

AN EMPIRICAL INVESTIGATION OF THE RELATIONSHIP BETWEEN MORAL
CHARACTER, CHARACTER STRENGTHS, VIRTUES, MORAL PERSONALITY AND
INDIVIDUAL ETHICAL DECISION-MAKING IN THE WORKPLACE

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Doctor of Philosophy Business & Social Sciences

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September 2022

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Abstract

The importance of understanding factors leading to unethical behaviour in organisations cannot be overstated and many scholars have sought to understand the antecedents of unethical decisions in organisations. This thesis examines the extent to which character strengths and virtues, the honesty/humility domain from HEXACO, and moral foundations (moral foundations theory), predict individual responses to a situational judgement test (SJT) of workplace ethical decision-making (EDM). It contributes to the understanding of individual level antecedents by considering morally relevant psychological traits and dispositions. The literature concerning virtue ethics, morally relevant behavioural traits, ethical decision-making models and SJTs is reviewed, and gaps identified.

A SJT containing workplace ethical dilemmas was developed from data obtained in interviews and focus groups of subject matter experts. The SJT-EDM was administered to a sample of 320 participants. Participants were obtained through professional and personal contacts of the researcher and recruited through Prolific. Participants completed the VIA-IS-M, measure of character strengths and virtues, The Honesty/Humility scale from HEXACO-PI-R and the MFQ30 measure of moral foundations. Results demonstrate that the SJT-EDM discriminated between individuals who endorsed the unethical, ethical and avoidance response options. The virtues of practical wisdom (phronesis) and courage combined with a concern for fairness and avoidance of harm were found to be significant predictors of unethical, ethical and avoidance SJT-EDM response options. All three of the measures used included variables that contributed to the prediction of ethical/unethical choices of individuals.

This research demonstrates that SJTs can be a useful tool for exploratory research in EDM and potentially used by organisations in assessment, selection, learning and development. The research also contributes to an understanding of what SJTs measure and questions concerning their psychometric properties and underlying structure. Explanatory models are offered which contribute to the understanding of the role of individual differences in workplace EDM. These have relevance for future academic consideration of morally relevant dispositional traits in EDM models, organisational practices concerning assessment and selection, business ethics education in Business Schools and in organisations.

Key words: ethical decision-making, morally relevant traits, Situational Judgement Tests, character and virtue, moral foundations theory, HEXACO, practical wisdom, moral courage, fairness.

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Chapter 1 Introduction

'It is clear from the vast empirical literature in social/personality and industrial/organizational psychology that the landscape of moral character is wide and varied, but we do not yet have an adequate map.' (Cohen et al, 2014 p943.)

This thesis focuses on individual ethical decision-making in the workplace in business or organisational settings. It sits within the discipline of applied psychology, drawing predominantly from the literature spanning occupational, organisational, and work psychology. Other domains within psychology have also been considered including, where appropriate, cognitive, moral, developmental, social, cultural, evolutionary, and positive psychology. Since the study of business ethics is an important discipline within both the academic and practitioner spheres, and contains a body of relevant knowledge and research, significant concepts from this discipline have also been considered.

Philosophical and Theoretical Perspective

Virtue ethics is the over-arching philosophical and theoretical framework for this thesis. Scholarly endeavour in the study of business related, ethical decision-making (EDM) must be placed in the context of considerations of morality and, therefore, the philosophy of ethics and moral reasoning are duly considered. Within moral philosophy, virtue ethics is a normative approach, as opposed to deontological or consequentialist approaches (Hursthouse & Pettigrove, 2018). Virtue ethics emphasises the role of character and virtue and is considered to be an 'agent-based' theory, i.e. virtues are viewed as inner-dispositions which lead individuals to behave virtuously. This research seeks to contribute to knowledge in this area by determining whether character strengths and virtues play a part in individual judgments concerning ethical dilemmas in workplace settings. The gap in research in this area is explained more fully in the literature review chapter and highlights the omission of any detailed consideration of character strengths and virtues in the EDM literature.

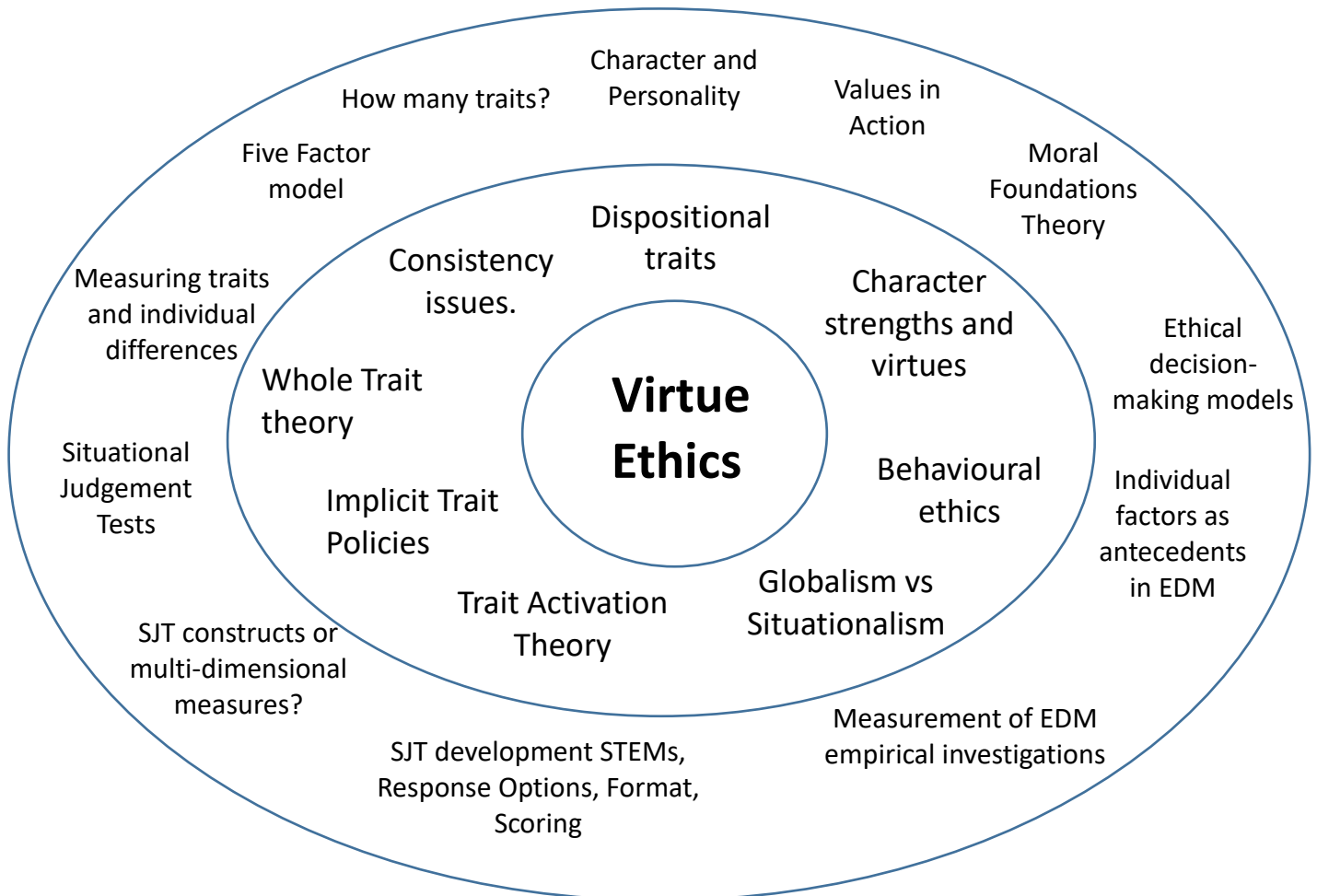
A second theoretical perspective that framed the research relates to the nature of individual differences, specifically psychological theories of personality. This thesis is situated in trait based theories and debates concerning the number and nature of dispositional traits are explored in the literature review chapter. The omission of morally relevant traits in prevailing trait-based personality models is highlighted.

Thirdly, research looking at individual differences in EDM frequently utilises vignettes, which describe ethically or morally relevant situations and require participants to respond to them.

The philosophical and theoretical framework is described in the figure below.

Figure 1

Philosophical and Theoretical Framework



To summarise, an SJT-EDM was designed as a measure of individual responses to situations requiring an ethical or moral decision. The content of the situations and the response options were based on current protocol for designing SJT. The stem content and response options were further designed based on trait activation theory (TAT) (Tett & Burnett 2003).

Definitions

The terms moral and ethical are used interchangeably throughout this thesis, both taken to refer to what is judged to be right or wrong conduct. Which term is used depends on the academic field of study and discipline of the researcher, but both terms retain the same focus, regardless of discipline. In this thesis the terms ethical and moral and un(ethical) and (im)moral are used interchangeably, as they are in much of the literature.

Included here is a brief introduction to constructs which helped to inform the conceptual framework for the research. A more in-depth and critical review of the scholarly debates concerning these constructs can be found in the Chapter 2.

Judgment

Subjective assessments made as a prelude to taking action (Solomon & Trotman 2003).

Mental activities of forming an idea, opinion or estimate about an object, events or a phenomenon wherein these activities influence the individual to make predictions for future events (Bonner, 1999).

Moral judgement

“prescriptive assessment of what is right or wrong” (Trevino, 1986, p. 604).

“Moral judgment refers to formulating and evaluating which possible solutions to the moral issue have moral justification.” (Lincoln and Holmes, 2011 p.57).

Moral dilemma

“Arise when two (or more) clear moral principles apply, but they support mutually inconsistent courses of action” (Jameton, 1984, p.6)

Ethical decision

“A decision that is both legally and morally acceptable to the larger community” (Jones, 1991, p367)

Unethical decision

“A decision that is both legally or morally unacceptable to the larger community” (Jones, 1991, p367)

Ethical decision-making

“The process by which individuals use their moral base to determine whether a certain issue is right or wrong” (Carlson et al, 2002, p16)

Unethical decision-making

“Decisions made to behave in ways that breach accepted moral norms or standards of behavior” (Detert et al, 2008, p375)

Corporate Scandals

The examination of ethical or unethical behaviour in organisations has attracted considerable attention from the media, practitioners, and academics over many decades but interest has heightened in recent years as a result of highly publicised corporate scandals. Barkemeyer et al (2020) found 123 corporate scandals had received widespread media coverage between 1990 and 2016, with significant increase in coverage with the growth of social media channels. They considered corporate scandals as those events which involved breaches of prevailing and accepted norms and that produce undesirable outcomes for the organisation. Corporate scandals can be distinguished from corporate crises as the former inevitably involve a human element within the organisation as opposed to, for example, crises of environmental or natural origins. Corporate scandals are based on the perception of the public and organisational wrongdoing and, according to Clemente and Gabbioneta (2017), the notion of wrongdoing may be conceived as socially constructed. This

perspective is both relevant for how the main research tool used in this research was developed but also meant that a wider consideration of the philosophy of ethics and moral reasoning was necessary.

