaluation of the research design and implementation	55
6	REFERENCES	57
7	APPENDICES.....	68
7.1	Appendix 1	68
7.2	Appendix 2.....	69
7.3	Appendix 3	70
7.4	Appendix 4	70

1 INTRODUCTION

1.1 Research topic

In the UK, US, Japan, and many places in western Europe, the last quarter of the twentieth century saw a marked shift from manufacturing industries to service industries. In 1948, 46% of the UK's GDP could be attributed to the service sector, by 2013 this figure had increased to 79% (Office for National Statistics, 2016). This shift had a range of impacts on workers, but one which is relevant to this thesis is the increase in employment requiring increased emotional labour. Service jobs typically require a very different emotional skill set to manufacturing jobs. In conjunction with this, from the 1990s onwards there has been a rapid increase in marketization and consumerism in the domain of higher education (HE), which has similarly led to a 'service like' focus on those working in this sector (Kelly, Fair, & Evans, 2017). These factors combine to produce a situation where the number and range of people exposed to roles requiring high levels of emotional labour is increasing. Along with that increase, is likely to be increased expectations in those who consume the service. These expectations have the potential to create service gaps (Parasuraman, 2006) when they are not met. The extent to which this is understood and accepted across HE is likely to be variable.

After spending the early part of their careers adapting to the emotional requirements of teaching, new leaders in higher education face a range of challenges when they step into their leadership positions. This is particularly the case for mid-level positions where their ability to effect change may be limited, and they encounter a whole new 'hidden curriculum' of what the organisation and their colleagues expect from them. Individuals at this level are sometimes sold a leadership position under the guise of 'distributed leadership' (the idea that leadership is dispersed across the institution rather than residing within a small group of senior executives), but this can lead to tensions (Bolden, Petrov, & Gosling, 2009). A distributed leadership role sometimes affords limited genuine leadership opportunities, because in reality it is enacted within a tight top-down frame-

work so can feel more like a management role. Bolden et al. (2009, p.260) question whether the ideals of distributed leadership "represents the lived experience of leadership in HE or just an idealistic fantasy unattainable in practice".

The distinction between leadership and management has been debated for several decades. Kotter (2013) defines the key differences as being about the future. Leaders are future focussed whilst managers have to focus on the present. Lunenburg (2011, p.1-2) provides a more detailed definition and defines the two in the following way: leadership "involves (a) developing a vision for the organization; (b) aligning people with that vision through communication; and (c) motivating people to action through empowerment and through basic need fulfilment. The leadership process creates uncertainty and change in the organization" whereas management "involves (a) planning and budgeting, (b) organizing and staffing, and (c) controlling and problem solving. The management process reduces uncertainty and stabilizes the organization". There is a changing nomenclature in UK universities as the words 'management' and 'manager' are disappearing from academic structures and being replaced with 'leadership' and 'lead'. This likely reflects a desire to address the constant need for innovation and future orientation in the context of marketization in UK HE. Kheovichai (2014) specifically notes a trend in the marketization of university job adverts in the UK from the 1970s to 2010, and describes the trend being towards the language of the financial sector. Language has been changing for some time in the wider context too. Allio (2012, p.4) notes an explosion in the production of books on leadership as well as a Google Ngram showing 'leader' appearing 50% more than 'manager' from 1990 to 2008. Competition and marketization are not going away in UK HE and universities need to be increasingly agile, whilst simultaneously being mindful that being too lean can create service gaps (Parasuraman, 2006).

Zaleznik (2004) identifies that leaders are able to tolerate chaos and see the opportunities in it, whereas managers pursue stability. Although universities really need leaders now more than ever, they need managers too in order to implement new ideas. Hannah, Sumanth, Lester, & Cavarretta (2014) argue that the difference between leadership and management is a false gulf and that continuing to explicitly separate the two limits the usefulness of research in this area. Whatever

the reality, replacing the words associated with management with words associated with leadership will not automatically create leaders, nor will it remove the need for actual day-to-day management. Neglecting these kinds of realities is a recipe for problems when a new leader is trying to perform their role.

In addition to the shifting terminology used in HE, there is also a generalization of expertise that takes place when an academic member of staff is promoted into a leadership/management position. Typically, an academic is promoted (e.g. from assistant professor (lecturer) to associate professor (senior or principal lecturer)) on the strength of their subject expertise. The promoted person is likely to have produced high quality peer-reviewed publications in their field, attracted research funding, supervised and examined PhD students, and (increasingly) received good student feedback from the courses they have delivered. Their reward for experience and expertise in this domain is to be promoted into a leadership/management position with an expectation that they will be good at this new thing because they were very good at the previous thing they were doing. This situation has the potential to be a stressful experience and fails to acknowledge the skills required to be a good leader/manager¹. As mental health issues continue to rise in students (Rudick & Dannels, 2018) and staff (Weale, 2019) alike, it is important to consider how to reduce stress levels where feasible rather than exacerbate them.

Misleading terminology and generalization of expertise can be unsettling for a leader, and for their followers or subordinates. Role ambiguity is a well-known stressor in occupational contexts (Eatough, Chang, Miloslavic, & Johnson, 2011). The extent to which this will affect a person is partly related to their personal characteristics as well as those of the organisation. This thesis explores how emotions and emotional labour are experienced and managed by academics in leadership positions in a UK university. This is achieved through the use of five case studies each exploring the leader's experiences alongside their personality.

¹ Until relatively recently, UK HE had a similar issue with regard to teaching expertise. It was only in response to the Dearing Report (Dearing, 1997) that universities began to create postgraduate certificates in higher education to ensure that newly appointed academic staff would also develop teaching skills as part of their professional development. These courses are now widespread and are considered an essential aspect of a new lecturer's professional development but it took some time for this to be achieved.

The thesis concludes with recommendations on how to better prepare academic staff for leadership roles.

1.2 Research questions

The key foci of this thesis are: to better understand how leaders experience and manage their emotions; to understand the relationship, if any, between emotional experiences, personality, and emotional labour; to relate these findings to existing relevant literature on leadership including concepts such as emotional intelligence and different forms of leadership; and to develop the participants' narratives into stories which can be used to aid the training and development of other leaders and managers. Specifically, the questions are: how do academic leaders manage their emotions; to what extent is this related to their personality; how could academic leaders be better prepared for leadership roles.

1.3 Research approach

The research approach taken for this thesis is a parallel mixed methods approach. Data are collected and analysed in both qualitative and quantitative forms simultaneously. The advantage of this approach is that it allows a richer understanding of the issue being researched than would be possible with just quantitative or qualitative methods alone. This approach is becoming more common (Shorten & Smith, 2017) and allows the strengths of two approaches to be combined in one piece of work. The variables within this study also have their own research traditions which span different approaches. Personality is mostly measured quantitatively using objective rather than projective measures. Leadership also tends towards quantitative measurement, although this is not always the case and it can be seen as a limitation within the field. Emotional labour began its life as a qualitative concept but is now often measured quantitatively using surveys. A parallel mixed methods approach allows a range of methodological traditions to be reflected, whilst generating novel insights.

1.4 Structure of thesis

The remaining sections of this thesis present a theoretical framework and literature review to set the scene for examining the key variables, a methodology section addressing the approach taken to collect and analyse data, a results section exploring and describing the data, and finally a discussion incorporating a practical conclusion and a critical evaluation of the approach taken. The thesis follows a broadly quantitative or scientific research structure, but the research itself uses mixed methods.

2 THEORETICAL FRAMEWORK

2.1 Literature review

This section will explore research literature concerning the nature and definition of leadership. It will also address the role of emotion and personality in leadership, and trends in leadership development.

2.1.1 What is leadership?

Leadership "emerges or develops over time – not at a unique specific instant. It seems to appear and then disappear; it is elusive. When we decide to study a leadership event, it has already occurred" (Allio, 2012, p.5).

The quote above positions leadership almost like the Heisenberg uncertainty principle of quantum physics (Hilgevoord & Uffink, 2016). Leadership cannot be properly observed and measured at the time it is occurring, it is something that can only ever be partially seen or reconstructed after the event. This poses challenges for the systematic study of leadership.

There is no universally accepted definition of leadership and this has become a familiar way to begin articles and book chapters on the subject. Despite this, research and other academic output in this area continues to rise at a rapid rate. Using the Clarivate analytics tool on the Web of Science site (Clarivate, 2019), it is possible to see the trend of the word 'leadership' appearing in articles between 1994 (855 times) and 2018 (9,680 times) (see figure 1).

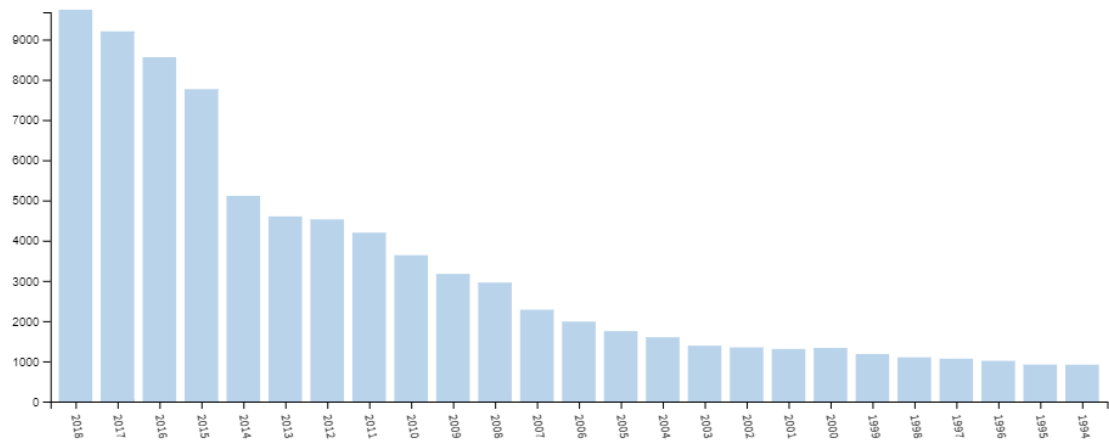


Figure 1. Increasing volume of research on leadership (y axis) between 1994 and 2018 (x axis) based on data from Web of Science.

The trend for publishing on leadership in an educational context is even more pronounced. From 1994 to 2003, publications were only in double figures and were stable, varying between 68 to 92 per year across the decade. Output rises from 2004 to 2014 showing an increase from 148 in 2004 to 625 in 2014. In 2015 the rate almost doubles to 1,117 rising to 1,317 in 2018. This clearly shows a relatively recent and large increase in research in the context of education, possibly showing the field as slow to catch on to the changing landscape of education, and the role of leadership within it.

With so much output in this area, why does it remain difficult to agree on a definition and understanding of leadership? Badshah, Farh, Seo, and Tesluk (2012) present an historical study of leadership theories and draw a distinction between traditional (mainly early to mid-twentieth century) leadership theories, and the newer theories of the twenty-first century. Early theories include trait theory (sometimes referred to as the Great Man theory), behavioural theory (also known as Leadership Style), and contingency theory. More modern theories encompass charismatic, transformational, and authentic leadership.

Trait theory focusses on the idea that leaders (usually male at the time this theory first became popular in the 1940s) can be studied, and that their qualities and traits can be understood and distilled into the profile of a leader. Great leaders are born and not made (Cawthon, 1996). Once the essence of the leader is un-

derstood, this can be used as a blueprint to select further good leaders. Behavioural approaches (or Leadership Style) moved away from the idea of the leader's personality or traits, and looked instead at leader behaviour. This is based on the idea that the behaviours associated with leadership can be learned by anyone. This led to the development of autocratic task orientated leadership, and democratic relationship orientated leadership together giving rise to four different leadership style combinations. Interestingly, one of the earliest texts on this topic by Likert (1967) specifically refers to management rather than leadership, but the theory is now always used with the word leadership. The contingency approach is an inevitable development based upon the two prior theories. This theory contends that successful leadership is contingent upon a combination of the individual's personal traits and contextual factors such as their relationship with followers. The leader and the situation should be matched for the best outcome.

Newer theories of leadership (transformational, charismatic, authentic) have emerged in response to an environment that is subject to more rapid and varied change than ever before. Transformational leadership, evolving from, but different to, transactional leadership, comprises four components: idealised influence; inspirational motivation; intellectual stimulation; and individualized consideration (Bass & Riggio, 2006). This leadership approach is supposed to enable followers to achieve more than they thought possible whilst fostering a collective identity and being a role model to other followers.

Mumford and Strange (2013) refer to charismatic leadership as something possessed by exceptional individuals who are able to communicate a vision and inspire others to follow them. They typically have a significant effect on society. Charismatic leadership has some similarity with transformational leadership. Mumford and Strange (2013) identify two types of charismatic leader: socialized charismatic; and personalized charismatic. The former has prosocial visions which lead to a positive impact on society, whilst the latter has visions more bound up in their individual concerns leading to a negative impact on society.

Finally, authentic leadership is widely seen as a response to an apparent degradation in the morals of leaders, and a need to for leaders to promote what is right instead of results at any cost (Rego, Vitória, Magalhães, Ribeiro, & e Cunha,

2013). Research and interest in authentic leadership has grown considerably in recent years. This style of leadership is considered 'ethical' and relies considerably on the leader being a 'good' person and developing trust and ethical behaviour in their followers. Anugerah, Abdillah, and Anita (2019) specifically link this form of leadership to increased whistleblowing and efforts to reduce corruption.

Hannah et al., (2014) ask whether these newer approaches are theoretically sound and practically useful, or whether they simply reflect the thoughts of scholars who wish these forms of leadership existed. A key critical perspective in Hannah et al. (2014) is the anthropomorphism of leadership (almost returning to the Great Man approach) whereby transformational/authentic/charismatic leadership is discussed in terms of the leader's personal qualities rather than their actions. They make the argument that this creates the idea of a 'super leader' and fails to acknowledge the importance of context and the need for leaders to use different approaches and styles in different situations. Leadership takes place in episodes and not necessarily continuously. It is necessary for followers to witness these episodes in order to build their history and relationship with the leader. Leadership is a thing that needs to be done rather than a state of being, a qualification, or a personality.

Peck and Dickinson (2009) present a fulsome critique of psychological approaches to leadership which they claim rely too heavily on the notion of the individual possessing static qualities irrespective of time and place. They comment that "psychology tends to award a high degree of prominence to individual agency at the expense of institutional forces" (p. 34). A concern for Peck and Dickinson is that the majority of leadership research, particularly in the twentieth century, has been within an individualistic psychological paradigm which has left little space for other understandings of leadership to be developed. The context in which leadership is exercised is crucial because this defines "what kind of actions and behaviours are legitimate, [and] also how certain actions, deeds or words might be interpreted ... organisational context restricts the options available to leaders" (Peck & Dickinson, 2009, p. 52). They argue that leadership is a performance which the institutional context sets the parameters of.

A further criticism of leadership research is that it has focussed on questionnaires rather than exploring real events (Badshah et al., 2012) and this has limited how leadership is constructed. Leader emergence and leadership effectiveness are also not consistently distinguished in research on leadership. Add to this the notion that leadership can be difficult to directly observe, and we tend to hear about it after the event (Allio, 2012), it starts to become clear why leadership is a fiendish thing to define or measure.

2.1.2 Psychological factors in leadership

2.1.2.1 Emotion

The specific measure of emotion in this study is emotional labour. There is precedence for studying emotional labour in higher education (Constanti & Gibbs, 2004) and in leadership (Peart, Roan, & Ashkanasy, 2013) despite its roots being in the traditional service sector. The concept of emotional labour was first proposed and discussed in detail by Hochschild (1983/2012) in her text *The Managed Heart*. Emotional labour refers to the effort involved in managing emotions so that they reflect what is desired in the work place. Two key concepts relating to emotional labour are surface acting and deep acting. Surface acting occurs when a person presents appropriate emotion at work, but they do not personally feel that emotion. They are faking their emotions because they believe that is what is expected of them in particular situations. Deep acting also involves presenting required emotions, but those emotions are much closer to the individual's own emotions. When deep acting occurs, the individual has made an effort to internalise the values of an organisation so that they can *feel* the emotions they need to display (*ibid*). The antecedent of emotional labour is emotional dissonance, the mismatch between what is felt and what is done.