The Role of the Individual

It may be asserted that at the root of corporate scandals are choices or decisions made by individuals, either acting alone or in conjunction with others, and that these choices and/or decisions impact on the final outcome or event which is ultimately revealed and perceived as the scandal. For clarity, the focus of this research concerns human-made corporate events, rather than those of natural causation but excludes cases of human error. This thesis considers ethical or unethical behaviour at the level of the individual and from the perspective of virtue ethics. It takes a micro level as opposed to a macro level view and follows other scholars' endeavours to establish individual differences that may act as antecedents of unethical behaviour.

Individual Differences

Of significance to this research is the question as to why individuals differ in their behaviour when faced with a decision to be made in the workplace which can be evaluated as having an ethical or moral element, or when faced with an ethical dilemma. Hence, the aim of this research is to explore the nature of individual differences in order to establish the validity of an extended model relating to the role of individual difference in EDM in the workplace.

Many influential models of EDM incorporate variables relating to individual factors. Kohlberg's (1973) rationalist view of moral reasoning was highly influential and Rest's (1986) model equally so; the later still used in many empirical studies to explore morally relevant workplace behaviour and cited widely in theoretical papers (Nyugen & Crossan, 2020). Proponents of the importance of intuition in EDM such as Haidt (2001) have also influenced research.

Depending on the model, individual level variables are given greater or lesser emphasis and these are discussed in the literature review chapter. However, whilst the role of individual factors in ethical decision-making models has been examined to some degree, there remain gaps in the business ethics literature. There are also areas within the psychology of individual difference where a more in-depth consideration of workplace ethical decision-making is merited. In studies of the role of individual **factors** in EDM described in the business ethics literature, the concept of individual factors is broad, incorporating demographic variables such as age, gender etc. The concept of individual **difference** has its roots in psychology, is well established, and encompasses individual differences related to personality, intelligence, motivation, and other aspects of cognitive functioning and some of these aspects of individual difference have been included in EDM models but gaps still remain.

Individual difference – personality

As stated previously, the expansion of the consideration of the role of individual difference of personality and cognitive styles in relation to the individual EDM through the lens of the psychology offers considerable scope. Some studies are reviewed in the literature section of this thesis which have incorporated accepted, main-stream factors of personality such as conscientiousness and extraversion, both factors from the widely considered 'Big 5' or Five Factor Model (FFM) model of Personality (McCrae & Costa (1987). The development of the Big 5 factor model emerging, as it did, in part from the lexical approach to understanding

personality and the statistical technique of factor analysis, inherited some of the principles applied by early researchers in the field, notably, Cattell (1947). As a result, the academic study of trait-based approaches to personality, as is well documented, initially attempted to exclude some of the more 'evaluative' aspects of personality in favour of demonstrable and observable traits (Allport, 1927). The distinction between 'descriptive' and 'evaluative' is an important one for this thesis. Saucier (1994), clarified the distinction; descriptive dimensions of personality being those where there is no element of desirability linked to the dimension as opposed to personality dimensions which carry an evaluation of desirability. The alternative route to the development of models of personality, non-lexically, involved reviewing scholarly work and empirical studies to determine basic personality dimensions. However, despite the initial intention to exclude evaluative aspects of personality, prevailing models typically include both descriptive and evaluative dimensions/traits. Saucier (2001) refers to these models as 'confounded'.

A further reason for the omission of what might now be considered to be personality characteristics of interest, was the limited capacity of computing technology to process large data sets (Ashton & Lee, 2007). Therefore, for this thesis, it became clear that an exploration of the debate about the nature of personality, the history of the development of trait or dimension-based approaches to personality and the inclusion or exclusion of evaluative aspects of personality from the study of individual differences, was necessary.

The more recently formulated HEXACO model (Ashton & Lee 2004) offered a 6-factor structure. The model, also partly lexically determined, emerged from factor analysis but drew on a wider range of languages and a broader cultural base for data gathering resulting in what the proponents of the model consider to be, a more representative and valid model of personality. The significance of this model to this research sits mainly with the emergence of, and inclusion into, the personality model of a domain labelled honesty/humility. Lee & Ashton (2004) developed a personality measure or inventory (HEXACO-PI and its revision, the HEXACO-PI-R) which have been shown to demonstrate positive psychometric properties (De Vries, Ashton, & Lee, 2009; Lee & Ashton, 2004). The literature review contains a more in-depth exploration of the model and the honesty-humility domain in particular. An objective of this research was to expand and develop the consideration of the role of individual difference in ethical decision-making, and the scale measuring honesty/humility was used in this research. This was justified as this research sought to explore morally relevant behaviour and it has been recommended that when morally relevant behaviour is the focus of interest then including the honesty/humility factor as a single scale can provide additional useful insights above those provided by measures of the Big 5 (Smillie *et al.* 2019).

Individual Difference – Character and Virtue

It was important for the development of this work to understand how the concept of personality has evolved through the history of psychology to the current viewpoints on trait based approaches to personality. In particular, due to the focus of this study, it became important to establish where and, more importantly, why, notions of moral personality, referred to as 'evaluative' aspects of personality by some of the founding fathers of trait based approaches to personality psychology (Gordon. W. Allport, Raymond Cattell, Hans Eysenk amongst others) became separated from the study of personality within main-stream personality psychology and the psychology of individual difference. Allport (1927) separated the notions of character and personality regarding them as different, independent concepts. The argument was presented that there were 'no moral traits until personality is evaluated' (p285) and implied that the study of 'character' had no place in the study of psychology. This separation has had a long and profound impact on research in this area. Concepts of character can be found in many other academic disciplines, for example, in philosophy, morality, religious studies, and sociology, however the concept of character is often absent

from the study of individual difference. The reasons for this development are discussed in greater depth in the literature review and include on-going debates concerning whether character traits are stable, enduring, and capable of being measured in ways acceptable to the discipline of the psychology of individual difference.

Trait-based approaches to individual differences of personality assume that traits are enduring and stable within the individual to some degree and, therefore can be measured and used to understand and predict behaviour. Some argue that morally related behaviour is more prone to situational effects and, therefore, would not reach the required criteria to be classed as stable and enduring traits. However, some of the well-established traits, for example *conscientiousness*, clearly include morally related behaviour. An objective of this thesis was to extend and develop understanding related to the consistency and enduring nature of moral aspects of character and personality. A further objective was to expand the knowledge related to individual differences in relation to ethical decision-making models.

This thesis seeks to build on more recent work which revisits the role of character in the study of individual differences and in particular the relationship between character and moral behaviour. A prominent model in this field is that of character strengths and virtues (Peterson & Seligman 2004). Again, a fuller discussion in the literature review explores this model which stems from the discipline of positive psychology but of import is the contention that they are,

'positive traits reflected in thoughts, feelings, and behaviours. They exist in degrees and can be measured as individual differences' (Park, Peterson, & Seligman, 2004, p. 603).

An objective of this research was to establish whether individual differences related to moral character or virtue can be predictive of an individual's response to an ethical dilemma or a decision related to an ethical scenario. The inventory developed to measure individual character strengths and virtues, The Values in Action Inventory of Strengths (VIA-IS-R) was used as part of the research to assist in achieving this aim.

Ethical Decision-Making Models

The overarching aim of this thesis is to establish which aspects of individual differences related to moral behaviour are of significance in determining ethical or unethical choices made by individuals facing decisions in the workplace. This necessitated exploring existing EDM models which have influenced scholarly activity in recent years.

The concept of moral reasoning and behaviour have been studied in some disciplines within psychology. One area that has been influential stems from psychologists within developmental psychology. Kohlberg's (1969, 1976) stage theory of moral development and Rest's (1986) model of ethical decision-making have underpinned much research in this area and have been applied to business and organisational settings as well as more generally across psychology. These are explored in the literature section however, what is most pertinent to this research is how these models relate to the notion of character and to what extent they are relevant in consideration of ethical decision-making in organisations.

As previously stated, the thesis considers the role of the individual in EDM in the workplace and research in this area needs to consider the current state of knowledge and contemporary theories and models of EDM. Debate continues within psychology about the role and extent of rational deliberation in human decisions in contrast to those perspectives that consider the propensity of humans to respond intuitively when faced with a decision to be made. Thus, the question of whether, and to what extent, choices which have an ethical

or moral dimension are responded to rationally or intuitively by individuals are also explored in the review of literature.

Kish-Gephart et al (2010) reviewed 30 years of research related to unethical workplace decisions and summarised the range of individual characteristics that had been deemed relevant in studies. The psychological characteristics that emerged and were included in their model were cognitive moral development, idealism, relativism, Machiavellianism, locus of control and job satisfaction. Although clearly this list contains some morally relevant constructs, the omission of moral character is noted. Neither Craft's (2013) nor Lehnert et al's (2015) reviews of the literature refer to character strengths and virtues within the individual characteristics included. Although, once again both Craft and Lehnert et al, do include morally relevant constructs e.g., philosophy/value orientation, religion/spirituality, and cognitive moral development. A more recent model proposed a much longer list of individual level antecedents of moral disengagement which facilitate unethical behaviour in the workplace and includes moral personality identity: moral personality, honesty-humility, empathy, and personal justice (Newman, 2020). Again, no specific mention is made of aspects of character and virtue. Nyugen & Crossan recently restated the importance of further research to identify the role of character and virtue in workplace EDM (2021), and this thesis seeks to do so.

Moral Foundations Theory

An additional conceptual framework that guided the research for this thesis was Moral Foundation Theory (MFT, Haidt and Joseph, 2004). The theory posits that individuals draw intuitively on moral foundations when making moral judgements and has been extensively researched in social psychology. The moral foundations contained in MFT include harm/care, fairness/reciprocity, ingroup/loyalty, authority/respect, and purity/sanctity. Although there are some studies that have considered the importance of, and relevance to, MFT in business ethics (see Anderson et al, 2015), there are opportunities for more detailed examination of its validity and applicability in business ethics, particularly related to individual difference in EDM. Questions also remain unanswered as to the relationship between the moral foundations, morally relevant dispositional traits and character and virtue. This thesis seeks to address some of these questions. MFT is discussed further in the literature review and was used to guide the construction of the SJT-EDM designed for the research, which is explained in the Methodology Chapter. To the best of the researchers knowledge this has not been done before.

Measurement in Ethic Decision-Making

This thesis also seeks to contribute to knowledge and research practice in the business ethics literature by developing a measure of EDM that follows the design principles stemming from psychology and psychometrics. Empirical studies within business ethics have utilised measures, often based on scenarios written by the researcher, however, few have been developed following the principles stemming from psychological testing and with psychometric considerations. Accordingly, the first stage of this research involved the development of a Situational Judgement Test (SJT). Discussed in the literature review, SJT are described as low fidelity simulations (Motowidlo, Dunnette, and Carter (1990), most typically developed and used within the assessment and selection of candidates for job roles. In some settings they may be used for employee development purposes, however, there are fewer examples of them being developed and used for research purposes. The advantage of developing and using a SJT to evaluate EDM in this research is clear. It allowed a more robust, psychometrically driven measure to be used, thereby increasing the validity of the measurement instrument, and allowing more confidence in the results of the

empirical study conducted for this thesis. This development complements the suggestion that the use of SJTs should be extended beyond their use in selection, and, to a lesser extent development and education, as they have potential to contribute more widely to aspects of personality research (Lievens et al, 2021).