Much of Hochschild's book focusses on air stewardesses and the very high levels of pleasant emotional faking they must engage in to promote their airline brand and provide customers with a pleasant experience. Although the book provides rich detail on the specifics (e.g. "the manual suggests that facial expressions should be sincere and unaffected. One should have a modest but friendly smile and be generally alert, attentive, not overly aggressive but not reticent either...")

(Hochschild, 1983/2012, p.70)) it has become a little dated in its conception of what specific performances of emotion look like in the 21st century. That said, the concept of emotional labour endures. Mesmer-Magnus, DeChurch, and Wax (2012) provide a useful overview of more recent research and produce a discordance-congruence continuum of emotional labour reproduced in figure 2.

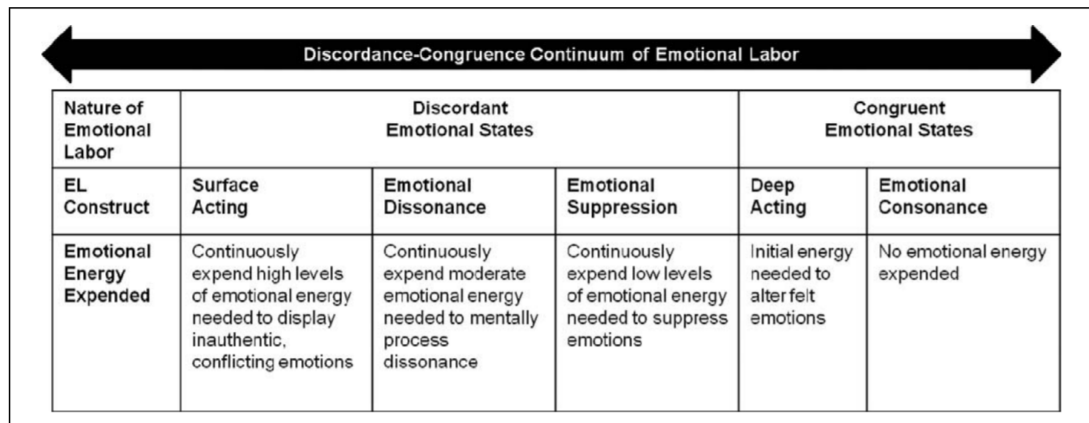


Figure 2: Discordance-congruence continuum of emotional labour (Mesmer-Magnus et al., 2012, p.28).

Jobs that require emotional labour involve face-to-face interaction, and the need to produce an emotional state in another person whilst simultaneously managing your own emotions (Dickson-Swift, James, Kippen, & Liamputtong, 2009). Peart, Roan, and Ashkanasy (2013) discuss emotional labour in leadership rather than focussing on more traditionally service orientated jobs. They acknowledge that the emotional labour of leaders is less rigid than the airline manual notion outlined above, but never-the-less can take its toll.

The forms of emotional labour undertaken by managers can involve general expressions of positive emotion directed towards the organisation which they work for, or more specific interpersonal displays of emotion when dealing with individual colleagues within the organisation itself. Managers may also be expected to engage in emotional masking of both positive and negative emotions so as to appear unbiased in a situation. This can be difficult in situations of managing poor performance when the organisation itself has not made clear what the expected emotional performance is. This is where Peart et al. (2013) identify the

importance of organizational culture for helping managers begin to develop congruence between the values of the organisation, and their own values. When congruence is achieved, levels of emotion labour are low, or at least the form of emotional labour is deep acting rather than surface. Of relevance here is the phrase "culture eats strategy for breakfast", often attributed to Peter Drucker (Cave, 2017). This highlights the critical role that culture can play "in determining the affective climate of an organization" (Peart et al., 2013, p.120). An organisational strategy can only go so far if it is located within an incompatible culture.

Santos, Mustafa, and Gwi (2015) explore emotional intelligence (EI), emotional labour and burnout in HR professionals. They conclude that it is specifically prolonged emotional dissonance that is most likely to lead to burnout rather than specific factors of EI. Emotional dissonance relates to the degree to which person has to perform emotions which they do not genuinely feel. The tension they experience when they perform in bad faith (surface acting) eventually leads to emotional exhaustion and problems with authenticity. Deep acting (actually changing your own emotions and beliefs to align with those that are being displayed) is far less likely to lead to burnout, and is also associated with better subjective job performance.

Anttila, Turtiainen, Varje, and Väänänen (2018) articulate the degree of emotional labour required to engage in student centred teaching in Finland. They describe teaching as profoundly emotional and identify some of the recent changes in education which have made it more so. Student centred teaching in Finnish schools has some similarities with higher education in the UK. The student focus with the idea of students developing as individuals and navigating their own route through a curriculum takes the focus away from the teacher as a source of knowledge, and moves them into a space where they are responsible for the success of students taking multiple paths. The teacher no longer possesses automatic respect, but has to earn it through a multitude of different expressions adapted for each student. The majority of new leaders in higher education will have experienced this with undergraduates.

In their study exploring the relationship between age and leadership, Walter & Scheibe (2013) consider emotion as a moderating factor. As aging occurs emotional abilities associated with emotion recognition become attenuated so that older individuals find it more difficult to manage emotionally intense situations. However, a positive benefit of aging is that emotional abilities related to emotion understanding and emotion regulation increase. This is thought to occur as a result of accumulating knowledge and expertise in dealing with affective events (*ibid*). The older person is better placed to predict the emotional impact of future events and to be able to control their own emotions. As all three emotion related abilities are important in leadership, this study provides further insight into why more experienced leaders (who are normally older individuals) are able to develop their leadership skills and deal with difficult incidents more effectively.

Although the current study focusses on emotional labour, it would be difficult to explore the role of emotion in leadership without giving some consideration to the widespread presence of emotional intelligence (EI) in the literature on this subject. The most well-known article on EI is Salovey and Mayer's (1990) work introducing a framework for the use of EI. They define EI as "the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (p.190). It is easy to see why this concept was readily embraced within the leadership field. Yet, despite 30 years of interest in EI, along with the development of a range of self-report (trait) and ability-based measures, it is not without its critics. In their meta-analysis of EI, Joseph and Newman (2010) stated that "the current state of EI is somewhat paradoxical; although EI is a wildly popular tool in organizations, organizational science has yet to answer many theoretical, measurement, and validity questions surrounding the construct" (p.54).

Joseph and Newman (2010) propose a cascading model of EI. This model is based on the ability-based conception of EI outlined by Salovey and Mayer which comprises four dimensions: emotion perception; emotion understanding; emotion facilitation; and emotion regulation. Joseph and Newman chose to exclude emotion facilitation from their model because of a lack of empirical support and validity for the concept. The cascade approach posits that emotional abilities must work

in a sequential or cascading way, and that those abilities are underpinned by intelligence (cognitive ability) and personality (conscientiousness and emotional stability). Figure 3 (taken from Joseph and Newman (2010, p. 56) shows the cascade and how it leads to job performance.

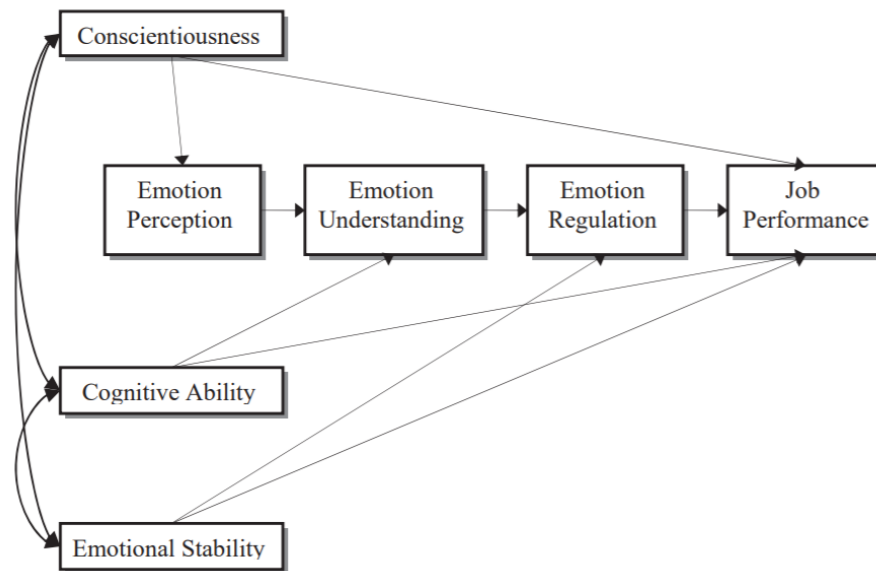


Figure 3: The cascading model of intelligence from Joseph and Newman (2010).

This model brings some clarity to some of the ideas on EI, but it also demonstrates that job performance can be directly predicted by personality and intelligence, with the elements of EI merely providing more detail on the steps involved. Edelman and van Knippenberg (2018) found that emotional intelligence had a statistically significant positive relationship with leadership effectiveness even when personality and intelligence were controlled for. The study was lacking in ecological validity (generalizability to real world settings) though as the data were partly based on role playing rather than on real life situations.

In the early stages of this project, EI was a strong contender for a variable to explore in the context of managing emotions in leadership. Writers such as Goleman (2011) emphasize the crucial importance of EI and place it even higher than cognitive ability in relation to success as a leader. However, research within psychology which has repeatedly tried to pin down the theory of EI, and then support that theory with data, has failed to demonstrate that it is a reliable concept (e.g. Brody (2004)). Other researchers have used stronger language in their rejection of EI. Antonakis, Ashkanasy, and Dasborough (2009, p.248) go as far as

to say " given the sparse empirical evidence, it is unethical and unconscionable to use these measures in applied settings". Even researchers presenting favourable outcomes relating to EI and leadership (Kerr, Garvin, Heaton, & Boyle, 2006), acknowledge that parts of the EI model do not appear to function as expected leading to their validity being questioned. For these reasons, EI was not pursued as a variable for this study. Personality was chosen instead to contextualise emotional labour and stories of leadership.

2.1.2.2 Personality

"Personality is closely connected to the strategic presentation of the self" (Hart, Richardson, & Breeden, 2020²). How a person reacts to, responds to, and manages emotion is important in how they perform as a leader. A leader has to present him/herself to their followers and the manner in which they are able to engage in this affective presentation is underpinned by their personality.

Affective presentation was explored by Joseph, Dhanani, Shen, McHugh, and McCord (2015) in a meta-analysis examining the question of whether a happy leader is a good leader. Happiness, or positive affect, straddles both emotion and personality. Happiness can be a fleeting emotional state, or a stable outlook embedded in personality. The expression of positive affect has been positively associated with extraversion and negatively associated with neuroticism or emotionality. The concept of mood contagion suggests that the leader's mood spreads through their followers setting the tone, implying positive or negative feedback, and influencing perceptions of likeability. With that in mind, it is intuitive to imagine that a happy leader will be perceived as a good leader by their followers. Joseph et al. (2015) found that trait positive affect contributed 15% of the variance in transformational leadership when other variables were controlled for. They conclude their paper by calling for more research looking at the dynamic aspects of affect in leadership rather than focussing on cross-sectional methods, or approaches which only look at brief exchanges between individuals.

² There is no page number for this yet because it is an early view article.

Judge, Bono, Ilies, and Gerhardt (2002) present an overview of personality and leadership. They conducted a meta-analysis incorporating both qualitative and quantitative research, and incorporating various personality measures under the Big Five³. They also clearly distinguish between leader emergence and leadership effectiveness. Their results reveal that effective leaders tend to be higher on extraversion, conscientiousness, and openness, and low on neuroticism with ambiguous findings for agreeableness. The ambiguity in agreeableness comes from the need for a leader to be tough minded and take difficult decisions, whilst also being likeable and good at getting along with people. This ambiguity is where the facets of each trait are useful for giving a more nuanced picture of personality. It would be useful to understand which facets of each trait might be having the biggest impact on leadership across the board.

Despite meta-analyses like that of Judge et al. (2002), the extent to which particular personality traits can predict the emergence or effectiveness of leaders is contested. Bergman, Lornudd, Sjöberg, and Von Thiele Schwarz (2014) conducted one of the few studies examining leader personality alongside data from a 360 degree assessment tool. Three sixty tools are designed to collect feedback about a manager's performance from several different sources or viewpoints (e.g. superiors, colleagues, and subordinates). Although these tools are used often, there is little research analysing their data alongside personality data. Bergman et al., (2014) found that openness, conscientiousness, and agreeableness were important in explaining leadership behaviours. These traits are also useful for adaptability and a positive attitude, and relate to both authentic and transformational leadership. Alongside positive attitude was emotional intelligence. As discussed previously, the emotional intelligence variable brings its own challenges, but it clearly represents something that is perceivable by people within an organisation even if that is simply behaviours associated with intelligence and specific personality combinations.

³ The 'Big Five' refers to five personality traits which can be summarised briefly as: Neuroticism (a tendency towards anxiety, depression, anger, self-consciousness, and vulnerability); Extraversion (a tendency towards friendliness, gregariousness, assertiveness, cheerfulness, and excitement seeking); Openness to experience (a tendency towards imagination, artistic interests, adventurousness, liberalism, intellect); Agreeableness (a tendency towards trust, morality, altruism, cooperation, sympathy, and modesty); and Conscientiousness (a tendency towards self-efficacy, orderliness, duty, achievement-striving, self-discipline, and cautiousness). Each trait contains within it more specific facets, but these vary depending on the measurement tool used.

Even though the relationship between personality and leadership may be unclear, it is useful to consider how a maladaptive personality functions in the workplace. If it is not clear what personality makes the perfect leader, it is at least clear what kind of personality is malevolent. Germain (2017) offers an analysis of leaders with personality disorders commenting that "the breadth of impairment that leaders with personality disorders may cause in the workplace is significant" (p.19). Germain focusses specifically on narcissism in leaders, but other research has considered toxic leadership more broadly. Webster, Brough, and Daly (2016) report some of the behaviours which followers have to endure in situations of toxic leadership. These include manipulation, intimidation, bullying, abusive and emotionally volatile behaviours, micromanaging, and narcissism. This leads to stress, self-doubt, anxiety, and physical illness in followers.

Exploitative and selfish traits are most likely to emerge in situations and organisations where there is a power asymmetry concerning resources and social relationships (Barends, de Vries, & van Vugt, 2019). Such asymmetry almost always arises in leadership situations because a leader needs to have some sort of influence in order to achieve their aims. Exploitative and harmful behaviours are less likely to occur if the leader possesses high levels of honesty-humility as part of their personality (*ibid*). Despite the potentially harmful effects of narcissistic or toxic leaders on their followers, a positive relationship between narcissism and leadership has been observed in a number of studies, and this is not surprising given that a degree of narcissism is essential in order for a person to put themselves forward as a potential leader. Narcissism also correlates with extraversion and openness (Wonneberg, 2007) – two traits which are generally viewed positively in leaders.

It is evident from the research analysed above that it can be difficult to separate personality and emotion. That is why both of these concepts are included in the present study.

2.1.3 Leadership development

Given the importance of how leaders manage their own and other's emotions and how their personality manifests, it is useful to consider the extent to which new leaders in academia are prepared for their leadership roles. The notion of experience generalization and the potential problem of confusing language has already been discussed in [section 1.1](#). Given these issues, what preparation is offered for the individual emerging into their new emotional landscape? Can the desirable behaviours and attributes discussed above be inculcated if the person does not already have them?

One leadership training vehicle that has been used widely in UK HE is Aurora (Advance HE, 2019a). According to Advance HE (the training provider) the course has been completed by almost 6,000 women from over 175 institutions in the last six years. The course is specifically designed for women with the aim of addressing the under-representation of women in leadership positions in UK HE. The course comprises six full days spread over several months. Four of the days are held in very large venues accommodating several hundred women seated cabaret style for activities and presentations. The four leadership themes covered by Aurora are shown below in figure 4, and are taken from Advance HE (2019b).

Aurora Development Days

Day 1: Identity, impact and voice

Participants will investigate the nature of leadership and leaders and what it means to them, learn about the importance of visibility and 'voice' and start to consider the leadership skill set they already have. Current challenges facing participants will be discussed along with what the participant wants and can offer within a leadership role. This day will be led by Amanda Wilsher.

Day 2: Power and politics

Under this heading the cultures and politics of organisations will be investigated along with individual responses to them and ways of working within them. Participants will be encouraged to think about building coalitions, developing networks and make lasting mutually supportive connections. At this development day participants will be placed in action learning sets. This will be a prelude to day three, a full day action learning set hosted at a participant's institution. This day will be led by Vijaya Nath.

<p>Day 3: Core leadership skills</p> <p>This day will introduce the key skills needed by all leaders and managers and consider whether there are any 'gendered' ways of leading. Participants' underlying values and principles will be discussed, along with powerful communication styles, influencing, and the necessity of having a clear vision and appropriate strategy. This day will be led by Suzanne O'Brien.</p>	<p>Day 4: Adaptive leadership skills</p> <p>Leadership is really tested when the environment is challenging or when there are no easy solutions. A leader's attitude to risk and challenge, and their ability to take the long-term view, are essential in this context. This day will look at how the process of adaptive leadership could enhance your performance and success. This day will be led by Jenny Garrett.</p>
--	---

Figure 4: Details of Aurora development days.

The programme is presented very much with the idea that leadership skills or attributes can be developed in anyone. What is lacking from the course in reality⁴ is a discussion on personality and emotion. These concepts are hinted at in the programme, but even Day 4 which promises to explore what happens when "there are no easy solutions" does not really confront the personal attributes of successful leadership, nor the concept of the affective climate and values of an organisation, which partly dictate the degree of emotional labour a leader must engage in. That said, the Aurora programme has received favourable coverage from some participants who have blogged about it (Naughton, 2017).

It is undoubtedly important to maintain a positive environment on a training programme, particularly one which purports to be for an historically under-represented group in leadership positions. It would be potentially counter-productive to focus excessively on the emotional challenges of leadership. That said, it is also perhaps disingenuous to not broach the subject with a group of emerging leaders, particularly women leaders who already bear the brunt of academic citizenship roles which lack esteem (Macfarlane, 2007) and for whom emotional labour is expected.

Another training programme offered within some universities (and in many other contexts) is called Insights (Insights, 2019). Insights essentially uses a 100-item personality test derived from the work of Carl Jung to produce a profile which can

⁴ The author of this thesis attended Aurora in 2014-15 as a delegate, and then again as a role model in 2017-18.

then be reduced to four colour 'energies' (fiery red, sunshine yellow, earth green and cool blue). As part of the process, participants are also provided with a qualitative account of how they function and relate to others. The main idea behind the product is that it raises self-awareness and reduces conflict so that leaders can focus more on achieving their goals. The use of four colours also simplifies the analysis so that participants can share their colour combination easily with others (participants are given stackable coloured rubber blocks to put on their desk to display and rank their colours).

The material produced from the test is shared over a two-day workshop where the results are discussed, and communication and planning activities are practised. Figure 5 provides a visual summary of how the colours can be interpreted.

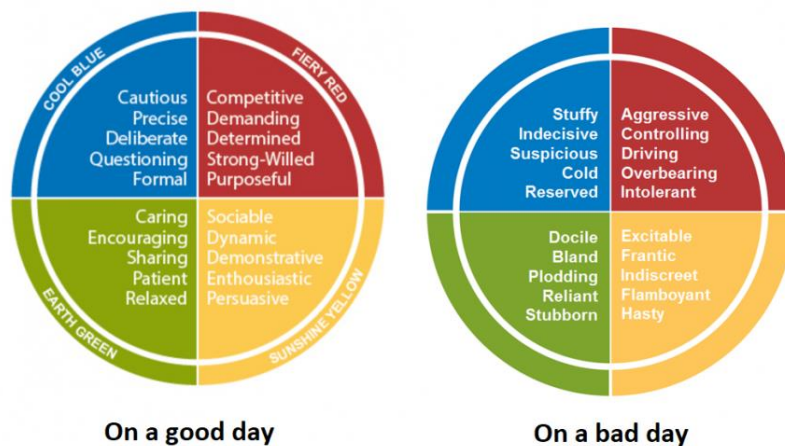


Figure 5: The Insights Discovery colour energies (Panneman, 2018).

This is a very different leadership training tool to Aurora. This tool is not specific to HE so the focus is entirely on the individual rather than on the organisational context. If participants develop insight into themselves and others, then the context should not matter – they should be able to forge a way ahead based on personality alone. This approach has the advantage of facing the fact that some people will find it hard to communicate and get along with one another because they have very different personalities. If a 'blue' person is finding a 'yellow' person infuriating to work with, they can begin a dialogue about their colour energies and adapt how they approach each other accordingly. This has good potential if everyone possesses such insight and is willing to share it.

Whilst Insights addresses an issue which Aurora ignores (personality and conflict), its lack of consideration for the wider context places responsibility for good leadership firmly at the door of the individual rather than something which is shaped by organisational culture. This notion highlights some of the limitations presented by Peck and Dickinson (2009) when they refer to leadership as a function of collective processes rather than something possessed by an individual.

Just two examples of leadership training have been highlighted here for reasons of space, but there are many others. The two discussed here take very different approaches with Aurora focussing on the organisational context (to the detriment of individual characteristics) and Insights adopting the opposite position. Neither approach really examines the biographies and emotional labour of leadership within the specific organisational context. What is missing is the interaction between the individual and the organisation. In law, organisations have legal personality enabling the decisions made by individuals within the organisation to be attributed to the organisation itself rather than to them personally. In legal terms, an organisation can do all the things an individual can (Mark, 2015). Brueckner (2013) takes the idea further and discusses organisations having psychological personalities. The commonly cited example of this is the idea of the corporation as a psychopath (*ibid*). It would be useful to develop this concept beyond corporate psychopathy into considering other less malevolent personalities which organisations may possess. If thought were given to an individual university's personality and culture, then leadership training around how to work with the organisation could take a more nuanced and insightful form.

2.2 Synthesis of theories

Leadership is difficult to measure and there are many conflicting approaches and theories. The role of emotion in leadership is also contested and blurs into personality in the sense of whether we consider some displays of emotion to be traits rather than states. Emotional dissonance is certainly a phenomenon, but the extent to which it affects different people is also mixed. Where there is burnout, there can also be post-traumatic growth (Slade et al., 2019). The variables included in the current study are messy and do not easily converge towards specific theories. What emerges from the research discussed in the previous sections, is

a complex picture of individual attributes and leadership in HE. This complexity also yields a complex variety of leadership training only two examples of which have been discussed here.

The current study acknowledges the diversity of the field and adopts a methodological approach which allows for some of this messiness. That said, the psychological paradigm is privileged in the construction of this project. Despite voices arguing against the twentieth century focus on *individual* leadership, the notion of it as something contained within an individual is presumed in the design of this study. The notion of agency and a stable self is also presumed by the use of quantitative, cross-sectional personality assessment. The rejection of EI in favour of emotional labour continues the focus on the individual and their performance (or acting) of leadership. It is only through interviews with leaders that the potential for considering a wider experience of leadership is allowed.

The present study does not have hypotheses because nothing is being tested. The study is exploratory in many ways because the focus is primarily on experience, which is then contextualised with quantitative data. Key outcomes from this work are: the generation of case studies which could be used in leadership training; and a more developed understanding of how leaders in HE manage their emotions.

3 METHODOLOGY

3.1 Methodological approach

This study seeks to unify the object of leadership with the subject of the leader. Leadership cannot really be studied as an entity wholly separate from the leader so conventional empirical methods of research are not entirely appropriate here. To that end, this study adopts phenomenology (Daher, Carré, Jaramillo, Olivares, & Tomicic, 2017) as a broad methodological principle for investigating the emotional experiences of leaders. This approach allows the reflective study of the lived experience, that is "the study of the lifeworld as we immediately experience it" (Adams & van Manen, 2008, p. 616). It does not rely heavily on theories and categories in order to present and understand information, and it allows the study of anything that is experienced. This is a different meaning to how the term phenomenology has been used historically. The phenomenology of practice tradition which emerged in the 1990s marked a departure from the many forms of phenomenology associated with different writers during the early to mid-twentieth century. An overview of the four most famous of the classical phenomenologists (Husserl, Heidegger, Sartre, and Merleau-Ponty) can be found in Smith (2018), along with discussion of their different conceptions of phenomenology, different methods, and different results. The phenomenology of practice approach "offers an alternative ... way of understanding knowledge ... [leading] to more ethical and experientially sensitive epistemologies" (Adams & van Manen, 2008, p.618-9) and that is what is employed here.

Using a phenomenological approach to study leaders with five years of leadership experience allows the immediate experience of leadership to be discussed and explored in the context of the participant's accumulated experience. Five years also has relevance in the context UK HE. Approximately every five years the Research Excellence Framework⁵ (REF) is carried out across the entire HE sector (UKRI, 2019). This activity (last conducted in 2014, with the next iteration delayed until 2021) requires all universities to report on their research activity. Inclusion in, or contribution to, the REF almost always plays a role in deciding

⁵ Previously the Research Assessment Exercise (RAE) up to and including 2008.

whether an academic will be promoted, or even hired in the first place. The results of the REF significantly affect universities' funding and perceived status. Choosing leaders with at least five years of experience usually guarantees that they have experienced at least one REF cycle as a leader, and will have likely experienced one previously in a more junior role. In consideration of Dreyfus's (2004) model on the five stages of adult skill acquisition, this level of experience is also likely to place the leader beyond the novice or advanced beginner category, into the competent, proficient, or expert category. This level of skill is important for this project because one of the outcomes is to produce training examples for new leaders so there must be evidence of leadership growth, change, or development in the participants' narratives.

Leadership can be fleeting and hard to define. Emotions and how they feel are also elusive. This is where a phenomenological approach is useful in bringing together all of the elements of this study. This research uses between-method triangulation by using two or more perspectives on a research subject (Flick, 2018). This approach to triangulation is close to Denzin's original conception – that of a "combination of methodologies in the study of the same phenomenon" (*ibid*, p.531). The research considers the concept of emotion in leadership from two perspectives: the quantitative measure of emotional labour; and the qualitative measure of participants' individual stories or narratives. In conjunction with these two perspectives, personality is also measured so that its relationship to emotion and leadership can be considered. There are other conceptions of triangulation such as within-method and systematic, but this study focusses on the between-method approach.

3.2 Participants

This study used purposive sampling (Morse, 2004) to recruit five participants working in leadership positions in UK HE. To take part in the research, participants had to have been working in a leadership position for at least five years. Four participants were female and one was male. They were aged between 40 and 45 years. Their leadership experience ranged from five to ten years. Recruitment of participants was by posters (see [appendix 1](#)) inside a UK university.

Participation in the research took the form of face-to-face semi-structured interviews and the completion of questionnaires. Prior to the research being advertised, it was subjected to ethical scrutiny by the University's ethics committee.

3.3 Measures

Participants' emotional labour was measured using the Emotional Labour Scale (Brotheridge & Lee, 2003). This survey style measure produces a quantitative measure which can be contextualised using published norms. The ELS is an attempt at a multifaceted measure that assesses surface and deep acting as well as the duration, frequency, and intensity of emotional displays. Brotheridge and Lee's measure has been cited 79 times in research exploring emotional labour in a variety of contexts.

Personality data were collected using Lee and Ashton's (2018) HEXACO-PI-R measure. This measure assesses personality using six factors: **H**onesty/**H**umility, **E**motionality, **eX**traversion, **A**greeableness, **C**onscientiousness, and **O**penness. This is the same as the 'Big Five' approach but with the addition of the Honesty/Humility factor. Low levels of this factor is thought to be key in explaining the positive correlations that exist across maladaptive personality traits such as narcissism and psychopathy. Honesty/Humility may be especially important in highly successful leadership (Collins, 2011) and it has also been shown to negatively correlate with counter-productive work behaviours (Lee, Berry, & Gonzalez-Mulé, 2019). The HEXACO-PI-R is a publicly available measure with published norms and scoring sheets, with 546 publications using it between 2009 and 2019, resulting in over 8,000 citations during the period.

Stories of emotional events in leadership were collected using face-to-face semi-structured interviews. Interviewing as a method for data collection has a long history in leadership research (Bryman, Stephens, & Campo, 1996). Interviewing, and the face-to-face encounter can be regarded "as the quintessence of qualitative research ... the optimal way to actively engage with the informant in a manner that narrows the gap between researcher and researched" (Klenke, 2016, p.125). Interviews are a way to make and construct meaning from the

experience of others. They are not simply encounters where information is transferred from one person to the other. The rapport building that occurs during interviews allows trust to develop between the interviewer and interviewee so that a richer realm of experience can be explored compared to closed answer surveys or questionnaires (Potter, 2018). To achieve individualised insights into leadership, an interview approach was necessary rather than relying solely on quantitative measures.

The interviews took between 45 and 75 minutes and were carried out at a time and location to suit the participant. Interviews were not recorded (for reasons discussed in [section 3.4](#)), but notes were taken either by hand or on a laptop. The stories generated from the interviews were analysed using a narrative approach. The interview schedule can be seen in [appendix 2](#). The interview questions emerged from the literature on emotional labour and leadership, and also had a focus on generating responses which would be useful in shaping training materials (e.g. what advice would you give to someone taking on a new leadership role?). The use of stories in leadership training is becoming increasingly popular and is considered an effective way to communicate ideas (Harris & Barnes, 2006; Mládková, 2013).

3.4 Ethics

This research complied with the ethical requirements of the University, and the ethical requirements of the British Psychological Society (The British Psychological Society, 2018). The ethical considerations raised by this research centred on two issues: participant confidentiality; and participant distress. Participants were known to the researcher because they worked in the same institution. This meant that the stories participants shared often related to experiences they had with colleagues known to the researcher. This required an extra degree of sensitivity in both discussions and the reporting and use of data. This sensitivity is why interviews were not audio recorded, but notes were taken instead. These notes were then shared with participants to ensure that they gave an accurate overview of the discussion, and to also ensure that participants did not feel identifiable from the information included. Participants were also referred to using the

gender-neutral pronouns 'they/them' in the results and discussion section to further protect their identity.

The semi-structured interview focussed on emotional experiences in leadership. All but one participant included negative emotional experiences in their interview which, by their nature, caused the participant to recall a difficult event. In circumstances such as these it is important the participants have sources of support they can turn to following the interview in case their feelings persist. Participants were provided with a list of sources of support which included the University's own services for staff experiencing emotional difficulties (see [appendix 3](#)).

3.5 Analysis methods

The data analysis combined two different approaches: a descriptive quantitative analysis of the HEXACO-PI-R and the ELS; and a qualitative analysis of the semi structured interviews using a narrative approach. These analyses are presented in [section 4](#), and discussed in [section 5](#).

4 RESULTS OF DATA COLLECTION

4.1 Participants

The first phase of analysis ([section 4.1.1](#)) explores the individual profiles of participants with reference to their HEXACO-PI-R profiles and emotional labour scores. Subsequent analyses (from [section 4.1.2](#) onwards) consider the individual stories shared by participants during their interviews. These sections together comprise quantitative and qualitative analysis.

4.1.1 Individual profiles

Table 1 shows the HEXACO-PI-R scores for each participant alongside population norms (Lee & Ashton, 2018). Table 2 shows the ELS score for each participant alongside the population norm (Brotheridge & Lee, 2003). These tables provide a quantitative personality and emotional labour profile of each participant which gives a context for considering each of their interview responses. These values will be used in the final analysis of each participant.