Situational Judgement Test

Within the literature there are many debates concerning techniques for developing the items for SJT, and these are explored in the methodology chapter. For this thesis, for the first stage of the research, a qualitative study involving participants from a variety of UK based organisations enabled ethical dilemmas to be collected that accurately reflected the type of decision dilemmas faced in current business environments. Many research tools used in research for ethical decision-making, including interviews, focus groups, and vignettes, have been derived from the theoretical framework of the researcher and designed accordingly. There are some instances of researchers writing ethical dilemmas that are hypothesised to reflect realistic situations faced by individuals, however, the realism of these dilemmas is not empirically tested. There are few that have derived content from subject matter experts as is the case for this research and this was intended to increase the content validity of the ethical situations containing the dilemmas. Therefore, an objective of this research was to develop a SJT of ethical decision-making relevant to the area of business ethics. Additionally, it would be developed following best practice principles. A further objective of the research would be to use the SJT to establish whether measures of morally related characteristics can be considered reliable and valid antecedents of the decisions made by individuals when faced with ethical dilemmas or decisions.

This thesis also contributes to the discourse concerning what, specifically, SJTs are measuring as, although demonstrating good levels of validity, they rarely show evidence of an underlying structure that can be interpreted to represent latent variables.

Research Aim

The overall aim of this thesis was to explore the role of character and virtue in individual approaches to ethical dilemmas or decisions faced in work and organisational settings.

Research Question 1

Can a situational judgment test of ethical decision-making in the workplace measure differences between individuals in terms of moral character?

Research Question 2

Is there a relationship between character strengths and virtues and courses of action chosen by an individual when faced by a workplace ethical dilemma?

Research Objectives

To develop a situational judgement test of ethical decision-making in the workplace.

To identify relationships between specific individual character strengths and courses of action chosen by an individual when faced by a workplace ethical dilemma.

To investigate the validity of moral foundation theory and honesty/humility domain when applied to workplace ethical decision-making.

To develop an explanatory model outlining the contribution of morally relevant traits and characteristics in ethical decision-making in the workplace.

Chapter 2 Literature Review

'When you choose your friends, don't be short-changed by choosing personality over character.' W. Somerset Maugham (n.d)

Introduction and Context

The examination of ethical or unethical behaviour in organisations has attracted considerable attention from the media, practitioners, and academics over many decades but interest has heightened in recent years as a result of highly publicised corporate scandals. This heightened interest has been reflected in the volume of research across many academic disciplines (Elm & Radin, 2012). Ethical decision-making has been considered from a variety of academic perspectives, psychological, philosophical, management, and leadership disciplines, as well as business ethics. The volume of research and the interest shown from many disciplines emphasises the perceived importance of this area of study from an academic, research, and practitioner standpoint. The importance of the role of individuals, and the decisions they make in organisations where there are ethical considerations, can clearly be demonstrated. Organisational reputation can be negatively impacted, resulting in severe financial consequences for commercial companies e.g., loss of stock market value. Not-for-profit or third sector organisations also can be seriously negatively impacted by the adverse publicity of corporate crises caused by unethical behaviour. The potential benefit of conducting robust research which enables conclusions to be drawn about the nature of individuals and, how they make decisions, has potential benefit to organisations seeking to promote sustainable, ethical organisations. It has implications for the development of socially responsible and ethical corporate culture, and the assessment, selection, training, and development of employees. Encouraging a corporate culture where ethical codes are well established and respected may also impact positively on employees' well-being. To illustrate, a recent study demonstrated that displays of virtuous leadership positively impacted on employee well-being and trust (Hendriks et al, 2020). There are also practical implications for those involved in education, particularly those involved in teaching those destined for leadership roles in organisations.

This literature review examines relevant material drawn from many strands and academic disciplines, but its focus is primarily the psychology of individual difference and the role such differences might play in workplace EDM. Specifically, the existing body of knowledge, including scholarly opinion and empirical evidence, is explored. The review starts by discussing the concepts central to this thesis i.e., character and virtue. The origins of the specific concepts, and related concepts such as moral character, moral agency, and moral self, are explored along with current views concerning their conceptual basis and standing. The classification of character strengths and virtues, developed by Peterson & Seligman (2004), formed part of the theoretical framework for this research and, therefore, related literature is discussed.

An important focus of this research is the nature of individual differences as considered in the psychological literature. The review considers this, as it was important to establish the distinction between personality and character and *when* and *why* the two concepts became separated. The argument for reinstating facets of character and moral character as valid aspects of individual difference, is central to this thesis. This can only be achieved by providing evidence that character traits show an acceptable level of consistency and stability across situations and time and due attention is devoted to this in the review.

Next, it was necessary to consider influential models of EDM, their origins and evolution, debates, and empirical evidence about intuitive versus rational decision-making processes,

and how these are of relevance to ethical decision-making. Much literature considers the problematic “judgment–action gap”, discussed in more detail in this review. This is significant, because the disparity between the possession of a trait by an individual and whether their behaviour appears to be consistent with what might be predicted by the trait, is both of scholarly and practitioner interest. If it is not possible to predict behaviour from measured individual differences then, it could be argued, the area does not merit further consideration. EDM models reviewed include those that take an interactionist standpoint and include situational factors, along with individual factors, as determinants or moderators of decisions made. In this thesis situational factors are considered when they are deemed likely to interact with individual differences, for example in Trait Activation Theory (TAT), (Tett & Burnett 2003), Implicit Trait Policies (ITP), and cognitive-affective processing theory of personality (CAPS), (Mischel & Shoda (1995). Situational factors are not, however, considered in depth as the research focus for this thesis is on individual differences. Where specific individual factors, characteristics and differences are specified in models of EDM these are highlighted, and relevant literature included.

Gaps in the Literature

There are evident gaps in the literature in relation to the role of individual differences specifically those relating to character and moral character. The gaps concern whether, and to what extent, they may be considered as mediating or determining factors in the choices individuals make when faced with an ethical dilemma or decision. The review identifies the gaps in the literature related to the role that individual moral character might play as a determinant, antecedent or mediator in workplace decision-making where there is an ethical component. There are also gaps in knowledge and practice relating to how empirical studies of ethical workplace behaviour are conducted; the nature of measures used in these studies and how robust measures with acceptable psychometric qualities can be developed. Further gaps in the literature relate to the question concerning whether SJTs are measurement methods, such as an interview, or whether they can sit alongside psychometric tests and questionnaires and be designed to measure target constructs. Theories such as ITP, TAT and CAPS are also of relevance here. These gaps are highlighted and discussed throughout the review and summarised in the final section.

Virtue Ethics

The thesis, focusing as it does on moral character and virtue, sits within the philosophical framework of virtue ethics. This is a moral philosophy that is distinct from and separated from the two other prevailing (western) moral philosophies of utilitarianism (consequence based) and deontology (duty based). Virtue ethics has its roots in Ancient Greece, particularly associated with Aristotle, and is an alternative approach to deontological and teleological ethical theories. The starting point for the review of extant literature is therefore an outline of virtue ethics but particularly focusing on how scholars have applied the concepts of character and virtue stemming from virtue ethics to the study of individual difference. This section discusses the concepts and describes the philosophical underpinnings of the research. It draws on previous writing and research from several academic disciplines, including business ethics, moral philosophy, virtue ethics and psychology.

The ancient Greek philosophers, Socrates, Plato, Aristotle, considered that the goal of human existence was the pursuit of excellence or of virtue and that this would result in a ‘good society’. Good society was defined in terms of happiness. The word “virtue” is derived from the Greek word “arete” (excellence) and virtue theory refers to a collection of normative ethical theories which place an emphasis on ‘being’ rather than ‘doing’. As such, virtue theory is concerned with the character or nature of the individual and hence individuals

may be considered to possess, or not, virtues. Interest in virtue ethical theory was reawakened in the West in the 20th century, notably by philosophers such as G.E.M Anscombe and Alasdair MacIntyre. Anscombe's (1958) influential paper calls for a psychologically informed virtue ethics and is considered by many to be the basis for contemporary virtue ethics. This resurgence of interest is accompanied by claims that it is of relevance today and much is rooted in the work of Socrates, Plato, and Aristotle. Socrates and Plato considered that if a person did evil, it was due either to their ignorance or that they were mistaken about the right thing to do. Aristotle on the other hand, said that there were occasions when an individual knew what the right thing to do was but would not do it. In this respect he sought to move beyond Socrates and Plato by developing a theory that would account for this. He said that virtue shows itself in action and that character is shown when that action is chosen knowingly and for its own sake. So, for Aristotle, being a 'good' person was about carrying out the 'right' actions knowingly (Sachs, 2022).

When considering Aristotle's notion of 'the good life', MacIntyre, (1984, p.149) states that 'good' means a "complete human life, lived at its best and that the exercise of the virtues is a necessary and central part of such a life". MacIntyre also states that according to Aristotle, the 'good life?' or 'eudaimonia' (translated as 'blessedness, happiness and or prosperity'), is the state of being well and doing well by being well. Aristotle considered the virtues to be those characteristics that enabled an individual to achieve eudaimonia and conversely, lack of the virtues would mean that the individual would not be able to reach the 'telos' or goal. Aristotle's account is therefore teleological. Important in Aristotle's consideration of virtue is the notion of the virtuous mean. Individuals might have vices of deficiency or vices of excess which would impact on the outcome of actions. For example, courage, in excess, might lead to recklessness, if deficient, might show in cowardliness (Nicomachean ethics 1106a26–1106b28). Individuals considered virtuous, are thought to make decisions between the extremes and Aristotle believed that good judgement was key to an individual developing virtuous character and meant that the individual would give careful consideration to how to act in the face of an ethical dilemma (Nyberg, 2008).

Mintz (1996, p827) described virtues stemming from Aristotelian thinking as 'acquired human qualities, the excellences of character, which enable a person to achieve the good life" or eudaimonia. Virtues enable the individual to achieve their function and the acquisition and exercise of the virtues are therefore a means to an end. Whilst later philosophers, for example, Kant, considered acting virtuously to be contrary to inclination, Aristotle considered that to act virtuously was to follow inclination stemming from the cultivation of the virtues. When faced, with a choice, judgement is exercised, and the virtuous choice is to do the right thing in the right way at the right time and place. Modern moral philosophy as described, for example by Anscombe (1958), embodies the thesis that an action is right if, and only if, it expresses moral virtue and contributes to a flourishing life.

According to MacIntyre (1984), Aristotle viewed the law, as prescribed by the city state, as prescribing, or prohibiting, certain types of actions and that a virtuous man would comply. MacIntyre noted that Aristotle's work reflected the nature of the society he lived in and was predominantly based on Jewish law. However, McIntyre also noted that Aristotle did posit that there were universal and natural, as well as local and conventional, rules of justice. MacIntyre argues that an individual would need to consider at any time and place and in any community, what might be the 'common good', and that any account of 'virtues' must be generated from the community in which those virtues are to be practiced. As such, Aristotelian views, as with later considerations of virtue theories, do not conflict with deontological or teleological approaches and sit within the framework of normative ethics.