Using the Bayesian approach outlined in Crawford and Garthwaite (2007) it is possible to compare each case study against population norms to identify any statistically significant traits in the participant's profile. Data marked with * indicate significant difference defined by a Bayesian p value less than 0.05 (two tailed). A magnitude of this difference was not detected in any of the personality comparisons. The Bayesian analysis also provides the participant's position between 1 and 100 relative to the normal population. A position between 1 and 25 indicates the first (or bottom) quartile and represents a score greater than one standard deviation below the mean. This is marked with ▼ in tables 1 and 2. A position between 75 and 100 indicates the fourth (or top) quartile and represents a score greater than one standard deviation above the mean. This is marked with ▲ in tables 1 and 2. The Bayesian analyses were completed using the freely available⁶ SingleBayes.exe (*ibid*) and the output is available in [appendix 4](#).

⁶ Available without a journal subscription from <https://homepages.abdn.ac.uk/j.crawford/pages/dept/BayesSingleCase.htm> [Accessed 5 December 2019].

	H	E	X	A	C	O
Norms	3.24,	3.42,	3.47,	2.97,	3.45,	3.32,
\bar{x}, σ	0.6	0.61	0.58	0.59	0.58	0.61
<i>Participants</i>						
1	3.69 ▲	3.19	3.19	3.27	3.13	3.50
2	4.00 ▲	3.88 ▲	3.13	1.87 ▼	3.38	4.31 ▲
3	2.88	3.13	4.00 ▲	2.67	3.63	3.81 ▲
4	4.13 ▲	2.94 ▼	3.31	2.73	3.44	3.50
5	4.06 ▲	2.75 ▼	4.31 ▲	3.33	3.38	3.56

Table 1: Participant HEXACO-PI-R data with norms (N = 2868).

ELS Norms \bar{x}, σ					
	Frequency	Intensity	Variety	Surface acting	Deep acting
	3.58, 0.91	2.54, 0.71	2.82, 0.79	3.95, 1.08	2.56, 0.74
<i>Participants</i>					
1	3.00	2.00 ▼	3.00	3.33	1.33 ▼
2	1.33 ▼*	1.50 ▼	1.67 ▼	1.67 ▼*	1.00 ▼*
3	3.67	2.00 ▼	3.33	3.33	1.33 ▼
4	3.33	2.50	3.33	2.67 ▼	2.00 ▼
5	3.67	3.00	3.33	2.67 ▼	2.00 ▼

Table 2: Participant ELS data with norms (N = 296).

The following sections present an overview of each participant's semi-structured interview.

4.1.2 Participant 1

Participant 1 (P1) has eight to nine years of leadership experience, with six of those years including line management. P1 has line managed between three

and 30 people during their time as a leader. P1 pursued their current leadership role because they believed it was an opportunity to change organizational culture, and also to be promoted.

P1's personality profile shows Honesty-Humility in the top quartile, with all other traits being average. P1's emotional labour scores reveal they are in the bottom quartile for intensity and deep acting, with average scores for all other elements of emotional labour.

Emotional event

P1's emotional event was a description of how they felt undermined by a person in their team who they do not directly line manage. P1 felt their motives for making course changes were misrepresented to students with the goal of provoking student complaints. P1 perceived the episode as a passive-aggressive strategy to complain about and undermine them without direct confrontation. During the interview, the primary emotion appeared to be anger, with additional feelings of disbelief and frustration.

4.1.3 Participant 2

Participant 2 (P2) has five years of leadership experience, with one of those years including line management. P2 has line managed one person during their time as a leader, but at the time of being interviewed had no line management responsibility. P2 pursued their current leadership role because they believed it was an opportunity to make things better for people by giving encouragement and motivation to colleagues in an effort to avoid a culture of ruthlessness which they had experience elsewhere.

P2's personality profile shows the top quartile for Honesty-Humility, Emotionality, and Openness, the bottom quartile for Agreeableness, and an average score for eXtraversion and Conscientiousness. P2's emotional labour profile shows statistically significantly lower levels of both deep and surface acting when compared to norms, as well as a significantly lower frequency of displaying, adopting, and expressing emotions as part of their job. P2 scores in the bottom quartile for all elements of emotional labour.

Emotional event

P2's emotional event was a description of how they felt very good about seeing the success of their colleagues. P2 felt a great sense of satisfaction at seeing the efforts of others rewarded when they had played a small part in that success. P2 describes feeling really good at seeing internal and external indicators of success and recognition in their leadership area, and believed that an environment of positive competition was developing rather than the ruthlessness they had seen at other institutions. During the interview, the primary emotion appeared to be happiness with additional feelings of pride.

4.1.4 Participant 3

Participant 3 (P3) had five years of leadership experience, with all of those years including line management. P3 had line managed between five and 12 people during their time as a leader. P3 pursued their current leadership role because they felt they did not have a choice after colleagues applied pressure to apply for the post which no one else wanted. P3 also believed it would be for a short period of time initially. This is the only case of a reluctant leader in the sample.

P3's personality profile reveals eXtraversion and Openness in the top quartile with all other personality traits in the average range. The emotional labour data for P3 shows intensity and deep acting in the bottom quartile. Other elements of emotional labour are statistically unremarkable.

Emotional event

P3's emotional event was a description of how they had to challenge a colleague they directly line managed who was not performing satisfactorily, and who other colleagues found difficult to work with. P3 reported the colleague's response as continuing to perform poorly, whilst making vexatious claims of bullying and dishonesty. P3 perceived there to be very little support from their own manager, and a feeling that they were forced to escalate the issue to higher levels for it to be taken seriously. During the interview, the primary emotion appeared to be anger with additional feelings of disappointment and frustration.

4.1.5 Participant 4

Participant 4 (P4) has five years of leadership experience, with all of those years including line management. P4 has line managed between 3 and 10 people during their time as a leader. P4 pursued their current leadership role because they perceived a very bad situation unfolding, and they felt they had the skills to step in and make it better. P4's personality profile shows Honesty-Humility in the top quartile with Emotionality in the bottom quartile. Extraversion, Openness, and Conscientiousness are in the mid-quartiles. Emotional labour results show surface and deep acting in the bottom quartile, with other elements of emotional labour in the normal range.

Emotional event

P4's emotional event required them to adopt a lengthy and crucial role in dealing with the aftermath of a suicide attempt that had occurred on university property. This required P4 to clear their diary for a week and to work with a range of people in different parts of the university, as well as the individual who had attempted suicide. P4 found this week long crisis work very difficult emotionally. The primary emotion described by P4 is anger alongside shock, horror, and sympathy.

4.1.6 Participant 5

Participant 5 (P5) has 10 years of leadership experience, with all of those years including line management. P5 has line managed between 1 and 15 people during their time as a leader. P5 pursued their current leadership role because of a purposeful desire to progress to the next level, and because of enjoying a platform of being able to make change. P5's personality profile demonstrates Honesty-Humility and eXtraversion in the top quartile with Emotionality in the bottom quartile. Other personality traits register in the mid-quartiles. Emotional labour scores reveal surface and deep acting are in the bottom quartile. Other elements of emotional labour are average.

Emotional event

P5's emotional event was from a previous leadership role which happened soon after they took up the post. P5 described a campaign to undermine their new

position from individuals who were dissatisfied with their appointment. This campaign involved rumours about the safety of peoples' jobs, and also accusations of a dictatorial leadership style. P5 feels they were the victim of a vexatious campaign designed not only to unsettle them, but also their staff. During the interview the primary emotion recalled was anxiety, as well as isolation and vulnerability.

4.2 Synthesis of results

The following section is written in the first person as is standard when analysing qualitative research (Gough, 2008). In this section I explore the five case studies of leadership in more detail with a specific focus on the research questions of this project: how do academic staff in leadership positions manage their emotions?; to what extent is this related to their personality?; and how could academic staff be better prepared for leadership roles? I also discuss the emotional aspects of knowledge production in this section. Analysing the results of qualitative research also tends to simultaneously incorporate elements of discussion rather than being able to keep the discussion separate as is the norm with quantitative research.

4.2.1 Managing emotion

P1, P3, P4, and P5 all focussed on emotional events which required them to manage their emotions from a negative state to a neutral or positive state. P1, P3, and P5 described events where they were undermined by more junior colleagues. Though basically similar, there were key differences in how these events came about, and also differences in the emotions they provoked. P1 and P5 were undermined by colleagues because of leadership (strategic) related actions, P3 (the reluctant leader) was undermined following a management decision. P1 and P3 experienced anger as the main emotion, P5 experienced anxiety. P1, P3, and P5 show similar emotional labour profiles with all three experiencing low (bottom quartile) levels of deep acting, P1 and P3 experiencing similarly low levels of emotional intensity, and P5 showing low levels of surface acting. None of the participants showed high levels of any form of emotional labour. Of interest are the very low levels of deep acting shared by these participants. Deep acting is one of the mechanisms which can be employed to help make emotional

expressions and experiences more bearable. This suggests a potential mismatch between the emotions felt by P1, P3, and P5 compared to the emotions expected of them by their organisation's culture. That being said, the generally low levels of emotional labour experienced by all three suggests that none of them are experiencing excessive amounts of emotional dissonance which is the main cause of emotional difficulty in such contexts.

P1, P3, and P5 shared similarities in how they remembered managing their emotions: "The trust of others. Having others listen. Having someone else to talk to..." (P1); "I talked about it a lot with people I trusted. It helped to know other people saw it the same way" (P3); and "I had to seek reassurance..." (P5). These responses all show the important role of trustworthy colleagues or friends in helping leaders manage their emotions into a manageable state. P1 also talked of "channelling anger into action" as a way to cope, whilst P5 spoke of "reverting back to facts" as a way to calm their thinking and confront the reality of the situation. These responses both overlap with P3 who spoke of "writing down the whole issue to begin a formal process" as being important in clarifying the facts of what had happened and feeling like they were doing something about it.

Going forward, P1 and P3 said they would approach a similar situation differently with the benefit of hindsight and experience. P1 said they would be "quicker to speak to the colleague" and get to the heart of the matter. P3 said that now they had more confidence and experience they would "begin a formal process quicker" and be less emotional about the whole event. P5 said they would deal with the situation in the same way, and that they had done so when it happened again. The emotional labour profiles of all three certainly reflect individuals who are no longer struggling with emotional experiences in the way they may have done at the time the events were experienced.

P4's emotional event also provoked anger, but it centred on a suicide attempt on university property. This is a qualitatively different example to all other participants because it was a situation which had arisen completely outside of P4's control. I also perceived this to be the most impactful event in terms of how the participant spoke about it. They had been surprised by their own emotional re-

action, and it had taken some time to fully understand it. The need to be focused, and display compassion was high, which made this an emotionally labour-intensive event. Despite this being a recent event for P4, their emotional labour profile suggests that in general they do not find their work environment to be emotionally challenging. P4 displays bottom quartile levels of both surface and deep acting.

P4 describes managing their emotions by keeping them inside ("I kept it in") and not offloading them onto others. P4 worked to actively distance themselves from the emotions of the situation and to focus instead on the individual who had attempted suicide ("we are responsible for them"). They tried to understand the cry for help in a compassionate way rather than to spend too much time considering their own feelings and emotions. This is a very different approach to P1, P3, and P5 who all relied on being able to talk to others in order to manage their feelings. It is also an approach which P4 does not necessarily support by the end of the interview. This difference emerges despite a near identical emotional labour profile to P5. This shows that the emotional labour profile may not be a useful way to distinguish how different people experience and manage emotions. It also suggests that different emotional events may lead to different strategies.

When considering how they might manage the same situation in the future, P4 said that they would split the situation into two parts: the operational part of what needed to be done and how it should be done; and the emotional part and how that should be coped with. P4 identified not knowing what to do as a source of emotional discomfort. They described how designing processes and protocols would help to blunt the emotional response were the same thing to happen again. They also described how they would focus fully on the individual concerned and keep in mind that the incident was not about them as a leader, but about the person in need of help. P4 was the most explicit when it came to discussing the need to recognise and deal with emotion in order to cope. No other participant really expressed this so clearly or deliberately. Towards the end of the interview, P4 said "don't be afraid of emotion. People are afraid of seeing emotion in others and they are a bit emotional themselves. Leaders need to acknowledge they're human. Emotions go up and down and effect how we are on a daily basis. We shouldn't hide from it. We should be open to talking about it."

P2 is a somewhat special case in this study as they focussed on a positive emotional event which did not require any emotional management. This does not mean that P2 has not faced any emotionally difficult situations in their role. The decision to focus on something positive may have meaning in itself. P2 reported very low levels of emotional labour suggesting that they do not engage in emotionally effortful interactions very often. Their emotional labour profile differed considerably from the other four participants in this study. It can be inferred that P2 experiences little emotional dissonance in their current role. It is possible that this may be related to an absence of line management responsibility and a less formal type of leadership role, or it could be attributed to P2's personality which will be explored in the section below. It should be noted that not experiencing emotional labour, is not necessarily the same as not having emotional experiences at work.

4.2.2 The relationship between personality and emotion

All five of the participants possessed different personality profiles revealing some traits in the top or bottom quartile across the HEXACO range. Figure 6 provides a visual representation of the profiles (Participants are labelled as 'Series').

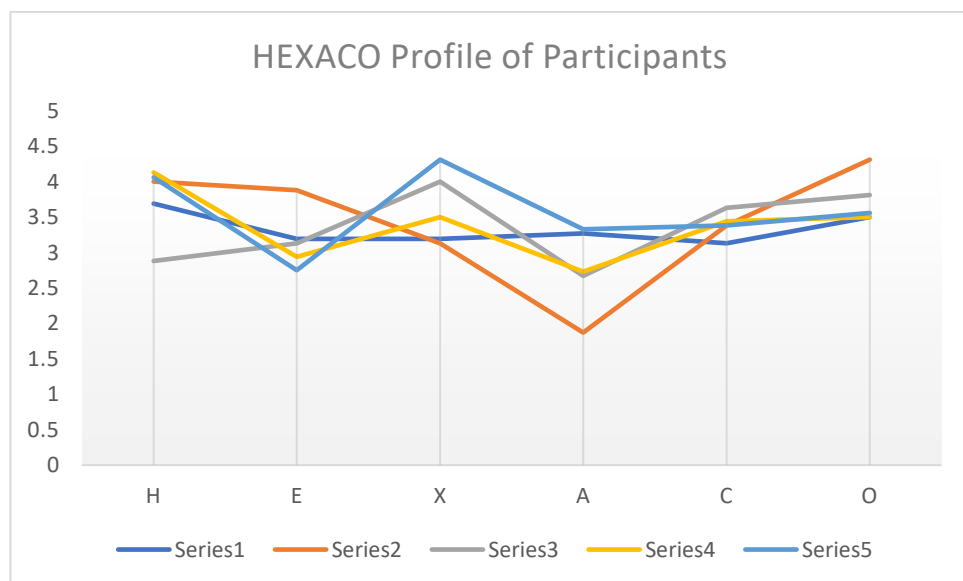


Figure 6: HEXACO participant profiles.

P2 (represented by the orange line) is evidently quite different to the other four participants. Of the six traits, P2 is in the top or bottom quartile for five of them. This shows an individual high in honesty-humility, emotionality, and openness, but low in agreeableness with average extraversion. Combined with the extremely low levels of emotional labour experienced by P2, this presents an interesting picture of an honest, open minded and emotional individual who is nevertheless prone to being disagreeable. Ode, Robinson, and Wilkowski (2008) found that high emotionality combined with low agreeableness was very likely to result in an angry and aggressive individual (agreeableness is regarded as a 'cooling' effect on the 'heat' of emotionality). This personality profile may explain the very low levels of emotional labour P2 experiences. They do not engage in emotional labour *because of* their somewhat disagreeable personality. This is an example of a personality profile which has the potential to be aversive, working in a protective way for an individual.

P5 presents the most typical leader personality: top quartile for extraversion and honesty-humility; bottom quartile for emotionality; and average levels of agreeableness, conscientiousness, and openness. P5 engages in low levels of surface and deep acting, but other levels of emotional labour are average. P5 did not describe anger as a dominant emotion in their narrative, likely reflecting their low levels of emotionality. They also described essentially trusting their own judgement when it came to leadership. Having had no formal training, they learned from others and simply tried to keep a level head. As noted elsewhere, P4 displayed an almost identical emotional labour profile to P5 (bottom quartile for surface and deep acting, whilst showing average results in other domains). In terms of personality, P4 differs from P5 most notably on extraversion and agreeableness (being lower on both) whilst all four other factors are similar. P4's personality differences may go some way towards explaining their initial reticence to share their struggle. Lower levels of extraversion and agreeableness might predict less inclination to talk through problems with others.

P1 and P3 are the least remarkable in terms of personality profile. P1 is in the top quartile for honesty-humility, but shows average traits for the other five factors. P3 is the only participant to display average honesty-humility rather than a top quartile score. P3 has top quartile scores for extraversion and openness with

average scores for the remaining factors. These two leaders shared similar challenges in their stories of emotion, and described some similar reactions and growth to the situations. Their emotional labour scores are identical on four of the five measures, with both showing low levels of deep acting and intensity.

With the exception of P2 who shared a positive story and has a statistically extreme personality, the data on personality has offered little in understanding the leaders' stories. Figure 4 reveals how similar the other participants are in terms of personality which suggests that the design of this study has not made it easy to understand the possible relationships between personality and the participants' experiences. The relationship may have been clearer if the facets of personality were analysed instead of the six main factors. It may also be the case that some of the criticisms of personality as a mechanism to understand leadership are justified.

4.2.3 Preparing for leadership

None of the participants felt that previous training or experiences had adequately prepared them for the emotional aspects of their leadership roles. There were comments on the shock of how different people can operate (e.g. P1 "the realisation that a person will do something you yourself would never do, or would consider unthinkable ... be prepared for disingenuous behaviour"; P4 "you have to work with chaotic personalities sometimes"; and P2 commenting that "dealing with the diversity of the group" is one of the most challenging aspects of leadership), along with more specific comments on the inadequacy of preparation (e.g. P5 "training and courses on leadership ... they don't get down to the crux of how to manage complex situations" and P2 "didn't feel prepared. You're learning on the job and learning about yourself"). P3 explicitly describes the emotional impact of this lack of preparation "I was thrown in at the deep end with no idea how to do things, and feeling very unsure about who would back me up when I took action. I cried a lot during the first year and regretted taking the job." P5 also comments "you have to maintain a degree of poker face. You can't show that things are getting to you ... you can't be down or other people will start to worry."

Leaders do not appear to be prepared for the diversity of personalities and situations that they will encounter in their role. It would be impossible for any leadership training programme to offer this kind of preparation, which is why a focus on skills, strategies, personality, and context would be useful. It is interesting that when asked about their leadership philosophy or style, only P3 was able to do this comfortably and talked about authentic leadership. The other participants struggled: P1 "I've thought about a teaching philosophy but not necessarily leadership ... relationships are important"; P2 "motivating people to do their best. It's a bit like parenting"; P4 "not sure. Leadership by stealth ... don't know much about leadership styles ... a quiet leader"; P5 "I feel like a charlatan ... I've had no proper training. I've defined it by my own standards ... I watch other people in leadership positions to avoid mistakes." These comments about leadership styles and philosophies suggest that any training the leaders have had, has not specifically pushed them to examine themselves and think about how they work, and how that relates to the organisational context. It would be unthinkable that an academic would not be able to identify their chosen research approach, or the paradigm they identify with in their own subject. It would also be surprising that academics who took up their posts in the last twenty years would not be able to offer some kind of commentary on their approach to teaching. Yet leadership, which is of crucial importance in HE as the sector continues to change at a rapid rate, is something which leaders feel unsure about or have not considered.

Only P3 had received any kind of formal leadership training for their role and they felt it had been inadequate. None of the participants had received the kind of training alluded to in [section 2.1.3](#) which would have facilitated a combination of personal and organisational insight. This is not an uncommon experience for leaders in HE as the sector struggles to define and cultivate leadership (Bolden et al., 2009). Williams's (2013) work exploring the lack of preparation for the emotional labour paramedics experience produces some very relevant insight here "preparation must ... redress this imbalance and ensure that emotion work and the skills needed to manage emotion are valued and included in the curriculum content. Key topics such as loss, grief, shock, depression, anxiety, self-harm" (p.157). Whilst comparing HE to the work of paramedics may seem dramatic, there are parallels in the range of emotions the work elicits.

4.2.4 Emotional aspects of knowledge production

Dickson-Swift et al. (2009) outline the importance of acknowledging and understanding the emotional aspects of knowledge production. Producing qualitative research based on interviews, particularly on sensitive topics, can induce an emotional response in the researcher even though their focus is on the responses of their participants. This can be considered a form of emotional labour or emotion work. Mallon and Elliott (2019) build upon this idea by exploring the impact on researchers who turn sensitive interviews into stories and how this can leave them feeling guilty because they gained professionally from the difficult experiences of others.

In light of this kind of work, it is worthwhile to offer a short commentary on the emotional aspects of knowledge production in the current study. As an experienced researcher with a background in forensic psychology, I entered into this research with experience of what it is like to hear emotionally difficult stories. I also had previous contact with all of my participants because we worked for the same university. I felt that these factors would prevent me from feeling too affected by the stories my participants shared. I expected all of the stories to focus on the frustrations of leadership and challenging colleagues. I was not prepared for P4's story of having to deal with a suicide attempt as part of their work, and how this had connected with experiences in their personal life. After the interview with P4 I felt a bit shocked and stunned that they had been through this situation, and that they had not discussed it with anyone. I kept going over the story in my own mind and trying to imagine how they coped with everything. I think my own emotional response was deepened because of the eloquence with which P4 was able to reflect on the incident and describe how they had learned from it even though they were describing something which they had found incredibly difficult.

My thoughts on this resonate with Mallon and Elliott's (2019) work. I felt awkward at not offering supportive overtures in the interview, instead choosing to allow long pauses and trying not influence the content. I also felt a sense of intrusion (despite all my efforts at anonymity) as I typed up P4's experiences for this study. It seemed somehow violating to share it with the world, and jarring to put this experience alongside accounts of problems like being undermined or complained

about. The more ordinary issues discussed by the other participants were very important to them though and had also had a significant effect on them at the time they happened. Unfairly 'ranking' the emotional experiences also played on my mind a little as I knew some of the other participants had been quite upset by the incidents they had shared and it seemed disrespectful to relegate them to something 'less than' because I had heard a more dramatic example.

Acknowledging the emotional impact of this kind of research is important, but it has not dissuaded me from doing similar research in the future if the opportunity arose. Emotion cannot be completely avoided, but we can prepare for it and improve how we manage it. The emotional experiences of the present study have allowed me to learn more about myself, and to be more reflective.

5 DISCUSSION

As is common with qualitative research, elements of discussion inevitably occur in the presentation of the results. [Section 4.2](#) (and its subsections) outlined the relationships between participants' personality, emotional labour, and experiences of leadership. There has also been discussion centred on lack of preparedness and ways of doing things differently in the future. The current discussion section presents a recap of previous analyses contextualised with previous research.

The aims of this project can be divided into academic aims (research questions) and practical aims. The research questions were: how do academic leaders manage their emotions; to what extent is this related to their personality; and how could academic leaders be better prepared for leadership roles. The practical aim was to develop the participants' narratives into stories which can be used to aid the training and development of other leaders and managers.

5.1 Research questions

How leaders manage their emotions, and the extent to which this is related to their personality, is discussed separately in [sections 4.2.1](#) and [4.2.2](#). These ideas can be understood better if they are combined here. Emotions that emerged from the analysis of participant stories were often anger, anxiety, frustration, and shock. A key factor identified by participants in managing these emotions was being able to talk to another person. This was reported by P1, P3, P4, and P5. Although P4 did not initially take this approach when dealing with their emotional event, they later commented that they would do so in the future and that it was important. The belief in this approach was shared regardless of differences in personality and emotional labour. This is an interesting finding as it suggests that while personality may play a factor in how a challenge is initially responded to, it becomes less relevant later as the participant comes to recognise the most beneficial approach for the context they are in. This chimes with Walter and Scheibe's (2013) work on age and emotion which suggests that leaders get better at two out of three emotional skills as they age.

It could also be argued that the ability to recognise the best approach and then adapt to it does itself reflect a particular type of personality, and perhaps intelligence. The greatest similarity in personality traits was for conscientiousness. All five participants shared very similar scores which also deviated little from the published norm. On the face of it, conscientiousness seems like it would be a positive predictor of intelligence but this is not supported by research (Moutafi, Furnham, & Paltiel, 2005). The relationship between conscientiousness and intelligence which is sometimes observed may be related to intelligence compensation theory whereby less intelligent individuals are driven towards conscientiousness in order to 'keep up' (Furnham & Treglown, 2018). The participants in the current study all possessed PhDs so are likely to have an IQ at least in the region of 120 (Dutton & Lynn, 2014) which puts them in the 'superior' intelligence category well above average. According to intelligence compensation theory, this suggests that their conscientiousness and intelligence are unlikely to be related.

The extent to which intelligence plays a role in how leaders adapt to, and deal with, emotional situations was not directly measured in this study. Personality proxies for intelligence are questionable with a lack of consistency in published research, and ongoing debate around issues such as how intelligence is measured (Furnham & Treglown, 2018). Participants differed much more from one another, and published norms, on the other five personality traits (i.e. everything except conscientiousness).

Honesty-humility appears at a high level for four of the five participants and this trait has been shown to relate negatively to counterproductive work behaviour and positively to organisational citizenship behaviour (Lee et al., 2019). This may be an explanatory factor behind how the participants eventually come to share similar views, but it does not explain P3 who scored in the average range rather than the top quartile of P1, P2, P4, and P5.

Another common issue highlighted by participants was the need to come across in a particular way. This normally involved masking their emotions to an extent, especially if the emotions were negative, so as not to spread the bad feeling amongst their colleagues. This mirrors Peart et al.'s (2013) discussion of emotional labour in managers where both positive and negative emotions need to be

attenuated in order to present a calm and balanced image. It also supports the work of Joseph et al. (2015) on happy leaders and mood contagion. Without being told, leaders came to realise that they needed to present an emotionally stable image regardless of how they were feeling inside so that they did not spread alarm amongst their followers. As with advice seeking and the need for a confidante highlighted earlier, this performance of emotional stability also does not relate to particular personality types. Levels of emotionality ranged from the top to the bottom quartile across the sample suggesting that trait emotionality did not determine leaders' realisation that they need to present calmness.

The findings discussed so far tend towards supporting the behavioural approach to leadership. Some key leader behaviours emerge from the interviews, and these behaviours are eventually adopted by the participants regardless of their own personality.

The question of how leaders could be better prepared for their roles is answered across several of the interview questions. Lack of preparation for the role was ubiquitous. Four of the five leaders had been drawn to their roles through a desire to improve things, or to play a role in decisions and developments. They had clearly felt able to do what they *thought* the role was, without any specific training. They then learned on the job through difficult trial and error, or with belated training. P3 felt propelled towards the job by others and was the only participant to have undertaken any formal training. As outlined in [section 4.2.3](#), leaders were unprepared for the diversity and sometimes hostility of the people they would be leading. They had tended to view people through their own fairly optimistic lens of high honesty-humility, they had judged them by their own standards rather than being prepared for something very different. There is growing interest in toxic leadership where there is a presumption of toxicity flowing from the leader downwards (Webster et al., 2016), but the results of the current study suggests there is scope for examining toxic followers too.

Despite the personal challenges from difficult people, the levels of emotional labour reported by the leaders were very low. This could suggest mastery of their emotions as a result of their 'baptisms of fire' experienced during their roles. All of the leaders, including P2 who was different in many ways, gave similar advice

and comments around leadership: be prepared, take your time, have someone to talk to, it is a balancing act that takes a lot of time, taking decisions is not hard but communicating them is. It was clear during the interviews that all the leaders felt they would have benefitted from knowing these things at the start of their leadership journeys.

These findings resonate with generalisation of expertise discussed in [section 1.1](#) and the notion that leadership develops over time (Allio, 2012). When their motivations and advice are examined, alongside their high levels of honesty-humility, the leaders in this study show some parallels with authentic leadership (Rego et al., 2013), with elements of the behavioural approach too. There is also a link with Peck and Dickinson (2009) as it is clear that the individual is not static but is being shaped by their organisational context, and also the passage of time. It might be useful to conceive of these ideas as phenotypes and genotypes. The phenotype (that which is observable) of personality is affected by organisational culture, but the genotype (the unchangeable building blocks) remains intact.

In light of the discussions above addressing the research questions, it is now useful to consider how the results of this study could be used to develop training materials. Research exploring leadership has not always taken the next step of considering how the findings could be used in a practical context.

5.2 The training materials

The production of training materials which could be used with new leaders in HE was a key outcome for this research. This section offers suggestions for what these materials could look like, and how they could be used. In addition to featuring the individual case studies, it is also important to consider the wider context of any training, adhering to the ideas explored previously when discussing organisational context.

A proposed training programme should incorporate a measure of both participant personality, and organisational personality. Organisations may prefer to use the term "values and behaviours" rather than personality. Universities are now work-

ing to ISO 9001, the international standard for management systems to help businesses and organizations be more efficient and improve customer satisfaction (International Organization for Standardization, 2015). This firmly locates universities as service providers and they are even mentioned as examples in the ISO brochure. It is easy to find the values and behaviours of universities online, and they are all similar because they are reflecting the same ISO. A training course for new leaders should specifically require participants to read and reflect on their institution's values and behaviours with the goal of considering those behaviours in the context of personality. Of course, the espoused values and behaviours of an organisation may not exactly mirror those displayed by its employees on a day to day basis. Participants on a training programme should be encouraged to consider this too, and reflect on what it means if there is a significant disparity.

The activity of considering individual personality alongside the corporate personality is an important step in developing personal insight alongside organisational awareness. If a new leader's personality is at odds with their institution, this is worth exploring as it suggests emotional dissonance ahead unless there is effort at perspective change, or deep acting. Emotional labour should also be explored, but not necessarily with the measure used in this study. Other measures or concepts of emotional effort may be more useful. Using Mesmer-Magnus et al.'s (2012) discordance-congruence continuum would be a helpful way for leaders to begin to explore how their work makes them feel.

Alongside this process of self and organisational analysis should also be engagement with case studies of leaders. Ideally these anonymised case studies should be from the same or a very similar organisation. Being mindful of the work of Peck and Dickinson (2009), the specific organisational context should be present alongside the individualised and personal introspection resulting from a self-report personality measure. Leaders can only lead within the constraints of their organisational environment so it is crucial that this is represented.

Box 1 is an example of how P5's story could be worked into a case study which could form the basis of an exercise for leadership training. P5 is given the gender-neutral name "Rowan" to avoid any bias in interpreting or predicting their actions, and also to seem more human than "P5". Any name could be used to help

leaders connect with the example, or to explore bias. There are questions at various points in the story to prompt readers to think about themselves, or to imagine themselves as Rowan. Ideally, the story would be presented in these sections to allow time for reflection and discussion, before the "answer" or next part of the story is presented. The final question prompts leaders to think about what action they will take next as a result of Rowan's advice.

Leadership Case Study

Rowan pursued their current leadership role because of a purposeful desire to progress through the organisation to a higher level. Rowan enjoys having a platform enabling them to make change. Rowan identifies the need for positivity and a calm demeanour as one of the challenges of leadership. They feel that they cannot come across as negative and that they must stay focussed on promoting the vision, and a professional version of themselves. Rowan's personality demonstrates very high levels of honesty-humility and extraversion, alongside very low levels of emotionality. Rowan's conscientiousness, openness, and agreeableness are average. Rowan demonstrates very low levels of surface and deep acting. Rowan has ten years of leadership experience and has line managed up to 15 people in the past.

Do you have any similarities with Rowan?

Not long after taking on a senior leadership role, Rowan experienced a hostile campaign from a small number of staff who wanted to undermine their new position. This small group was not happy with Rowan's appointment. The campaign centred on rumours and misinformation designed to frighten other staff over job security, unsettle everyone, and paint Rowan as a dictatorial leader.