The notion of virtue continued to be explored by later philosophers and notably Thomas Aquinas who developed Aristotle's ideas further. Aquinas (c1225-74) was developing his thinking at a time when early universities and scholastic approaches were flourishing and he

is considered to have had a major influence in Europe generally, on Christian thought and ultimately a significant impact on Western ideas about business ethics (Flynn, 2008). Like Aristotle, Aquinas also viewed man as pursuing an ultimate goal and actions taken towards that goal would be 'good' or 'evil' depending on the goal pursued. Like Aristotle, Aquinas also considered that repetition of good acts led to a moral habit.

The debate concerning character, virtue and morality continued over the centuries and, with the emergence of psychology as a separate area of study, some of that debate moved into the examination of morality, ethics, and character from a psychological perspective. As psychology developed as a discipline, these topics were considered within the different schools i.e., moral psychology, positive psychology, and evolutionary psychology, amongst others. Necessarily these drew on the roots of the concepts from the ancient Greek philosophers but also on subsequent developments in thinking. Virtue ethics is founded upon the notion that individual virtues ought to be the central focus of ethical thought. However, inevitably, difficulty occurs in firstly defining what 'virtue' is and then secondly defining and describing the scope and content of virtues. This challenge was highlighted by MacIntyre (1984) who indicated that differences and also, incompatibilities, exist within philosophical considerations of the scope and content of virtues. He also asserted that these differences and incompatibilities would come to light if an attempt was made to compile lists of virtues from the writings of the various philosophers. Nevertheless, many scholars in the subject areas of relevance to this thesis have continued to focus on the concepts of character, stemming from virtue ethics and, in particular the notion of moral character. Many of the difficulties highlighted in MacIntyre's (1984) seminal work have been addressed and a greater consensus has emerged, although further questions remain.

Returning to MacIntyre, Akgün et al (2022) state that MacIntyre did not direct his attention to business ethics as the following indicates,

"When asked why he declined an invitation to address a conference on business ethics, MacIntyre replied that it was for the same reason that he would not attend an astrology conference" (Knight, 1998, p. 284).

Nevertheless, Akgün et al (2022) review the impact that MacIntyre's thinking has had on business ethics research, confirming that 'After Virtue' (AV) is one of the most frequently cited books in business ethics literature. Citing Wang & Hackett, (2020), they observe that AV facilitated the conceptualisation of virtue-centred leadership and the important difference between moral goals, moral traits, and moral virtue. The consensus view concerning the current status of moral character and the further challenges that remain are now considered.

Character and Virtue

It is important to clarify the difference between the various concepts and labels used in this arena. Much consideration has been given to the status of virtues as traits of character and this has been considered by prominent moral philosophers. Mintz (1996 p827) described virtues stemming from Aristotelian thinking as 'acquired human qualities, the excellences of character, which enable a person to achieve the good life'. The term 'arete' used by Aristotle, means virtue or a positive trait of character. Other philosophers also reflect this, "a virtue is a character trait that a human being needs to flourish or live well" (Hursthouse 1999, p21). In virtue ethics the excellence of individuals character is the primary focus and an individual with good character will possess virtues that push them into behaving in line with the virtues. A virtue is considered to be a positive trait or quality which is deemed to be morally good.

Aristotle emphasised stability and stated it was key to the virtues and to being a good person. A person who occasionally commits a virtuous act is not a good person. When a

virtue becomes second nature, a habit, then the person can be said to be good. Hursthouse (1999) considered that once obtained, a virtue becomes entrenched and involves much more than mere tendencies to act in certain ways. Fowers (2005, p4) stressed that “virtues are, simply, human excellences.” and refers to “virtues of character” or “the character strengths that make it possible for individuals to pursue their goals and ideals and to flourish as human beings”. Richardson (2012) continued the discussion and emphasised that, in virtue ethics, virtues are not only ideas in individuals’ heads but are seen in everyday actions. It is evident here that this conceptualisation of virtue leads to an understanding that an individual may possess aspects of character which are stable and enduring and can be seen in everyday behaviour. This notion is fundamental to this research because it underpins the belief that character can act as a determinant of individual behaviour in the workplace.

Gotsis & Grimani (2015) maintained that virtue is related to but distinct from character strengths. This was clarified by Park & Peterson, (2009, p.3) who stated their perspective on character as

‘a family of positive characteristics shown in feelings, thoughts, and actions, each of which exists in degrees—i.e., along a continuum ... virtues are the core characteristics valued by moral philosophers and religious thinkers ... Character strengths are the more specific psychological processes or mechanisms that define the virtues’.

Character strengths are described as psychological processes or mechanisms which define a virtue and constitute “distinguishable routes” along which the virtue might be displayed (Peterson & Seligman, 2004, p.13). Park & Peterson refer to character strengths as aspects of personality that are morally valued (2009). Elsewhere, and frequently, character strengths are referred to as traits including in Peterson & Seligman’s (2004) original classification and continuing through to more recent articles (Wagner et al, 2021; Kretzschmar, A. *et al.* (2022)). The importance of the word ‘trait’ in this context needs considering. As discussed later, the concept of traits in relation to personality has been highly influential in guiding research into the psychological consideration of individual difference. This review of the literature considers later what is meant by a trait in personality psychology and how this has impacted on debate and research into the nature of individual difference.

If, as is asserted in virtue ethics, virtues exist in individuals and possess some level of stability then the argument that they can be measured in similar ways to well-established models of personality traits or dispositions, discussed later in the literature review, is strengthened. Similarly, as emphasised by scholars such as Richardson (2012), virtues are manifested in daily activities by those who possess them as character traits and this, by inference, must mean that they are observable in actions and measurable to some degree.

Blasi (1984) proposed the idea of moral *personality* that, in his view, was necessary to augment the notions of rationality which had dominated thought in relation to moral reasoning. The moral agent, from its roots in Aristotelian virtue ethics which stressed the role of character and virtue, was extensively discussed by Blasi (1984) in his ‘self-model’ of moral reasoning. His model views moral notions as central to self- understanding and that this motivates behaviour consistent with those notions. Blasi’s extensive work in this area was intended to link moral cognition and moral personality and to better explain the link with moral behaviour (Lapsley et al, 2004). The importance of this issue, i.e., the gap between moral reasoning and actual behaviour is explored in more depth later in the review. According to Narvaez, et al (2009) moral character is about enduring moral qualities that influence an individual to uphold moral principles. Blasi (2005) states that character and virtue exist in everyday thinking concerning moral functioning, that they appear to capture

something that is not captured elsewhere in thinking about cognitive structures and finally, that they are relatively stable personality dispositions to behave morally.

For the purpose of this thesis, the definition of moral character that is used stems from Funder and Fast's (2010, p. 669) definition of personality:

"An individual's characteristic patterns of thought, emotion, and behavior, together with the psychological mechanisms—hidden or not—behind those patterns."

And for moral character specifically,

'Moral character can be conceptualized as an individual's disposition to think, feel, and behave in an ethical versus unethical manner, or as the subset of individual differences relevant to morality.' (Graham et al, 2011 p.45)

As already indicated, this research treats moral character from the perspective of dispositions. The study of 'individual difference' in psychology focuses on differences in *cognitive or affective functioning and behaviour* of individuals and this research views moral character as sitting within the psychological study of individual difference. This view concurs with WTT which describes traits as robust dispositional capacities for trait-appropriate behaviour and posits that the behaviour will be displayed if there are trait-relevant situation stimuli (Fleeson & Jayawickreme, 2015).

Character and Personality

In colloquial use, the terms character and personality may often be used interchangeably. Within academic disciplines important differences between them, and any potential connections between them, are much debated. For example, there has been, and continues to be, considerable discussion within contemporary moral philosophy concerning the concept of character. This debate is also seen elsewhere in the literature, for example, within moral psychology, social psychology, business ethics, personality psychology and other disciplines. Much of the debate has centred on the extent to which character, specifically moral character, can be treated as an aspect of personality.

The study of personality within psychology has resulted in theoretical frameworks from different sub-disciplines, including, but not exclusively, psychodynamic, humanistic, biopsychological, evolutionary, social cognitive theories and the dispositional (trait) approach. The research for this thesis considers character from a dispositional or trait based theoretical standpoint. However, it also considers the criticisms made of this theoretical standpoint which have led to more recent developments that seek to incorporate a broader approach to personality such as cognitive perspectives and processing theories (Mischel & Shoda (1998). Personality traits are considered by trait personality theorists as relatively stable and enduring characteristics and as such, they are deemed to have the potential to be measurable and observable and links with observable behaviour should be evident. As the discipline of psychology developed, the term personality became dominant in the study of individual difference and trait-based approaches, and the term character became less evident.

The word 'character' had been frequently used in psychological studies exploring individual difference in the early years of the development of psychology as an academic field. In an article published in the *Journal of Personality* in 1932 entitled 'Of the words character and personality', William McDougall, an influential social psychologist at the time, discussed the history of the concept of character and its treatment by moral philosophers, psychologists and academics and renowned thinkers over the 19th and 20th centuries. He also observed

that different international perspectives of the meaning of the word 'character' created issues for scholars. For example, the use of the word in the English language appeared to have a particular, and distinctly different, meaning to that understood by German, French or American scholars (McDougal 1932).

McDougal (1932 p13) appositely comments

'There has been considerable effort to devise methods of measuring traits of character; but, as with the similar work of Webb in England, one feels that some outline of a theory of character is needed for the guidance of such work, and that, without such guidance, the experimental approach to character is wandering in a wilderness.'

Further evidence for the inclusion of character in the early study of psychology is the existence until 1945 of the journal with the title 'Character and Personality'. Searches in other journals also reveal many articles referring to 'character' as a focus for empirical research in the area of individual differences. However, the change of name of the journal Character and Personality after 1945 to The Journal of Personality reflected a growing consensus that personality was the preferred term and should be the focus of study in individual difference.

Allport (1927) separated the notions of character and personality, regarding them as different, independent concepts. The argument was that there were 'no moral traits until personality is evaluated' (p285) and that the study of 'character' had no place in the study of psychology. This separation has had a long and profound impact on research in this area. References to notions of character are to be found in, amongst other areas, positive psychology, educational psychology, moral psychology, developmental psychology, and clinical psychology but far fewer can be found in the study of individual difference and personality psychology. However there has been a renewed interest over more recent times within personality psychology, the psychology of individual difference and organisational behaviour.

According to Cohen & Morse (2014), the lack of consideration of character as a legitimate focus of study in the field of organisational behaviour stemmed, partly, from the proponents of situationalist approaches. Situationalist approaches argue that behaviour, particularly in relation to moral behaviour, is predominantly influenced by situational factors and the role of individual factors are not considered. The situationalist view is discussed in greater depth later in this review as it also is relevant in consideration of the trait-based approaches to personality and also, ethical decision-making models.

Fleeson et al (2014) are among scholars who have argued for a re-instatement of a personality-based consideration of moral and immoral behaviour. This has been echoed by some psychologists studying the nature of individual differences.

'It is clear from the vast empirical literature in social/personality and industrial/organizational psychology that the landscape of moral character is wide and varied, but we do not yet have an adequate map.' (Cohen et al, 2014, p943.)

Others question the status of character in the study of personality and propose it as a distinct and separate construct. Hannah and Avolio (2011, p989) clearly assert that '*character is not personality*' and that it can be distinguished from both an individual's values and their personality. However, they continued by stating that whilst they considered character to be distinct from personality, it might be structured similarly and operate in a similar way. They referred to the concept of a *character signature* and equated their view of the *character*

signature as being similar to *personality signatures* as in dynamic personality models, for example, that proposed by Mischel & Shoda (1998).