Thinking about Rowan's personality, how do you think this made Rowan feel?

How do you think you would feel about this if it happened to you?

Rowan's primary emotion was anxiety, and they also felt isolated and vulnerable.

Thinking about Rowan's personality, what do you think Rowan did about this?

What would you do about this?

Rowan responded to this situation by seeking advice from more senior colleagues and focussing on the facts of the situation so that they could counter

each claim with factual information. Rowan tried to take emotion out of the situation. Their course of action soothed their emotional response rather than exacerbating it. Rowan encountered similar issues again during their leadership role and they were able to deal with them effectively using the same strategies. Rowan's confidence in dealing with difficult situations grew each time they experienced them. Rowan experienced less anxiety because they knew their approach would be effective.

Was your approach different to Rowan's?

Rowan's advice to new leaders is this: "try to very quickly to find a position where you're not isolated. Find somewhere where you can go and talk through an issue. You need a safe space with someone to bounce ideas off. Also, don't feel you have to react immediately to an incident. Take time to reflect if you can and try not to be rushed. There can be pressure to be decisive quickly but it doesn't always lead to the right decision. Leaders should surround themselves with people better than themselves".

If you were going to take Rowan's advice, what would be your next steps?

Box 1: Leadership case study.

All of the participant narratives gathered in this study could be converted in the same way as P5. The key purpose of these stories is to engage new leaders in realistic problems, challenges, or situations which they might face, to provoke them into considering how they would deal with such a situation, and to think about how they can use advice from those that have gone before.

This kind of training material would not be a substitute for published texts on leadership, or for external leadership programmes. Rather, the purpose of this approach is to get the new leader to think deeply about themselves, others, and their specific organisation.

5.3 Conclusions

This project has explored the ways in which academic leaders manage their emotions, the extent to which this is related to their personality, and the ways in which academic leaders can be better prepared for leadership roles. The main findings do not show a clear link between personality and the management of emotions, or between the experience of emotional labour and emotion management. The findings suggest that leaders tend to manage their emotions by seeking advice, support, and solace from more senior colleagues and friends. They also tend to attenuate their displays of emotion in the belief that the display of negative emotion would be bad for their followers, and would make it difficult for them to keep focussed on their vision or strategy. These approaches are eventually arrived at by all of the leaders regardless of their personality or levels of emotional labour. Broadly speaking, this supports the behavioural approach to leadership. The leaders' motivations and personality profiles also suggest elements of authentic leadership.

Leaders could be better prepared for their leadership roles if they were able to engage in training which prepared them for the diversity of personality types and motivations which they encounter in their role. Training which also incorporates the personality and culture of their organisation, alongside an exploration of their own personality would help. The practical aim of this project was to develop the participants' narratives into stories which can be used to aid the training and development of other leaders and managers. This has been achieved with a worked example of P5 shown in Box 1.

Further research in this area could be focussed on developing and testing the training programme outlined in this project. It would also be of great benefit to the field of leadership research if there were to be some longitudinal research on leaders to enable the dynamic nature of leadership to be better understood.

5.4 Critical evaluation of the research design and implementation

There are a range of ways in which the research undertaken for this thesis could be improved. First, the methodological approach could have been more systematic. Whilst it was interesting to take a varied approach to collecting and analysing data, a more meaningful contribution to the field might have been achieved with a single approach. The contribution that positivist psychology can make to understanding leadership has perhaps passed its zenith. Quantitative measures of personality and emotional labour did not offer as much to this research as the narratives of emotional experiences which participants shared. Hearing the first-hand accounts of how challenges were overcome, and how change had occurred produced more meaningful training material than personality profiles.

Secondly, the sampling for this research could also be improved. The five leaders used for this project presented interesting stories which work well to generate training materials, but in many ways, they were very similar. The age and experience range of participants was quite narrow. It would have been useful to hear the stories of highly experienced leaders (those Dreyfus (2004) might clearly define as 'expert' as opposed to 'competent' or 'proficient'). One leader in this study had ten years' experience and their longer view of the emotions they encountered was in some ways more reflective than the other participants. The participants were also known to the researcher and employed in the same institution. This is very likely to have affected the kind of examples they felt comfortable discussing. This is an issue which could have been anticipated from the outset of this project, but pragmatism played a role, as it often does in time limited programmes of study versus more lengthy research undertakings. In light of the findings in this study, future research should also consider the leader's context as an additional participant in the study. The culture, values, and behaviours of the organisation should be considered when sampling.

A third area for critical reflection is the concept of emotion and how it was approached in this study. A discussion around emotional intelligence versus emotional labour can be found elsewhere in this thesis, the focus here is on the specific measure of emotional labour. The emotional labour scale (ELS: Brotheridge & Lee, 2003) yielded results suggesting that none of the participants experienced

unusual amounts of emotional labour. In fact, the participants were all in the bottom quartile, or statistical outliers, for most elements of the ELS. This was a surprising finding given the experiences the participants described along with one participant having very high levels of emotionality, and two others having average levels. This mismatch questions the validity of the measure for this particular sample. With research suggesting that emotional labour is widespread beyond the traditional notion of the service sector, perhaps measures of emotional labour have not yet adapted to reflect this. If this research were to be repeated, a more insightful appraisal of emotional labour might be achieved by explaining the concept to participants and then asking them what they think of it using the continuum suggested by Mesmer-Magnus et al. (2012). The emotional labour results may also have been affected by the study design. Participants completed the ELS and then separately discussed an event which had specifically made them emotional. The event chosen may have been a long-time in the past, or not at all representative of their day-to-day experiences. This could have led to an erroneous expectation of emotional labour.

In closing, a useful method to consider in future research might be the use of leaders' autobiographies (Mathias & Smith, 2016). This would allow exploration beyond the single events explored in the current study. Although the use of autobiographies brings its own limitations, such as social desirability or the pushing of an agenda, it would also allow leadership to be understood as a dynamic process that acknowledges the organisational and societal context as opposed to a static glimpse of the individual. Autobiography could also be supplemented with narrative from significant others in order to produce a fuller picture of the leader. Whilst this could appear to be harking back to the 'Great Man' approach by studying the life of a single leader, it does not have to unfold in that way. The autobiographies in bookshops might be of "great men", but autobiographies within institutions and communities could be of anyone who is regarded as a leader. This may be a way to give a voice and exposure to individuals not normally associated with leadership so would actually challenge the 'Great Man' notion and would bring different stories of leadership to the fore.

6 REFERENCES

- Adams, C., & van Manen, M. (2008). Phenomenology. In L. M. Given (Ed.), *The SAGE Handbook of Qualitative Research Methods* (pp. 615–619). Thousand Oaks: SAGE Publications Inc.
- Advance HE. (2019a). Aurora. Retrieved December 29, 2019, from <https://www.advance-he.ac.uk/programmes-events/aurora>
- Advance HE. (2019b). How does Aurora work? Retrieved December 29, 2019, from <https://www.advance-he.ac.uk/programmes-events/aurora/how-does-aurora-work#day>
- Allio, R. J. (2012). Leaders and leadership – many theories, but what advice is reliable? *Strategy & Leadership*, 41(1), 4–14. <https://doi.org/10.1108/10878571311290016>
- Antonakis, J., Ashkanasy, N. M., & Dasborough, M. T. (2009). Does leadership need emotional intelligence? *Leadership Quarterly*, 20(2), 247–261. <https://doi.org/10.1016/j.leaqua.2009.01.006>
- Anttila, E., Turtiainen, J., Varje, P., & Väänänen, A. (2018). Emotional labour in a school of individuals. *Pedagogy, Culture & Society*, 26(2), 215–231. <https://doi.org/10.1080/14681366.2017.1378708>
- Anugerah, R., Abdillah, M. R., & Anita, R. (2019). Authentic leadership and internal whistleblowing intention: The mediating role of psychological safety. *Journal of Financial Crime*, 26(2), 556–567. <https://doi.org/10.1108/JFC-04-2018-0045>
- Badshah, S., Farh, C. I. C. C., Seo, M., & Tesluk, P. E. (2012). Historical Study of Leadership Theories. *Journal of Strategic Human Resource Management*, 1(1), 49–60. <https://doi.org/10.1037/a0027377>
- Barends, A. J., de Vries, R. E., & van Vugt, M. (2019). Power influences the

expression of Honesty-Humility: The power-exploitation affordances hypothesis. *Journal of Research in Personality*, 82, 103856. <https://doi.org/10.1016/j.jrp.2019.103856>

Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership*. (2nd ed.). New Jersey: Lawrence Erlbaum Associates Inc. Retrieved from <https://ebookcentral.proquest.com>

Bergman, D., Lornudd, C., Sjöberg, L., & Von Thiele Schwarz, U. (2014). Leader personality and 360-degree assessments of leader behavior. *Scandinavian Journal of Psychology*, 55(4), 389–397. <https://doi.org/10.1111/sjop.12130>

Bolden, R., Petrov, G., & Gosling, J. (2009). Distributed Leadership in Higher Education. *Educational Management Administration & Leadership*, 37(2), 257–277. <https://doi.org/10.1177/1741143208100301>

Brody, N. (2004). What Cognitive Intelligence Is and What Emotional Intelligence Is Not. *Psychological Inquiry*, 15(3), 234–238.

Brotheridge, C. M., & Lee, R. T. (2003). Development and validation of the Emotional Labour Scale. *Journal of Occupational and Organizational Psychology*, 76(3), 365–379. <https://doi.org/10.1348/096317903769647229>

Brueckner, M. (2013). Corporation as Psychopath. In *Encyclopedia of Corporate Social Responsibility* (pp. 613–618). Berlin, Heidelberg: Springer Berlin Heidelberg. https://doi.org/10.1007/978-3-642-28036-8_128

Bryman, A., Stephens, M., & Campo, C. à. (1996). The importance of context: Qualitative research and the study of leadership. *The Leadership Quarterly*, 7(3), 353–370. [https://doi.org/10.1016/S1048-9843\(96\)90025-9](https://doi.org/10.1016/S1048-9843(96)90025-9)

Cave, A. (2017). Culture Eats Strategy For Breakfast. So What's For Lunch? Retrieved December 14, 2019, from <https://www.forbes.com/sites/andrewcave/2017/11/09/culture-eats-strategy-for-breakfast-so-whats-for-lunch/>

- Cawthon, D. W. (1996). Leadership: The great man theory revisited. *Business Horizons*, 39(3), 1–4. [https://doi.org/10.1016/S0007-6813\(96\)90001-4](https://doi.org/10.1016/S0007-6813(96)90001-4)
- Clarivate. (2019). Web of Science. Retrieved December 8, 2019, from <https://wok.mimas.ac.uk/>
- Collins, J. (2011). Level 5 Leadership: the triumph of humility and fierce resolve. In *HBR's 10 Must Reads on Leadership* (pp. 115–136). Boston, MA: Harvard Business Review Press.
- Constanti, P., & Gibbs, P. (2004). Higher education teachers and emotional labour. *International Journal of Educational Management*, 18(4), 243–249. <https://doi.org/10.1108/09513540410538822>
- Crawford, J. R., & Garthwaite, P. H. (2007). Comparison of a single case to a control or normative sample in neuropsychology: Development of a Bayesian approach. *Cognitive Neuropsychology*, 24(4), 343–372. <https://doi.org/10.1080/02643290701290146>
- Daher, M., Carré, D., Jaramillo, A., Olivares, H., & Tomicic, A. (2017). Experience and Meaning in Qualitative Research: A Conceptual Review and a Methodological Device Proposal. *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*, 18(3). Retrieved from <http://www.qualitative-research.net/index.php/fqs/article/view/2696/4129>
- Dearing, R. (1997). *Higher education in the learning society*. London. Retrieved from National Committee of Inquiry into Higher Education (NCIHE) (1997) Higher Education in the Learning Society (the Dearing Report), chart 3.14, London
- Dickson-Swift, V., James, E. L., Kippen, S., & Liamputtong, P. (2009). Researching sensitive topics: qualitative research as emotion work. *Qualitative Research*, 9(1), 61–79. <https://doi.org/10.1177/1468794108098031>

- Dreyfus, S. E. (2004). The Five-Stage Model of Adult Skill Acquisition. *Bulletin of Science, Technology & Society*, 24(3), 177–181. <https://doi.org/10.1177/0270467604264992>
- Dutton, E., & Lynn, R. (2014). Intelligence and Religious and Political Differences Among Members of the U.S. Academic Elite. *Interdisciplinary Journal of Research on Religion*, 10, 1–29.
- Eatough, E. M., Chang, C.-H., Miloslavic, S. A., & Johnson, R. E. (2011). Relationships of role stressors with organizational citizenship behavior: A meta-analysis. *Journal of Applied Psychology*, 96(3), 619–632. <https://doi.org/10.1037/a0021887>
- Edelman, P., & van Knippenberg, D. (2018). Emotional intelligence, management of subordinate's emotions, and leadership effectiveness. *Leadership and Organization Development Journal*, 39(5), 592–607. <https://doi.org/10.1108/LODJ-04-2018-0154>
- Flick, U. (2018). Triangulation in Data Collection. In U. Flick (Ed.), *The SAGE Handbook of Qualitative Data Collection* (pp. 527–544). SAGE Publications Ltd. <https://doi.org/10.4135/9781526416070>
- Furnham, A., & Treglown, L. (2018). High potential personality and intelligence. *Personality and Individual Differences*, 128, 81–87. <https://doi.org/10.1016/j.paid.2018.02.025>
- Germain, M. L. (2017). *Narcissism at work: Personality disorders of corporate leaders*. *Narcissism at Work: Personality Disorders of Corporate Leaders*. <https://doi.org/10.1007/978-3-319-60330-8>
- Goleman, D. (2011). What makes a leader? In *HBR's 10 Must Reads on Leadership* (pp. 1–22). Boston, MA: Harvard Business Review Press.
- Gough, N. (2008). First-Person Voice. In L. M. Given (Ed.), *The SAGE*

Encyclopedia of Qualitative Research Methods (p. 351). 2455 Teller Road, Thousand Oaks California 91320 United States: SAGE Publications, Inc. <https://doi.org/10.4135/9781412963909.n177>

Hannah, S. T., Sumanth, J. J., Lester, P., & Cavarretta, F. (2014). Debunking the false dichotomy of leadership idealism and pragmatism: Critical evaluation and support of newer genre leadership theories. *Journal of Organizational Behavior*, 35(5), 598–621. <https://doi.org/10.1002/job.1931>

Harris, J., & Barnes, B. K. (2006). Leadership storytelling. *Industrial and Commercial Training*, 38(7), 350–353. <https://doi.org/10.1108/00197850610704534>

Hart, W., Richardson, K., & Breeden, C. J. (2020). Profiling HEXACO factors on self-presentation tactic use. *Personality and Individual Differences*, 153, 109649. <https://doi.org/10.1016/j.paid.2019.109649>

Hilgevoord, J., & Uffink, J. (2016). The Uncertainty Principle. In *The Stanford Encyclopedia of Philosophy* (Winter 201). Metaphysics Research Lab, Stanford University. Retrieved from <https://plato.stanford.edu/archives/win2016/entries/qt-uncertainty/>

Hochschild, A. R. (2012). *The Managed Heart: Commercialization of Human Feeling*. ProQuest Ebook Central: University of California Press. Retrieved from <http://ebookcentral.proquest.com/lib/ntuuk/detail.action?docID=870020>

Insights. (2019). Leadership Development. Retrieved December 31, 2019, from <https://www.insights.com/solutions/leadership-development/>

International Organization for Standardization. (2015). *ISO 9001: 2015 Debunking the Myths*. Retrieved from <https://www.iso.org/files/live/sites/isoorg/files/store/en/PUB100368.pdf>

Joseph, D. L., Dhanani, L. Y., Shen, W., McHugh, B. C., & McCord, M. A. (2015).

Is a happy leader a good leader? A meta-analytic investigation of leader trait affect and leadership. *Leadership Quarterly*, 26(4), 557–576. <https://doi.org/10.1016/j.leaqua.2015.04.001>

Joseph, D. L., & Newman, D. A. (2010). Emotional intelligence: An integrative meta-analysis and cascading model. *Journal of Applied Psychology*, 95(1), 54–78. <https://doi.org/10.1037/a0017286>

Judge, T. A., Bono, J. E., Ilies, R., & Gerhardt, M. W. (2002). Personality and leadership: A qualitative and quantitative review. *Journal of Applied Psychology*, 87(4), 765–780. <https://doi.org/10.1037/0021-9010.87.4.765>

Kelly, P., Fair, N., & Evans, C. (2017). The Engaged Student Ideal in UK Higher Education Policy. *Higher Education Policy*, 30(1), 105–122. <https://doi.org/10.1057/s41307-016-0033-5>

Kerr, R., Garvin, J., Heaton, N., & Boyle, E. (2006). Emotional intelligence and leadership effectiveness. *Leadership and Organization Development Journal*, 27(4), 265–279. <https://doi.org/10.1108/01437730610666028>

Kheovichai, B. (2014). Marketized university discourse: A synchronic and diachronic comparison of the discursive constructions of employer organizations in academic and business job advertisements. *Discourse & Communication*, 8(4), 371–390. <https://doi.org/10.1177/1750481314537575>

Klenke, K. (2016). Qualitative interviewing in leadership research. In *Qualitative Research in the Study of Leadership* (2nd ed.). Bingley, UK: Emerald Group Publishing Limited.

Kotter, J. P. (2013, January). Management is (Still) not Leadership. *Harvard Business Review*. Retrieved from <https://hbr.org/2013/01/management-is-still-not-leadership>

Lee, K., & Ashton, M. C. (2018). Psychometric Properties of the HEXACO-100. *Assessment*, 25(5), 543–556. <https://doi.org/10.1177/1073191116659134>

- Lee, Y., Berry, C. M., & Gonzalez-Mulé, E. (2019). The importance of being humble: A meta-analysis and incremental validity analysis of the relationship between honesty-humility and job performance. *Journal of Applied Psychology, 104*(12), 1535–1546. <https://doi.org/10.1037/apl0000421>
- Likert, R. (1967). *The human organization : its management and value*. New York: McGraw-Hill.
- Lunenburg, F. C. (2011). Leadership versus Management : A Key Distinction — At Least in Theory. *International Journal of Management, Business, and Administration, 14*(1), 1–4.
- Macfarlane, B. (2007). Defining and Rewarding Academic Citizenship: The implications for university promotions policy. *Journal of Higher Education Policy and Management, 29*(3), 261–273. <https://doi.org/10.1080/13600800701457863>
- Mallon, & Elliott. (2019). The Emotional Risks of Turning Stories into Data: An Exploration of the Experiences of Qualitative Researchers Working on Sensitive Topics. *Societies, 9*(3), 62. <https://doi.org/10.3390/soc9030062>
- Mark, G. A. (2015). Legal Personality. In *International Encyclopedia of the Social & Behavioral Sciences* (pp. 753–756). Elsevier. <https://doi.org/10.1016/B978-0-08-097086-8.86072-9>
- Mathias, B. D., & Smith, A. D. (2016). Autobiographies in Organizational Research. *Organizational Research Methods, 19*(2), 204–230. <https://doi.org/10.1177/1094428115618761>
- Mesmer-Magnus, J. R., DeChurch, L. A., & Wax, A. (2012). Moving emotional labor beyond surface and deep acting. *Organizational Psychology Review, 2*(1), 6–53. <https://doi.org/10.1177/2041386611417746>
- Mládková, L. (2013). Leadership and Storytelling. *Procedia - Social and*

Behavioral Sciences, 75, 83–90.
<https://doi.org/10.1016/j.sbspro.2013.04.010>

Morse, J. M. (2004). Purposive Sampling. In M. S. Lewis-Beck, A. Bryman, & T. F. Liao (Eds.), *The SAGE Encyclopedia of Social Science Research Methods*. Thousand Oaks California: Sage Publications, Inc.
<https://doi.org/10.4135/9781412950589.n774>

Moutafi, J., Furnham, A., & Paltiel, L. (2005). Can personality factors predict intelligence? *Personality and Individual Differences*, 38(5), 1021–1033.
<https://doi.org/10.1016/j.paid.2004.06.023>

Mumford, M. D., & Strange, J. M. (2013). Vision and Mental Models: The Case of Charismatic and Ideological Leadership. In *Transformational and Charismatic Leadership: The Road Ahead 10th Anniversary Edition* (Volume 2, pp. 125–158). Emerald Publishing Group Limited.
<https://doi.org/10.1108/S1479-357120130000005013>

Naughton, L. (2017). Getting the gang together – reflections on women in HE leadership. Retrieved from <https://wonkhe.com/blogs/getting-the-gang-together-reflections-on-women-in-he-leadership/>

Ode, S., Robinson, M. D., & Wilkowski, B. M. (2008). Can one's temper be cooled? A role for Agreeableness in moderating Neuroticism's influence on anger and aggression. *Journal of Research in Personality*, 42(2), 295–311.
<https://doi.org/10.1016/j.jrp.2007.05.007>

Office for National Statistics. (2016). Five facts about... The UK service sector. Retrieved December 15, 2019, from <https://www.ons.gov.uk/economy/economicoutputandproductivity/output/articles/fivefactsabouttheukservicesector/2016-09-29>

Panneman, T. (2018). Insights Discovery part 1: The 4 colors. Retrieved January 19, 2020, from <https://www.mudamasters.com/en/personal-growth-personality/insights-discovery-part-1-4-colors>

- Parasuraman, A. (2006). Assessing and improving service performance for maximum impact: insights from a. <https://doi.org/10.1108/14678040410546064>
- Peart, F. M., Roan, A., & Ashkanasy, N. M. (2013). The 'Managed Heart' of leaders: The role of emotional intelligence. In M. Iszatt-White (Ed.), *Leadership as Emotional Labour: Management and the "Managed Heart"* (pp. 106–128). New York: Routledge. <https://doi.org/10.4324/9780203098400>
- Peck, E., & Dickinson, H. (2009). *Performing Leadership*. London: Palgrave Macmillan UK. <https://doi.org/10.1057/9780230246171>
- Potter, A. (2018). Managing productive academia/industry relations: the interview as research method. *Media Practice and Education*, 19(2), 159–172. <https://doi.org/10.1080/25741136.2018.1464716>
- Rego, A., Vitória, A., Magalhães, A., Ribeiro, N., & e Cunha, M. P. (2013). Are authentic leaders associated with more virtuous, committed and potent teams? *The Leadership Quarterly*, 24(1), 61–79. <https://doi.org/10.1016/j.leaqua.2012.08.002>
- Rudick, C. K., & Dannels, D. P. (2018). Yes, and ... : continuing the scholarly conversation about mental health stigma in higher education. *Communication Education*, 67(3), 404–408. <https://doi.org/10.1080/03634523.2018.1467563>
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality*, 9, 185–211.
- Santos, A., Mustafa, M. J., & Gwi, T. C. (2015). Trait emotional intelligence, emotional labour, and burnout among Malaysian HR professionals. *Management Research Review*, 38(1), 67–88. <https://doi.org/10.1108/MRR-06-2013-0143>

- Shorten, A., & Smith, J. (2017). Mixed methods research: Expanding the evidence base. *Evidence-Based Nursing*, 20(3), 74–75. <https://doi.org/10.1136/eb-2017-102699>
- Slade, M., Rennick-Egglestone, S., Blackie, L., Llewellyn-Beardsley, J., Franklin, D., Hui, A., ... Deakin, E. (2019). Post-traumatic growth in mental health recovery: qualitative study of narratives. *BMJ Open*, 9(6), e029342. <https://doi.org/10.1136/bmjopen-2019-029342>
- Smith, D. W. (2018). Phenomenology. Retrieved January 18, 2020, from <https://plato.stanford.edu/archives/sum2018/entries/phenomenology/>
- The British Psychological Society. (2018). Code of Ethics and Conduct. *The British Psychological Society*, (July). Retrieved from www.bps.org.uk.
- UKRI. (2019). What is the REF? Retrieved January 18, 2020, from <https://www.ref.ac.uk/about/what-is-the-ref/>
- Walter, F., & Scheibe, S. (2013). A literature review and emotion-based model of age and leadership: New directions for the trait approach. *Leadership Quarterly*, 24(6), 882–901. <https://doi.org/10.1016/j.leaqua.2013.10.003>
- Weale, S. (2019, May 23). Higher education staff suffer “epidemic” of poor mental health. *The Guardian*. Retrieved from <https://www.theguardian.com/education/2019/may/23/higher-education-staff-suffer-epidemic-of-poor-mental-health>
- Webster, V., Brough, P., & Daly, K. (2016). Fight, Flight or Freeze: Common Responses for Follower Coping with Toxic Leadership. *Stress and Health*, 32(4), 346–354. <https://doi.org/10.1002/smi.2626>
- Williams, A. (2013). A study of emotion work in student paramedic practice. *Nurse Education Today*, 33(5), 512–517. <https://doi.org/10.1016/j.nedt.2012.03.003>

Wonneberg, D. A. (2007). *The nature of narcissism within organizational leadership*. Capella University. Retrieved from <https://search.proquest.com/docview/304721301?accountid=14693>

Zaleznik, A. (2004, January). Managers and Leaders: are they different? *Harvard Business Review*. Retrieved from <https://hbr.org/2004/01/managers-and-leaders-are-they-different>

7 APPENDICES

7.1 Appendix 1

Recruitment poster

Leadership and Emotion Research

Can you help?

I am looking for participants with leadership responsibility to take part in my research on emotion and leadership. In this context, leadership refers to roles and responsibilities which include duties such as line management, programme leadership, research project leadership, or other similar academic roles and duties.

Can you spare about 20 minutes to complete two surveys plus some time for an interview? All participation is strictly confidential.

If you'd like to know more about this research please scan the QR code for more detailed information (anonymously) or contact me directly.



Thanks in advance for your time!

Dr Kathy Charles
Psychology
School of Applied Sciences

k.charles@

7.2 Appendix 2

Interview schedule

These are the questions I would like to ask you during our face-to-face interview. You do not need to answer all of them and you can ask for clarification at any time during the interview, or ask for the interview to stop. Your interview will not be recorded and I will share with you what I write up from this discussion. You will be able to ask me to change my notes if you think I have misrepresented you in any way.

1. Can you tell me a bit about your current leadership role?
(for example – how many people do you line manage, are you responsible for leading a project, subject area, or other specialized area such as Quality?)
2. How long have you had your current leadership role, and how much experience of leadership do you have overall?
3. What do you enjoy about having a leadership role?
4. Did you seek out your leadership roles(s), or did you *have* to take it/them on due to other pressures?
5. What do you find challenging about having a leadership role?
6. Do you have a leadership philosophy or style that you could describe?
7. As you know, this research is about emotions and emotional experiences in leadership, so please can you tell me about an event (or events) in which you experienced strong emotions relating to your role at work.

This could be a positive event or a negative event, or something which encompassed both positive and negative feelings. Some examples might be: a complaint being made against you (or you making a complaint against someone else); having to be involved in dismissing/firing someone; having a member of your team promoted (or receiving a promotion yourself); leaving a role either through choice or being asked to; dealing with long-term staff absence (physical/mental ill health); dealing with unusual relationships within your team (e.g. romantic relationships or extreme conflict or violence). These are just examples, there may be other examples which you would like to talk about.

7a) Can you describe to me how this event made you feel.

7b) Can you describe to me how you managed these feelings from a state of intense emotion to a more manageable level.

7c) If the same event were to happen again, would you approach it in the same way?

8. Thinking about the event(s) we just talked about, how prepared did you feel to deal with them? This can include practical preparation such as regulations or processes you needed to follow, as well as psychological preparation such as knowing how to manage your emotional reactions and feelings.
9. Do you feel better prepared for emotional events as a result of your experiences?

10. Is there any advice you would give to people who are new to leadership roles which you think might prepare them for dealing with emotional events?
11. Do you have any questions for me?
12. Is there anything else you would like to add that we have not talked about?

7.3 Appendix 3

Sources of support

If taking part in this research has caused you some distress then you may find the following sources of support helpful.

Edinburgh Napier University Counselling Service

<https://my.napier.ac.uk/Wellbeing-and-Support/Counselling/Pages/Our-Services.aspx>

Edinburgh Napier University Workplace Options Support
(available from your line manager and in staff rooms)

Mind

<https://www.mind.org.uk/>

7.4 Appendix 4

Bayesian output

SINGLEBAYES.EXE: Bayesian point and interval estimate of the abnormality of a patient's test score

THIS PROGRAM WAS WRITTEN TO ACCOMPANY THE FOLLOWING PAPER:
Crawford, J.R & Garthwaite, P.H. (2007). Comparison of a single case to a control or normative sample in neuropsychology: Development of a Bayesian approach. *Cognitive Neuropsychology*, 24, 343-372.

User's Notes: HEXACO P1 H

INPUTS:

Mean of the control or normative sample= 3.24
Standard deviation for the control sample= 0.6
Sample size of the control sample= 2868
Individual's test score= 3.69

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
One-tailed probability = 0.2266828
Two-tailed probability = 0.4533655

Bayesian point estimate of percentage of control population falling below patient's score = 77.3317%
 95% lower credible limit on the percentage = 76.0630%
 95% upper credible limit on the percentage = 78.5646%

User's Notes: HEXACO P2 H

INPUTS:

Mean of the control or normative sample= 3.24
 Standard deviation for the control sample= 0.6
 Sample size of the control sample= 2868
 Individual's test score= 4

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.1027518
 Two-tailed probability = 0.2055036

Bayesian point estimate of percentage of control population falling below patient's score = 89.7248%
 95% lower credible limit on the percentage = 88.8219%
 95% upper credible limit on the percentage = 90.5858%

User's Notes: HEXACO P3 H

INPUTS:

Mean of the control or normative sample= 3.24
 Standard deviation for the control sample= 0.6
 Sample size of the control sample= 2868
 Individual's test score= 2.88

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.2743165
 Two-tailed probability = 0.5486330

Bayesian point estimate of percentage of control population falling below patient's score = 27.4317%
 95% lower credible limit on the percentage = 26.1213%
 95% upper credible limit on the percentage = 28.7694%

User's Notes: HEXACO P4 H

INPUTS:

Mean of the control or normative sample= 3.24
 Standard deviation for the control sample= 0.6
 Sample size of the control sample= 2868
 Individual's test score= 4.13

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.0690936
 Two-tailed probability = 0.1381871

Bayesian point estimate of percentage of control population falling below patient's score = 93.0906%
 95% lower credible limit on the percentage = 92.3617%
 95% upper credible limit on the percentage = 93.7781%

User's Notes: HEXACO P5 H

INPUTS:

Mean of the control or normative sample= 3.24
 Standard deviation for the control sample= 0.6
 Sample size of the control sample= 2868
 Individual's test score= 4.06

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.0859525
 Two-tailed probability = 0.1719049

Bayesian point estimate of percentage of control population falling below patient's score = 91.4048%
 95% lower credible limit on the percentage = 90.5890%
 95% upper credible limit on the percentage = 92.1798%

User's Notes: HEXACO P1 E

INPUTS:

Mean of the control or normative sample= 3.42
 Standard deviation for the control sample= 0.61
 Sample size of the control sample= 2868
 Individual's test score= 3.19

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.3530900
 Two-tailed probability = 0.7061801

Bayesian point estimate of percentage of control population falling below patient's score = 35.3090%
 95% lower credible limit on the percentage = 33.9174%
 95% upper credible limit on the percentage = 36.7308%

User's Notes: HEXACO P2 E

INPUTS:

Mean of the control or normative sample= 3.42
 Standard deviation for the control sample= 0.61
 Sample size of the control sample= 2868
 Individual's test score= 3.88

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.2254197
 Two-tailed probability = 0.4508394

Bayesian point estimate of percentage of control population falling below patient's score = 77.4580%
 95% lower credible limit on the percentage = 76.2085%
 95% upper credible limit on the percentage = 78.6902%