Banicki (2017) asserted that character and personality both sit within the remit of the study of individual difference. However, in a later clarification in response to Lameill (2018), he clarified that he had meant the term *individual difference* in a broader non-technical context rather than specifically referring to the term as used in the psychological research paradigm. In his theoretical discussion of the differences between the two concepts, an examination of the historical development of the two concepts, and an analysis of their different consideration within psychology, Banicki (2017) also highlights the exclusion of character from discussions of personality by the early trait theorists. He considered both character and personality to be dispositional in nature and argued that personality and character both should be considered as potentially capable of explaining behaviour, in combination with situational factors. He cited Goldie (2004, p27), as remarking that “character traits are, in some sense, deeper than personality traits, and ... are concerned with a person’s moral worth” and continued by asserting that the difference between the two concepts lies in the dimensions of depth and that of morality.

Virtue ethics considers that a person who possesses a certain set of personal characteristics is more likely to make the ‘right’ choice in ethically complex situations (Fisher & Lovell, 2006). In virtue ethics, an individual’s moral conduct is not determined by a consideration of the consequences nor an overarching code, but by specific personal traits. ‘

‘A virtue can be thought of as a habit or character trait that is part of one’s identity and that affects one’s behaviour’ (Jonsson, 2011, p31).

‘Virtue’ as an aspect of ‘character’ and ‘virtue’ and ‘character’ as aspects of ‘personality’ have been explored. Cawley et al (2000) for example claim that there is evidence indicating that virtue shows a strong correlation with personality and therefore may be influenced by personality rather than by moral reasoning and cognitive development. Furthermore, these authors argue that psychology had,

‘abandoned a deeper and richer conception of the human person by turning from character to personality. The character, or virtues approach, to the human person addressed issues regarding human agency and personal responsibility’. (p999)

The view that traits of character and virtue should sit alongside those of personality was also posited by Jayawickreme et al. (2014) who wrote that “we see no reason a priori to think that virtue traits would not share many of the same properties as other personality traits” (p. 290). Others have also called for the concept of character to be re-instated as a potentially important component of personality worthy of investigation (Fleeson et al, 2014). They propose three justifications for this suggesting this firstly, asserting that moral and ethical behaviour might also be based ‘*on long-standing psychological characteristics that exist within individual persons and on which individuals differ*’, citing Hill & Roberts, (2010) and Narvaez & Lapsley (2009) in support of this assertion. Secondly, they argue that the concept of character has meaning for people in their daily experiences and that people evidentially make judgements concerning character. That individuals use the language of character, vice, and virtue in everyday language is also stressed by Fowers, et al (2021). The conclusion drawn for a comprehensive empirical study was that peoples’ perception of others’ moral traits play a significant role in impression formation.

Moral character information powerfully determines the overall impression we form of another person with whom we have or expect to have an important or meaningful relationship. (Goodwin et al (2014, p163)

This supports the second justification given by Fleenon et al (2014) that psychologists need to explore the validity and accuracy of these judgements and contribute to knowledge in the field of moral and social cognition. The third justification given by Fleenon et al (2014) is that the tools and techniques used in the study of personality would be likely to bring valuable insights to the field of morality.

Snow et al (2020, p12) assert that virtues are 'best understood as a particular subset of personality traits. Given that this thesis explores the nature of character traits and their relationship with other dispositional traits, particularly of personality, then it is necessary to explore personality theories relevant to the theoretical standpoint of this research. Before this however, it is important to highlight an important problem that has focused the attention of scholars researching dispositional traits, that is, the difficulty of explaining the frequently observed inconsistency between an individual's possession of dispositional traits and the expression of those traits in the individual's observed behaviour.

The Problematic Gap

As already indicated, the explanation for the gap between the possession of an individual of particular personality traits and their behaviour in reality has concerned many scholars and resulted in the exploration of different possibilities and correspondingly different explanatory theories and models. An individual whose psychometric profile suggests they are highly extraverted may not always behave in an extraverted manner. The same can be said for those scholars whose focus has been on moral character and behaviour. Why, for example, might a person who scores high on conscientiousness not always behave in a conscientious manner? In the case of both personality traits and traits of character and virtue, similar reasons have been explored and the importance of interactionist models is acknowledged.

Interactionism

Restating the point that dispositional traits need to describe, explain, and predict, it is important to consider the complexity of models incorporating traits related to moral character. Moral character impacts on unethical behaviour but the effect may not be a simple and direct one (Cohen & Morse 2014). These authors stress the importance of situations in determining behaviour, proposing that the interaction between the person and the situation might be mediated by character. For example, some research suggests that the decision whether to avoid or engage in certain situations is moderated by aspects of personality (Carnahan & McFarland, 2007). The study, cited as evidence, concluded that those who self-selected into a targeted study replicating the Stanford Prison Experiment scored higher on Machiavellian, aggression, narcissism than those who did not. The traits referred to are explained and examined in more detail in a latter section of this review along with others that have been included in EDM research. What is important to note here is the notion that traits are likely to affect behaviour. Cohen & Morse (2014), whilst stressing the importance of the interactionist model i.e., involving the situation (or environment), the person (moral character) and the ensuing behaviour, also stress the likely complexity of the interaction effect.

Theories of Personality

Mischel & Shoda (1998) sought to both broaden the consideration of personality and to unify what they described as the two separate approaches to understanding personality that had emerged within different psychological disciplines. According to the authors, these distinct approaches, described as dispositional (trait) approaches and processing (social-cognitive, dynamic, affective) approaches, explored different, and often opposing, paths in developing personality theory. As already mentioned, but is necessary to restate, trait-based

approaches (dispositional) seek finite, stable and enduring traits that predict individual behaviour across situations. Trait-based, dispositional approaches can be referred to as structural approaches, with models varying in the number of traits they propose and hypothesising different hierarchical structures of the identified traits. Baumert et al, (2019), refer to the traits in these models as factorial traits because the models referred to were produced from factor analysis of the data. Such models would include the Five Factor Model (Costa & McCrae, 1985) and HEXACO (Ashton, Lee & de Vries, 2014), amongst others. From the corresponsive perspective factors are seen as reflecting the effect that the underlying causal generator has on the observable manifestation of the trait.

Studies that have focused on the role of traits stemming from structural models in ethical decision-making are considered later in this review and, as with many studies considering the predictive ability of traits in other contexts, they show mixed results. There are many explanations proffered for the predictive gap between traits and behaviour. Some claim that dispositional, trait-based theories are inadequate to explain the complexity of personality (Mischel, 1998). Others consider that the extent and range of traits that should be included in models of personality should be broadened to increase explanatory power of the models. Scholars have also considered that the optimal hierarchical structure of trait models has not been described. Another explanation for the predictive gap concerns the difficulty of achieving accurate measurement of traits. Lamiell, (2018), challenges the validity of factor analysis as a way to determine factors of personality. Of particular pertinence to this thesis is the continuing evidence for the problematic gap between the possession of a trait in individuals and the differences in behavioural manifestation of that trait by those individuals.

The globalism/situationism debate within philosophy and social psychology, has been and is, concentrated on situational consistency. This has also been the focus within personality psychology. Given that the accepted definition of traits implies that there is a level of consistency between possession of the trait and the resulting behaviour of the individual, it is an important area of study. It might be hypothesised that traits interact together in complex networks so that the resulting behaviour may be a result of this interaction and that simple approaches which consider the relationship between a single trait and the observed behaviour do not capture this complexity. Thirdly, it is conceivable that there may be more traits left to be identified and these may help explain behaviour more accurately and consistently. Fourthly, there may be mediating factors between the possessed trait and the behaviour, for example, motivation, values, etc. Fifthly, there may be intraindividual differences in the level of consistency between trait and behaviour which may not be unravelled by the prevailing statistical approach taken in dispositional trait approaches.

The Significance of the Situation

From a lay perspective, the idea that human behaviour might depend on the situation the person finds themselves in surely comes as no surprise. From an academic and theoretical standpoint, the extent of, and nature of, this dependency has been given much scrutiny. This thesis considers how situational factors are viewed in the psychology of personality and individual difference as well as individual differences of moral character. It explores how individual differences have been considered and placed within models of EDM. The gap between moral judgement and actual behaviour is of evident importance when considering EDM, both to academics working in many disciplines and to stakeholders within organisations. Scholars have referred to this gap as the judgement-action gap (Blasi 1980), or the thought-action problem (Locke 1983).

Globalism Versus Situationism/Situationalism

The significance of the situation that the individual finds themselves in and how that impacts on their behavioural response has long been debated within the study of the psychology of

individual difference in personality. The early pioneering work of Allport (1937) had significant impact on trait-based approaches to personality however he did acknowledge that the consistency issue was a troubling one. Allport proposed the notions of cardinal, primary and secondary traits. Cardinal traits being those possessed by an individual that would be seen in behaviour across all situations, primary were those resulting in some level of behavioural consistency in many situations and secondary proposed as being less commonly displayed in individual behavioural responses to situations. Allport continued to recognise the importance of the situationalist position and towards the end of his illustrious career concluded,

“To the situationist I concede that our theory of traits cannot be so simpleminded as it once was. We are now challenged to untangle the complex web of tendencies that constitute a person, however contradictory they may seem to be when activated differentially in various situations.” (Allport, 1968, p.47)

Of particular relevance to moral character traits and behaviour, the early studies of Hartshorne & May also had significant impact on subsequent considerations of the consistency of individual attributes (1928). After studying the behaviour of children, they posited that there was not sufficient evidence to support the conclusion that honesty was a stable characteristic but instead, that it appeared to be situationally determined. Other studies concerning the behavioural consistency of morally relevant characteristics are reviewed later however, it is important to note that this study was an important and, influential one, in the divide between trait theorists and situationalist approaches.

Within social psychology, Mischel (1968), was among the scholars who asserted that situations were significant determiners of an individual's behaviour. Trait theorists, continued to counter the arguments put forward by those advocating the situationalist perspective and defending the state-trait perspective arguing that state-trait concepts allowed for consideration of their possible function as intervening variables (Eysenck & Eysenck, 1980). Mischel & Shoda (1995) noted that, despite decades of research, the results from correlation studies linking dispositional traits and behaviour were disappointing and developed the cognitive-affective processing theory of personality (CAPS) to explain cross-situational variance in behaviour. Cooper (2020) reports that some supporting evidence for consistency, particularly for broad traits, comes from studies which demonstrate (i) that traits are consistent across time and situations, (ii) are influenced by an individuals' genetic make-up and, therefore, by implication must exist, and finally, (iii) can predict behaviour.

In both social psychology and the philosophy of ethics, this debate concerning character traits has been phrased in terms of situationism versus globalism. Influential scholars in this area include John Doris and Gilbert Harman, whose papers published at the start of the 21st century, started the contemporary debate (Miller, 2017). Both Doris (2002), and Harman (2009), would appear to support the notion of situationism i.e. that virtuous behaviour is elicited by the situation an individual finds themselves in rather than related to the possession, or not, of particular character traits. According to Doris (2002), the globalist conception of traits, that conceives character traits as reliably manifested in trait relevant behaviour across situations and stable over time, is a mistaken one and not supported by empirical evidence. Indeed, the lack of support from studies exploring the consistency of moral behaviour led many to abandon explorations of character and moral character in psychology (Fleeson et al, 2014).

According to Linn (2019, p55) this 'consistency thesis' expects that virtues should be 'behaviourally expressed in a wide range of trait-relevant situations'. For example, Kunda (1999) claimed 'Even slight variations in the features of a situation can lead to dramatic shifts in people's behavior' (p. 499). Linn (p.57) referred to this as the 'empirical inadequacy

charge' and described it as stemming from findings in experimental psychology including the infamous early experiments of Milgram (1974) and, continuing through the decades, with other experimental psychology studies which found little consistency in behaviour.

'...the social psychology of this century reveals a major lesson: Often, it is not so much the kind of person a man is as the kind of situation in which he finds himself that determines how he will act.' (Milgram, 1974 p205)

Linn concluded that the expectation that virtues should have predictive power is not important to the philosophical debate within virtue ethics. Aristotle, himself, stated that those who lack virtue may have a changeable character demonstrated by lack of consistency. However, whilst asserting that it was not necessary to prove consistency in order to consider the concept of virtue as a valid one, Linn continued by positing that the distinction between global and local traits is an important one when considering the issue of consistency. Linn (p. 59) also points out that in the debate it is never made entirely clear *'how many trait-relevant situations in which a trait must be activated in order to be considered global.'* This is significant to the argument proposed by some that particular character traits possess sufficient consistency to be considered as stable and enduring characteristics including Fleeson (2001, 2004), in line with definitions accepted for personality traits such as the FFM (Goldberg, 1990; McCrae & Costa, 2008). For that to be the case, many consider that there must be evidence of a link with behaviour and the empirical evidence for this link is considered later.

Argument continues within the disciplines of moral and social psychology as to the status of character traits and the issues of cross-situational consistency. Some scholars in these fields defined the status of character traits as important and argue that the move towards a situationalist stance was mistaken. Fleeson et al (2014) countered the most frequent situationalist arguments. In Fleeson's view, such arguments were firstly, based on inadequate statistical analysis of early studies. Secondly, many studies that considered moral characteristics as individual differences showed acceptable levels of reliability and validity. Thirdly, that many moral characteristics show correlations with existing, accepted personality traits. Fourthly, whilst evidence does show that behavioural inconsistency is sometimes evident, it is also evident that behavioural consistency does manifest in some situations.

In a robust defence of the importance of character traits in determining behaviour, Yang (2016) discussed and disputed the situationalist standpoint. In her view, the view taken by personality psychology and virtue ethics concerning the existence of global character traits is mistaken. Whilst acknowledging that evidence for empirical studies is not conclusive, she nevertheless, argues from a philosophical perspective that possession of a character trait does not imply that it would always be manifest, irrespective of the situation. She posited that character traits are likely to be sensitive to the nature of the situation the individual finds themselves in and to dismiss the possibility of their existence is mistaken. Further, that the ordinary understanding of character traits assumes that they are possessed in degree i.e., there are intra-individual differences in the possession of a trait and therefore this may explain some behavioural inconsistencies. This thinking would appear to be in line with Whole Trait Theory (WTT) developed by Jayawickreme, et al, (2019) and WTT is more fully discussed in the next section.

The ordinary understanding or ordinary attribution account has its roots in Aristotelian virtue ethics and as has been previously stated, the concept of consistency and inconsistency of behaviour is recognised in virtue ethics. Yang (2016) also mentions that traits may not be 'activated' in certain situations. The use of this term clearly resonates with both WTT

(Jayawickreme, et al, 2019) and Trait Activation Theory (Tett & Burnett 2003), both discussed in this literature review, however it is worth noting that Yang (2016) does not comment on this connection. The applicability of using the statistical measure of correlations, based on combining data from many individuals is also questioned in the article as some individuals may show greater levels of consistency across situations than others do. Finally, it is argued, variations in the situation may result in changes to some individuals' behavioural responses but again, that does not necessarily mean that those changes cannot be explained by traits possessed by the individual.

The ongoing debate concerning situational consistency of behaviour has further encouraged the development of alternative models of personality and for this thesis, models linking dispositional trait approaches with processing approaches are considered.

Whole Trait Theory (WTT)

This theory was also proposed as a way of encompassing both the psychometrically based trait perspectives and the socio-cognitive approaches to personality (Jayawickreme, et al, 2019). WTT was intended to build on the work of both Allport (1937) and CAPS (Mischel & Skoda, 1995). In WTT, a personality trait is composed of a set of situation-specific trait-appropriate responses, which are produced when certain "social-cognitive" mechanisms (cognitive/affective/motivational processes and dispositions) are triggered by the perception of trait-relevant stimuli in a person's external and/or internal environment. The authors emphasise that both paradigms, trait based and socio cognitive, had contributed to significant progress being made in understanding personality with the former focusing on descriptions of individuals thought, feelings and behaviours and the latter focusing on explaining why people think, feel, and behave in the way they do. As already indicated in this review, this merging of the two paradigms has been recognised as necessary to counter criticisms stemming from the problematic trait-behaviour inconsistency and the situationalist standpoint. Socio-cognitive variables are proposed as being sensitive to factors in the situation and responsible for the resulting behaviour.

Key to WTT is the notion of the density distribution of trait relevant behaviours or states (Fleeson, 2001) and a more nuanced understanding of behavioural consistency (Fleeson & Nettle, 2009). In the 2001 study, Fleeson examined the Big 5 personality traits and observed that individuals demonstrated large variance in everyday behaviour but that average tendencies were highly stable descriptors of individuals and that the shape and size of the distributions provided reliable descriptors of individual difference characteristics. Pointing out that personality psychologists on both sides of the debate recognise that there is consistency in the aggregate behaviour of individuals but that there is less consistency in single behaviours, Fleeson (2009), proposed that the notion of consistency in the trait/situational debate might be reconsidered by the recognition that there exist two different types of consistency; traits produce different types of consistency to different degrees. Some empirical evidence in support of WTT in relation to morally relevant behaviour has emerged, for example, daily within-person variability was shown for the Big 5 factors (Church et al, 2013). Hardin et al (2022) reported results from a study demonstrating that self-reported levels of Narcissism, Machiavellianism, and psychopathy showed daily variation and, in support of WTT and the density distribution approach, showed that self-reported dark personality traits were significantly related to their typical daily reposts over a 21-day period.

Supporting a more integrated approach to personality psychology, Baumert et al (2019) proposed that since a key goal of personality psychology is to describe, predict and explain, a more integrated approach was necessary i.e., one that encompasses structural, process and developmental approaches in combination. They point to the problematic area of causation of behaviour, i.e., the observation that individuals possessing the same level of a particular trait may behave differently in the same situation. They argued that trait-based

approaches have been useful in that the factors currently identified can suggest groups of phenomena that might have common causes but the driving forces behind the behaviours needed to be identified by considering lower levels of organisation within the hierarchical structures. In stressing this they also stress the importance of examining intraindividual differences.

To conclude, given that there is evidence that broad traits exist, i.e., stable individual differences, and there is evidence that some people engage in virtuous behaviour more frequently and more consistently than others, it is argued that virtuous states of character are legitimate objects of study (Jayawickreme et al, 2014). Additionally, Snow et al (2020) propose that the neo-Aristotelian perspective of virtues, as subsets of personality, can be integrated with WTT and provide an empirically sound framework for research.

The consensus within theoretical, moral, and social psychology would now seem to favour a dynamic, interactive, and comprehensive model of personality. Such a model would incorporate a range of dispositional traits, on which individuals will vary and that these traits may be displayed in behaviour. However, this behavioural manifestation may be displayed in some situations but not others.

Trait Activation Theory (TAT)

An alternative framework that seeks to explain the cross situational dilemma in trait-based personality theories is TAT. TAT was also proposed as an explanation for the variability of individual behaviour across situations, specifically related to workplace behaviours (Tett & Burnett 2003). TAT takes an interactionist standpoint and put simply, posits that traits are expressed in response to situation cues. The conceptual model was built on earlier work, for example, by Tett & Guterman (2000) which indicated traits expressed as intentions are consistent in trait relevant situations. Relevant situational factors are identified which include, job demands, distracters, constraints, releasers, and facilitators), and that they operate at task, social, and organizational levels. (Tett, 2003; Tett & Guterman, 2000; Tett et al, 2013).

In line with Kenrick and Funder's assertion that 'traits influence behavior only in relevant situations...' (1988, p. 29), Newman, et al (2020) suggest that TAT may be a useful framework for researchers to use when considering the impact of personality traits on moral disengagement. As an example, Newman et al suggest that individuals who score high on the trait 'conscientiousness' might be less likely to morally disengage when faced with ethical dilemmas at work than those low in conscientiousness. They cite a study by Kish-Gephart, et al (2014) which demonstrated that conscientious individuals were less likely to engage in self-serving behaviour. The theory has been developed and extended since it was first proposed. Additionally, it has allowed considerable progress to be made in understanding the complexities of the correspondence between a trait and the resulting behaviour.

Implicit Trait Policies (ITP)

ITP are defined as beliefs held by the individual about the effectiveness of traits in situations and are therefore assumed to mediate the link between traits and behaviour (Motowidlo et al, 2006; Lievens & Motowidlo, 2016; Lievens, 2017b). ITP are believed to be dispositional in nature but may also develop through individuals' experiences, i.e., individuals learn which traits to express in certain situations (Lievens & Motowidlo, 2016; Motowidlo, S. J. & Beier, M.E. 2010). ITP are deemed of particular importance in SJT research and have been used to explain the complexity of the analysis of SJT content validity. The 'hot mess' of SJT construct related validity is explored later in this chapter (McDaniel et al, 2016 p 47). What is important to note at this juncture is that ITP would appear to sit well with WTT and TAT to explain situational variance between traits and behaviour. As Lievens (2107a) points out,

measurement of personality, when personality is deemed to be displayed differently in different contexts might be most usefully measured in empirical studies that give situational context such as SJTs.

How Many Traits are Needed?

There is some consensus that a dynamic, interactive, and comprehensive model of personality is needed, and this has meant that some researchers have continued the search for more dispositional traits that explain behaviour. Other psychologists, notably Cooper (2019) have expressed caution concerning the pursuit of narrow traits by designing scales that effectively ask the same question repeatedly, merely paraphrasing and rephrasing the questions and then concluding that a new trait has been identified. He does not, however, advocate abandoning the search for personality traits. He does advocate concentrating on the higher order traits that are already well established in personality research. He advocates that researchers should also ensure that measures are used where items do not have the same meaning as each other.

However, as already highlighted, evaluative trait descriptors were excluded from the item pools analysed in the development of structural personality models which led to the development of the Big Five model. There have been steps to reintroduce evaluative traits into more comprehensive considerations of personality traits. Alongside the Big Five factors, other personality traits have been considered in studies considering the relationship between traits and morally relevant behaviour. Studies looking at this relationship are considered in the next section.