User's Notes: HEXACO P3 E

INPUTS:

Mean of the control or normative sample= 3.42
 Standard deviation for the control sample= 0.61
 Sample size of the control sample= 2868
 Individual's test score= 3.13

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.3172963
 Two-tailed probability = 0.6345926

Bayesian point estimate of percentage of control population falling below patient's score = 31.7296%
 95% lower credible limit on the percentage = 30.3570%
 95% upper credible limit on the percentage = 33.1105%

User's Notes: HEXACO P4 E

INPUTS:

Mean of the control or normative sample= 3.42
 Standard deviation for the control sample= 0.61
 Sample size of the control sample= 2868
 Individual's test score= 2.94

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.2157332
 Two-tailed probability = 0.4314663

Bayesian point estimate of percentage of control population falling below patient's score = 21.5733%
 95% lower credible limit on the percentage = 20.3582%
 95% upper credible limit on the percentage = 22.8196%

User's Notes: HEXACO P5 E

INPUTS:

Mean of the control or normative sample= 3.42
 Standard deviation for the control sample= 0.61
 Sample size of the control sample= 2868
 Individual's test score= 2.75

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.1361400
 Two-tailed probability = 0.2722800

Bayesian point estimate of percentage of control population falling below patient's score = 13.6140%
95% lower credible limit on the percentage = 12.6209%
95% upper credible limit on the percentage = 14.6399%

User's Notes: HEXACO P1 X

INPUTS:

Mean of the control or normative sample= 3.47
Standard deviation for the control sample= 0.58
Sample size of the control sample= 2868
Individual's test score= 3.19

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
One-tailed probability = 0.3146855
Two-tailed probability = 0.6293711

Bayesian point estimate of percentage of control population falling below patient's score = 31.4686%
95% lower credible limit on the percentage = 30.1042%
95% upper credible limit on the percentage = 32.8505%

User's Notes: HEXACO P2 X

INPUTS:

Mean of the control or normative sample= 3.47
Standard deviation for the control sample= 0.58
Sample size of the control sample= 2868
Individual's test score= 3.13

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
One-tailed probability = 0.2789216
Two-tailed probability = 0.5578431

Bayesian point estimate of percentage of control population falling below patient's score = 27.8922%
95% lower credible limit on the percentage = 26.5738%
95% upper credible limit on the percentage = 29.2377%

User's Notes: HEXACO P3 X

INPUTS:

Mean of the control or normative sample= 3.47
Standard deviation for the control sample= 0.58
Sample size of the control sample= 2868
Individual's test score= 4

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
One-tailed probability = 0.1805234
Two-tailed probability = 0.3610467

Bayesian point estimate of percentage of control population falling below patient's score = 81.9477%
 95% lower credible limit on the percentage = 80.7876%
 95% upper credible limit on the percentage = 83.0694%

User's Notes: HEXACO P4 X

INPUTS:

Mean of the control or normative sample= 3.47
 Standard deviation for the control sample= 0.58
 Sample size of the control sample= 2868
 Individual's test score= 3.31

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.3913453
 Two-tailed probability = 0.7826905

Bayesian point estimate of percentage of control population falling below patient's score = 39.1345%
 95% lower credible limit on the percentage = 37.6995%
 95% upper credible limit on the percentage = 40.5720%

User's Notes: HEXACO P5 X

INPUTS:

Mean of the control or normative sample= 3.47
 Standard deviation for the control sample= 0.58
 Sample size of the control sample= 2868
 Individual's test score= 4.31

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.0738412
 Two-tailed probability = 0.1476824

Bayesian point estimate of percentage of control population falling below patient's score = 92.6159%
 95% lower credible limit on the percentage = 91.8613%
 95% upper credible limit on the percentage = 93.3271%

User's Notes: HEXACO P1 A

INPUTS:

Mean of the control or normative sample= 2.97
 Standard deviation for the control sample= 0.59
 Sample size of the control sample= 2868
 Individual's test score= 3.27

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.3056130
 Two-tailed probability = 0.6112260

Bayesian point estimate of percentage of control population falling below patient's score = 69.4387%
 95% lower credible limit on the percentage = 68.0744%
 95% upper credible limit on the percentage = 70.7891%

User's Notes: HEXACO P2 A

INPUTS:

Mean of the control or normative sample= 2.97
 Standard deviation for the control sample= 0.59
 Sample size of the control sample= 2868
 Individual's test score= 1.87

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.0312066
 Two-tailed probability = 0.0624133

Bayesian point estimate of percentage of control population falling below patient's score = 3.1207%
 95% lower credible limit on the percentage = 2.7130%
 95% upper credible limit on the percentage = 3.5613%

User's Notes: HEXACO P3 A

INPUTS:

Mean of the control or normative sample= 2.97
 Standard deviation for the control sample= 0.59
 Sample size of the control sample= 2868
 Individual's test score= 2.67

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.3055812
 Two-tailed probability = 0.6111623

Bayesian point estimate of percentage of control population falling below patient's score = 30.5581%
 95% lower credible limit on the percentage = 29.2038%
 95% upper credible limit on the percentage = 31.9325%

User's Notes: HEXACO P4 A

INPUTS:

Mean of the control or normative sample= 2.97
 Standard deviation for the control sample= 0.59
 Sample size of the control sample= 2868
 Individual's test score= 2.73

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.3421146
 Two-tailed probability = 0.6842291

Bayesian point estimate of percentage of control population falling below patient's score = 34.2115%
95% lower credible limit on the percentage = 32.8219%
95% upper credible limit on the percentage = 35.6255%

User's Notes: HEXACO P5 A

INPUTS:

Mean of the control or normative sample= 2.97
Standard deviation for the control sample= 0.59
Sample size of the control sample= 2868
Individual's test score= 3.33

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
One-tailed probability = 0.2709169
Two-tailed probability = 0.5418338

Bayesian point estimate of percentage of control population falling below patient's score = 72.9083%
95% lower credible limit on the percentage = 71.5712%
95% upper credible limit on the percentage = 74.2225%

User's Notes: HEXACO P1 C

INPUTS:

Mean of the control or normative sample= 3.45
Standard deviation for the control sample= 0.58
Sample size of the control sample= 2868
Individual's test score= 3.13

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
One-tailed probability = 0.2906184
Two-tailed probability = 0.5812367

Bayesian point estimate of percentage of control population falling below patient's score = 29.0618%
95% lower credible limit on the percentage = 27.7294%
95% upper credible limit on the percentage = 30.4336%

User's Notes: HEXACO P2 & P5 C

INPUTS:

Mean of the control or normative sample= 3.45
Standard deviation for the control sample= 0.58
Sample size of the control sample= 2868
Individual's test score= 3.38

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
One-tailed probability = 0.4519895
Two-tailed probability = 0.9039790

Bayesian point estimate of percentage of control population falling below patient's score = 45.1989%
 95% lower credible limit on the percentage = 43.7516%
 95% upper credible limit on the percentage = 46.6599%

User's Notes: HEXACO P3 C

INPUTS:

Mean of the control or normative sample= 3.45
 Standard deviation for the control sample= 0.58
 Sample size of the control sample= 2868
 Individual's test score= 3.63

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.3781284
 Two-tailed probability = 0.7562568

Bayesian point estimate of percentage of control population falling below patient's score = 62.1872%
 95% lower credible limit on the percentage = 60.7647%
 95% upper credible limit on the percentage = 63.5915%

User's Notes: HEXACO P4 C

INPUTS:

Mean of the control or normative sample= 3.45
 Standard deviation for the control sample= 0.58
 Sample size of the control sample= 2868
 Individual's test score= 3.44

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.4931268
 Two-tailed probability = 0.9862536

Bayesian point estimate of percentage of control population falling below patient's score = 49.3127%
 95% lower credible limit on the percentage = 47.8474%
 95% upper credible limit on the percentage = 50.7720%

User's Notes: HEXACO P1 & P4 O

INPUTS:

Mean of the control or normative sample= 3.32
 Standard deviation for the control sample= 0.61
 Sample size of the control sample= 2868
 Individual's test score= 3.50

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.3840311
 Two-tailed probability = 0.7680623

Bayesian point estimate of percentage of control population falling below patient's score = 61.5969%
95% lower credible limit on the percentage = 60.1677%
95% upper credible limit on the percentage = 63.0153%

User's Notes: HEXACO P2 O

INPUTS:

Mean of the control or normative sample= 3.32
Standard deviation for the control sample= 0.61
Sample size of the control sample= 2868
Individual's test score= 4.31

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
One-tailed probability = 0.0523947
Two-tailed probability = 0.1047895

Bayesian point estimate of percentage of control population falling below patient's score = 94.7605%
95% lower credible limit on the percentage = 94.1445%
95% upper credible limit on the percentage = 95.3346%

User's Notes: HEXACO P3 O

INPUTS:

Mean of the control or normative sample= 3.32
Standard deviation for the control sample= 0.61
Sample size of the control sample= 2868
Individual's test score= 3.81

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
One-tailed probability = 0.2109725
Two-tailed probability = 0.4219450

Bayesian point estimate of percentage of control population falling below patient's score = 78.9027%
95% lower credible limit on the percentage = 77.6796%
95% upper credible limit on the percentage = 80.1028%

User's Notes: HEXACO P5 O

INPUTS:

Mean of the control or normative sample= 3.32
Standard deviation for the control sample= 0.61
Sample size of the control sample= 2868
Individual's test score= 3.56

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
One-tailed probability = 0.3469978
Two-tailed probability = 0.6939957

Bayesian point estimate of percentage of control population falling below patient's score = 65.3002%
 95% lower credible limit on the percentage = 63.8916%
 95% upper credible limit on the percentage = 66.7006%

User's Notes: ELS Frequency P1

INPUTS:

Mean of the control or normative sample= 3.58
 Standard deviation for the control sample= 0.91
 Sample size of the control sample= 296
 Individual's test score= 3

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.2626302
 Two-tailed probability = 0.5252604

Bayesian point estimate of percentage of control population falling below patient's score = 26.2630%
 95% lower credible limit on the percentage = 22.3065%
 95% upper credible limit on the percentage = 30.4237%

User's Notes: ELS Frequency P2

INPUTS:

Mean of the control or normative sample= 3.58
 Standard deviation for the control sample= 0.91
 Sample size of the control sample= 296
 Individual's test score= 1.33

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.0070690
 Two-tailed probability = 0.0141380

Bayesian point estimate of percentage of control population falling below patient's score = 0.7069%
 95% lower credible limit on the percentage = 0.3467%
 95% upper credible limit on the percentage = 1.2534%

User's Notes: ELS Frequency P3

INPUTS:

Mean of the control or normative sample= 3.58
 Standard deviation for the control sample= 0.91
 Sample size of the control sample= 296
 Individual's test score= 3.67

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.4607529
 Two-tailed probability = 0.9215058

Bayesian point estimate of percentage of control population falling below patient's score = 53.9247%
 95% lower credible limit on the percentage = 49.4098%
 95% upper credible limit on the percentage = 58.4420%

User's Notes: ELS Intensity P1 & P3

INPUTS:

Mean of the control or normative sample= 2.54
 Standard deviation for the control sample= 0.71
 Sample size of the control sample= 296
 Individual's test score= 2

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.2242188
 Two-tailed probability = 0.4484376

Bayesian point estimate of percentage of control population falling below patient's score = 22.4219%
 95% lower credible limit on the percentage = 18.6837%
 95% upper credible limit on the percentage = 26.4202%

User's Notes: ELS Intensity P2

INPUTS:

Mean of the control or normative sample= 2.54
 Standard deviation for the control sample= 0.71
 Sample size of the control sample= 296
 Individual's test score= 1.5

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.0723339
 Two-tailed probability = 0.1446678

Bayesian point estimate of percentage of control population falling below patient's score = 7.2334%
 95% lower credible limit on the percentage = 5.1735%
 95% upper credible limit on the percentage = 9.6959%

User's Notes: ELS Variety P1

INPUTS:

Mean of the control or normative sample= 2.82
 Standard deviation for the control sample= 0.79
 Sample size of the control sample= 296
 Individual's test score= 3

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.4100372
 Two-tailed probability = 0.8200744

Bayesian point estimate of percentage of control population falling below patient's score = 58.9963%
 95% lower credible limit on the percentage = 54.4820%
 95% upper credible limit on the percentage = 63.4341%

User's Notes: ELS Variety P2

INPUTS:

Mean of the control or normative sample= 2.82
 Standard deviation for the control sample= 0.79
 Sample size of the control sample= 296
 Individual's test score= 1.67

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.0736346
 Two-tailed probability = 0.1472691

Bayesian point estimate of percentage of control population falling below patient's score = 7.3635%
 95% lower credible limit on the percentage = 5.2650%
 95% upper credible limit on the percentage = 9.8215%

User's Notes: ELS Variety P3

INPUTS:

Mean of the control or normative sample= 2.82
 Standard deviation for the control sample= 0.79
 Sample size of the control sample= 296
 Individual's test score= 3.33

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.2597727
 Two-tailed probability = 0.5195454

Bayesian point estimate of percentage of control population falling below patient's score = 74.0227%
 95% lower credible limit on the percentage = 69.8521%
 95% upper credible limit on the percentage = 77.9940%

User's Notes: ELS Surface Acting P1 & P3

INPUTS:

Mean of the control or normative sample= 3.95
 Standard deviation for the control sample= 1.08
 Sample size of the control sample= 296
 Individual's test score= 3.33

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.2833677
 Two-tailed probability = 0.5667354

Bayesian point estimate of percentage of control population falling below patient's score = 28.3368%
 95% lower credible limit on the percentage = 24.2846%
 95% upper credible limit on the percentage = 32.5965%

User's Notes: ELS Surface Acting P2

INPUTS:

Mean of the control or normative sample= 3.95
 Standard deviation for the control sample= 1.08
 Sample size of the control sample= 296
 Individual's test score= 1.67

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.0179377
 Two-tailed probability = 0.0358755

Bayesian point estimate of percentage of control population falling below patient's score = 1.7938%
 95% lower credible limit on the percentage = 1.0260%
 95% upper credible limit on the percentage = 2.8312%

User's Notes: ELS Deep Acting P1 & P3

INPUTS:

Mean of the control or normative sample= 2.56
 Standard deviation for the control sample= 0.74
 Sample size of the control sample= 296
 Individual's test score= 1.33

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.0490357
 Two-tailed probability = 0.0980714

Bayesian point estimate of percentage of control population falling below patient's score = 4.9036%
 95% lower credible limit on the percentage = 3.3087%
 95% upper credible limit on the percentage = 6.8829%

User's Notes: ELS Deep Acting P2

INPUTS:

Mean of the control or normative sample= 2.56
 Standard deviation for the control sample= 0.74
 Sample size of the control sample= 296
 Individual's test score= 1

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.0180798
 Two-tailed probability = 0.0361595

Bayesian point estimate of percentage of control population falling below patient's score = 1.8080%
 95% lower credible limit on the percentage = 1.0378%
 95% upper credible limit on the percentage = 2.8542%

User's Notes: ELS P4 & P5 Surface Acting

INPUTS:

Mean of the control or normative sample= 3.95
 Standard deviation for the control sample= 1.08
 Sample size of the control sample= 296
 Individual's test score= 2.67

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.1188351
 Two-tailed probability = 0.2376702

Bayesian point estimate of percentage of control population falling below patient's score = 11.8835%
 95% lower credible limit on the percentage = 9.1198%
 95% upper credible limit on the percentage = 15.0339%

User's Notes: ELS P4 & P5 Deep Acting

INPUTS:

Mean of the control or normative sample= 2.56
 Standard deviation for the control sample= 0.74
 Sample size of the control sample= 296
 Individual's test score= 2.00

OUTPUTS:

Bayesian p values (akin to frequentist significance test):
 One-tailed probability = 0.2252376
 Two-tailed probability = 0.4504753

Bayesian point estimate of percentage of control population falling below patient's score = 22.5238%
 95% lower credible limit on the percentage = 18.8123%
 95% upper credible limit on the percentage = 26.5128%