The *correspondence* view of personality traits is that the trait as measured, for example by a personality questionnaire, captures the effect that the underlying causal generator (latent variable) has on observable behaviour. The latent variable is judged as exerting an influence on the observed variable and the level of covariance is determined through statistical calculation. Any evidence of covariance is taken as demonstrating that the latent variable exists. The factor analytic tradition established a firm hold on personality research. Developments in theoretical statistics and statistical analytical techniques, Item Response Theory and latent structure analysis reinforced the dominance of the approach. As indicated by Borsboom et al (2003), the latent variable became a substantial element in psychological theory, but they asserted that there were some questions unanswered as to the theoretical basis of latent variables. Before considering some of these questions and reviewing alternative approaches, this review first considers latent variable approaches to morally relevant dispositional traits.

Unethical/Ethical Behaviour – Traits and Personal Characteristics

The search for trait-based explanations for ethical/unethical behaviour has meant that the role of many established traits, including the 'Big 5' factors has been explored. The individual traits described in the 'Five Factor Model' (FFM), also referred to as the 'Big 5' have been highly influential and much debated in the field of personality and individual differences. The FFM emerged from the research of several psychologists notably, Tupes & Cristal (1961) and McCrae & Costa (1987), the former having reanalysed the data collected by Raymond Cattell. The FFM conceptualises personality as clusters of traits and the traits identified were, neuroticism, agreeableness, openness to experience, conscientiousness, and extraversion.

Within work psychology, studies have demonstrated some evidence of the predictive ability of personality traits, thereby establishing that there is some level of consistency. Although it is generally acknowledged that the relationship is not straightforward, traits such as *conscientiousness*, one of the Big 5, have been shown to predict job performance. Ones

conducted a review of meta-analytic studies and concluded that *'Big Five personality variables as a set predict important organizational behaviors (e.g., job performance, leadership, and even work attitudes and motivation).'* (2007, p1010)

Of specific interest to this thesis are studies that have considered the correspondence between personality traits and morally relevant workplace behaviour. Several classifications of unethical behaviour have emerged in the organisational behaviour and business ethics literature. One area that has been identified and studied is counterproductive work behaviour (CWB). It is defined as behaviour, which is intentional by an employee, and is viewed as contrary to the organisation's legitimate interest (Sackett & DeVore, 2001). CWB, is referred to in some studies as workplace deviance, and has been defined as "voluntary behavior that violates significant organisational norms and in so doing threatens the well-being of an organization, its members, or both" (Robinson & Bennett, 1995, p. 556). Salgado (2002) studied links between the Big 5 and counterproductive work behaviours by conducting a meta-analysis of published research. Counterproductive work behaviours included a category labelled deviant behaviours such as theft, disciplinary problems, drug and alcohol abuse, property damage, organizational rule breaking and other irresponsible behaviours. He concluded that of the Big 5 traits there was evidence that conscientiousness did predict deviant behaviours. The extent to which CWB might be considered as ethical or unethical however clearly will depend on a number of factors some of which are not within the range of this thesis as 'legitimate interest of the organisation' may be in conflict with other stakeholder interests.

Judge and Bono (2000) in a study of 200 leaders, found the multiple correlation of the Big 5 traits with transformational leadership, corrected for measurement error, to be .40. Whilst not specifically considering ethical constructs and decision making, transformational leadership is categorised as an 'ethical leadership' and such leaders are assumed to be more likely to act in an ethical way.

In a more narrowly focused study, Bjørkelo et al (2010) studied 'whistleblowing' and the correlation between 'whistleblowing' and personality traits. Whistleblowing encompasses the actual behaviour of the individual (not just the intention) when employees are confronted with organizational wrongdoing and includes taking action to draw attention to, and stop, wrongdoing that is perceived by the individual to be immoral or unethical; often regardless of fear of consequences to themselves. In the study, high scores on extraversion and low scores on agreeableness demonstrated significant positive correlations with whistleblowing behaviour. In this study, conscientiousness, which might be considered as a likely factor to influence ethical decision making showed no correlation to whistleblowing behaviour. However, conscientiousness, as defined in the FFM model, has been shown to be correlated with performance on Integrity Tests (Murphy & Lee, 1994). Conscientiousness was found to be positively associated with leader integrity and accountability (Nei et al. 2018). Aditya & Praveen (2020) study provides yet further confirmation that high scorers on conscientiousness are more likely to follow rules than low scorers and less likely to justify unethical behaviour. Importantly, Luke & Gawronski (2022), established in an empirical study that individual difference traits showed stability over time in relation to approaches to moral dilemmas and therefore reflected traits rather than states. Their results also found that 'sensitivity to consequences' was negatively correlated with extraversion, 'sensitivity to moral norms' correlated with agreeableness and that openness showed a correlation with both but also with the general tendency for inaction. They conclude that their study provides strong evidence for the role of individual difference traits in moral judgements.

Amongst other psychological characteristics or traits that have been the subject of interest to researchers looking specifically for determinants or antecedents of EDM are 'locus of control' (Rotter 1966), the concept of 'ego strength', 'field dependence' (Witkin 1962), the moral reasoning level of the individual (Kohlberg 1984), the stage of cognitive moral development

(Rest, 1986). Craft (2013) found 43 studies that considered aspects of personality in relation to EDM. These included locus of control, self-control, mindfulness, Machiavellian traits, attitudes, and values. Kish-Gephert et al, (2010) reviewed a multitude of studies spanning 30 years of research to identify antecedents of unethical choices relevant to organisation research. They considered variables relevant to the individual, the nature of the moral issue and organisational factors. Their meta-analysis utilised structural equation modelling to identify the unique predictive ability of individual psychological factors identified in the empirical studies they included. Of these individual psychological factors, they demonstrated that all those included in the review (cognitive moral development, idealism, relativism, Machiavellianism, locus of control, job satisfaction) made a unique contribution to unethical intention and behaviour.

In ethical decisions, Rest (1984) reported that high ego strength individuals demonstrated fewer cheating behaviours than those with low ego strength. Rotter (1966) developed the concept of locus of control of reinforcement which proposes that an individual possesses either an internal or external locus of control. Internally-oriented individuals believe events in their lives are determined by their own behaviour and effort, whereas externally-oriented individuals believe events in their lives are determined by forces outside their control, such as fate, chance, or other forces. Many of the models of ethical decision making propose that locus of control is relevant as a determinant of how individuals approach decisions in ethical scenarios however, empirical studies examining the relationship are few in number and show some limited support for this relationship (Haines & Leonard 2007)

The Dark Triad

Sometimes referred to 'undesirable personality traits', the Dark Triad has been the focus of much research in ethical and unethical behaviour. These traits, conceptualised as including Machiavellianism, psychopathy, and narcissism were intended to describe traits in the sub-clinical population that were not included in other trait-based models, e.g., Big 5 (Paulhus & Williams (2002). This represented a move to include morally relevant traits into the consideration of personality from a latent trait perspective. According to the authors, all three traits share some similarity in that they represent traits within the individual often behaviourally expressed in aggression, self-promotion, emotional coldness, and duplicity. These aspect of 'socially-aversive behaviour' were also described as sitting within the normal range of functioning (Furnham et al, 2013). Some acknowledgment is given to the philosophical origin of Machiavellianism, stemming as it does from the philosophy and tactical approaches of Nicolo Machiavelli which was then captured in a questionnaire by Christie & Geis, (1970). The three variables have demonstrated overlap in factor analytical studies (Furnham & Trickey, 2011) and all three loaded onto the Honesty/Humility factor of the HEXACO (Lee & Ashton, 2005). As with other measures of morally relevant behavioural traits some evidence has emerged that they have some genetic basis (Petrides et al, 2011) and the traits have also been explored through an evolutionary perspective.

Considering unethical behaviour, Harrison et al (2018) found that narcissism positively correlated with the intention to commit fraud, Machiavellianism influenced perception of motivation and opportunity to commit fraud and that psychopathy had a significant role to play in the decision made by the individual to commit fraud. Their study reinforced the interactionist approach to unethical behaviour, i.e., one that considers both the psychological predispositions of the individual and characteristics of the situation. Aghababaei et al (2014) used a measure of the Dark Triad, referred to as the Dirty Dozen, along with the H/H scale to investigate the relationship between prosocial behaviour, religiosity, and happiness. Finding evidence that both H/H and the Dirty Dozen measure showed significant relationships with the target variables in their study, H/H showed the stronger relationships.

Zsolt et al's (2021) study looked at whether the Dark Triad traits demonstrated incremental validity above the HEXACO measure in predicting counter productive work behaviours (CWB). Their conclusion from the data was that although the Dark Triad did explain a small amount of unique variance in 'corruption intention', overall, the model did not offer incremental validity over HEXACO across a range of CWB. Their findings supported Hodson et al (2018) metanalytical review which found a near complete overlap between the low pole of the HEXACO H/H scale and the Dark Triad constructs.

Jonason et al (2017) used several self-report measures and found that the Dark Triad were predictive of the commission of sin. They also used the MFQ30, the questionnaire developed to measure moral foundations, (Graham et al 2009; Graham et al, 2011) which was also, but to a lesser extent, predictive of the commission of sin but conducted mediator analysis and concluded that personality is more predictive in this area than morality.

Some studies have looked beyond the FFM, the Dark Triad and other individual variables and this is of importance to this thesis as it extends the consideration of the role of traits to morally relevant workplace behaviour. Pletzer et al (2019) conducted a meta-analysis of previous data from studies considering the correspondence between workplace deviance and personality. The results indicated that Honesty/Humility from the HEXACO model were the strongest predictor of workplace deviance and that the HEXACO domains explained more variance (31.97%) than the Big 5 (19.09%).

The consensus view is that there is sufficient evidence to support the Big 6 i.e., HEXACO and most studies show that the Dark Triad traits do not add incremental validity.

HEXACO

The HEXACO model (Ashton, Lee & de Vries, 2014) represented an attempt from a structural perspective to develop a model of global dispositional traits that incorporated the evidence related to the Big 5 factor model but that accounted for more variance in the empirical data. Several lexical studies of the structure of personality had observed a factor defined by honesty, fairness, sincerity, modesty, and lack of greed that could be considered as a significant additional personality factor (Ashton & Lee, 2007). The HEXACO model included a factor (domain) labelled Honesty/Humility (H/H). The inclusion within the honesty/humility factor of fairness, sincerity, modesty, and greed avoidance made the evaluative aspects of traits more prominent and thus created an opportunity for structural personality models to be used in a more focused way to examine moral/immoral or ethical/unethical behaviour.

The definitions of the H/H domain and sub-scales (facets) below were taken from Lee & Ashton (2004)

Within the HEXACO model, Honesty/Humility domain is described as follows,

Persons with very high scores on the Honesty-Humility scale avoid manipulating others for personal gain, feel little temptation to break rules, are uninterested in lavish wealth and luxuries, and feel no special entitlement to elevated social status. Conversely, persons with very low scores on this scale will flatter others to get what they want, are inclined to break rules for personal profit, are motivated by material gain, and feel a strong sense of self-importance (<http://hexaco.org/scaledescriptions>)

Sincerity (facet)

Assesses a tendency to be genuine in interpersonal relations. Low scorers will flatter others or pretend to like them in order to obtain favors, whereas high scorers are unwilling to manipulate others.

Fairness (facet)

Assesses a tendency to avoid fraud and corruption. Low scorers are willing to gain by cheating or stealing, whereas high scorers are unwilling to take advantage of other individuals or of society at large.

Greed Avoidance (facet)

Assesses a tendency to be uninterested in possessing Avoidance lavish wealth, luxury goods, and signs of high social status. Low scorers want to enjoy and to display wealth and privilege, whereas high scorers are not especially motivated by monetary or social-status considerations.

Modesty (facet)

Assesses a tendency to be modest and unassuming. Low scorers consider themselves as superior and as entitled to privileges that others do not have, whereas high scorers view themselves as ordinary people without any claim to special treatment.

Empirical studies have demonstrated important links between this model, specifically the Honesty/Humility scale, and morally relevant behaviour. Hilbig & Zettler (2015) assert that the trait of Honesty/Humility is “quintessential basic trait to account for individual differences in ethical behavior” (p 85).

Many studies have been conducted examining various aspects of lying and cheating behaviour, often using versions of economic games. In research into morally relevant behaviour, methods such as a coin tossing experiment have been used and demonstrate that the tendency to lie is prevalent, particularly when the stakes are high (Bucciol & Piovesan, 2011). Participants toss the coin in private and then report the results. However, experiments using this method have also found that whilst some individuals will lie, a proportion of individuals refrain from lying even when the rewards and incentives are increased quite substantially. Some, but not all, of these studies were conducted with child participants. Significantly, concluding their study with adult participants, Fischbacher & Föllmi-Heusi state ‘the pattern of lying does not change when stakes, consequences or anonymity is altered. We always observe liars, honest subjects and some subjects who lie partially’ (2013 p 542). In response to criticisms that these experimental studies might be distorted by situational factors (the perceived utility of the reward at stake) or the influence of social desirability (claiming to be high in honesty/humility is considered to be socially desirable), the authors of the study ensured that there was no material gain available and that no individual could be identified.

Heck et al (2018) reanalysed data, using logistic regression analysis, from 16 studies that had explored morally relevant behaviour and personality traits. Having established that the link between H/H and dishonesty was consistently found in studies, the authors sought to determine the size of the predictive effect, whether any other traits also predicted behaviour, to examine the impact of any covariants, for example, such as gender or age, and finally to consider any interaction between traits. By combining data from 16 studies, they were able to increase the statistical power and provide greater evidence for their conclusions. Their

analysis allowed them to conclude ‘overwhelming evidence for a negative link between HH and dishonest behaviour’ (p362) and that all four facets of HH, namely sincerity, greed avoidance, modesty, and fairness each contributed to explaining unique variance in unethical behaviour. The study also found that the EXACO traits from HEXACO did not have predictive significance but did find agreeableness (as measured by the NEO-Five Factor Inventory (NEO-FFI; Costa & McCrae, (1992)) did predict dishonest behaviour but it did not have incremental validity over HH. The applicability of the notion of moral character to workplace behaviour was considered in a large and complex empirical study by (Cohen, et al, 2014). They utilised a wide range of self-report measures, including HEXACO, alongside a 3-month diary study, and found that the Honesty/Humility trait differentiated between high-character class and low-character class by more than 1.5 standard deviations. HH sits in the HEXACO model of personality and as such can be considered a development or extension of the FFM. Cooper (2020), who has expressed reservations concerning the proliferation of research finding new traits, has acknowledged that HEXACO demonstrates a robust factor structure and predictive validity, adding that he has a ‘higher regard’ for the model than Costa and McCrae’s FFM (p119). The case for the addition of Honesty to the ‘Big 5’, based on empirical evidence, is also restated in the Annual Review of Psychology - Personality Psychology (Roberts & Yoon, 2022).

Other developments are also important when considering morally relevant dispositional traits and this includes the development of models concerning character traits. In some subject disciplines moral behaviour is referred to in the literature as behaviour in ‘the moral domain’. The moral domain has been defined as behaviours that are ‘socially esteemed in terms of virtue, goodness, and integrity, such as fairness and altruism’ (Ruch, 2017, p186). Ruch et al’s (2017) study used both the HEXACO model and questionnaire but also the Values in Action (VIA) questionnaire which measures character strengths and virtues based on the work of Peterson & Seligman (2004). The empirical study sought to determine whether individual variance in performance of an economic game (designed to look at decisions made by individuals relevant to fairness and altruism) could be predicted by individual profiles on the two questionnaires. The study found that whilst the Big 5 traits as represented in ‘EXACO’ did not predict behaviour in the game, ‘H’ (honesty/humility) proved to be a significant predictor of behaviour i.e., participants high in HH were more likely to allocate funds to their game partners than those with lower scores. The study also recorded higher scores for women than men. Gender differences in EDM have been observed in other studies and are discussed later in this review. The inclusion of the VIA, a questionnaire focused specifically on character strengths, i.e., evaluative dispositional traits, is important for this thesis. Ruch et al (2010) study also determined that character strengths, (strengths of heart), also predicted fair and altruistic behaviour.

VIA - Character Strengths and Virtues

The discipline of Positive Psychology was established by Martin Seligman and Mihaly Csikszentmihalyi and was defined by them as,

“the scientific study of positive human functioning and flourishing on multiple levels that include the biological, personal, relational, institutional, cultural, and global dimensions of life.” (Seligman & Csikszentmihalyi, 2000, p5)

The relevance of some aspects of positive psychology to the study of dispositional traits of personality helped fuel the search for traits relevant to moral behaviour and for the considerations of more dynamic and interactive models of personality than those offered by accepted structural models such as the Big 5. Accordingly, Peterson & Seligman (2004) developed a classification of positive individual traits. The classification of human characteristics was based on their extensive research and the 24 character strengths are described as “psychological ingredients – processes or mechanisms - that define the

virtues,” and as “distinguishable routes to displaying one or another of” these socially desirable principles (p. 13). The six-virtue structure are described as socially valued ideals. Operationalizations of character strengths usually consider them as interpersonal differences—dimensions that describe the intensity of these processes. This accords with the original definition of Peterson & Seligman (2004).

The original six virtue structure, with the corresponding character strengths, was summarised by McGrath, (2014). In the summary below terms in parentheses are variants of the character strength (Peterson & Seligman, 2004).

WISDOM & KNOWLEDGE: Creativity (originality, ingenuity), Curiosity (interest, novelty-seeking, openness to experience), Judgment & open-mindedness (critical thinking), Love of learning, Perspective (wisdom)

COURAGE: Bravery (valor), Perseverance (persistence, industriousness), Honesty (authenticity, integrity), Zest (vitality, enthusiasm, vigor, energy)

HUMANITY Capacity to love and be loved, Kindness (generosity, nurturance, care, compassion, altruistic love, "niceness"), Social intelligence (emotional intelligence, personal intelligence)

JUSTICE: Teamwork (citizenship, social responsibility, loyalty), Fairness, Leadership

TEMPERANCE: Forgiveness & mercy, Modesty & humility, Prudence, Self-regulation (self-control)

TRANSCENDENCE: Appreciation of beauty and excellence (awe, wonder, elevation), Gratitude, Hope (optimism, future-mindedness, future orientation), Humor (playfulness), Religiousness & spirituality (faith, purpose)

The VIA Inventory of Strengths (VIA-IS; Peterson & Seligman, 2004) was developed to measure the 24 character strengths in adults ages 18 or older. Later, shortened versions of the inventory became available. Studies utilising the VIA-IS have provided evidential support for the individual character strengths with evidence of universal acceptance (Dahlsgaard, et al, 2005; Park et al, 2006). Such studies found high rates of agreement with the characteristics themselves and agreement with their desirability for the society, for example, in remote cultures such as Kenyan Maasai and Inughuit in Northern Greenland as well as in developed western societies. Indeed, character strengths were found to be remarkably similar across 54 nations and across the United States (Park et al, 2006). Nevertheless, the classification of character strengths and virtues led to research which produced both some criticism, in particular related to the structure of the model of virtues and strengths.

VIA – Structure and Measurement

The structure of the model proposed in the VIA classification has come under much scrutiny. The clustering of the character strengths underlying the six virtues in the original model was achieved through an intuitive, conceptual analysis as opposed to an empirically based, statistical analysis. Peterson & Seligman (2004) clearly stated their expectations that empirical studies would likely lead to new models to explain the underlying latent variable factor structure. Numerous studies followed, using the VIA-IS, the questionnaire developed to measure the VIA classification of strengths and virtues, that sought to consider the underlying factor structure utilising various techniques of factor analysis. Initially Peterson & Seligman's own analyses determined a five-factor model.

Analysis has resulted in suggestions of 4-5 factors (McGrath (2014) and a 3-factor solution (McGrath et al 2018). The latter identified three factors labelled as Caring, Inquisitiveness, and Self-control. The structure found is summarised below.

Caring

Fairness, Gratitude, Kindness, Capacity to love and be loved, Teamwork, Forgiveness & mercy, Appreciation of beauty and excellence, Leadership, Humor, Religiousness & spirituality.

Inquisitiveness

Creativity, Curiosity, Perspective, Bravery, Judgment & open-mindedness, Love of learning, Zest, Appreciation of beauty and excellence, Hope, Humor, Social intelligence.

Self-control

Honesty, Judgment & open-mindedness, Perseverance, Prudence, Modesty & humility, Perspective, Self-regulation, Fairness

In the light of the contradictions concerning the number of factors derived in studies and the issues of cross loading, Ng, V. et al. (2017) applied exploratory structural equation modelling to a sample of 447,573 participants. Participants completed the VIA-IS with a reduced set of 107 items. They established a 6 factor model containing the character dimensions of justice, temperance, courage, wisdom, transcendence, humanity, and an overarching dispositional positivity dimension. These conformed with the original classification theoretically derived by Peterson & Seligman (2004) however, the authors stress that whilst confirming support for the original classification, this was only achieved with the reduced item set.

McGrath & Wallace (2021) conducted a review of the VIA and noted several criticisms raised in the literature. Firstly, that VIA items were all positively keyed. The response format of items in Likert scale questionnaires has been debated extensively in psychometrics. Items might be designed with the more positive response on the left or the right or a mixture. A questionnaire containing both positively and negatively keyed items has been considered by some psychometricians to reduce the effect of acquiescence or naysaying response bias. Whilst unidimensional scales have been demonstrated to increase the reliability of the scale, it remains unclear whether the resulting score on the variable is a true measure of the variable or construct being measured or, whether it reflects the tendency of the individual to acquiesce. Acquiescence is reported as one of the most common response biases (Vigil-Colet et al, 2020).

Another criticism noted by McGrath & Wallace (2021) was the length of the original inventory. As a result of a revision of the measure, instigated by the VIA Institute in 2014 a revised version of the inventory, VIA- IS-R, was developed and demonstrated improved statistical properties. This version contained 196 items and shorter versions containing 96 items were developed, VIA-IS-M and VIA-IS-P. The intention was to provide researchers with options suitable for their specific research requirements concerning both the overall length of the inventory but also a shorter version with positively and negatively keyed items to mitigate acquiescence response bias (M version) or version (P) with only positively keyed items.

Character Strengths and Virtues – Morally Relevant Workplace Behaviour

Thun & Kelloway (2011) conducted an empirical study and used structural equation modelling to analyse the empirical validity of Peterson and Seligman's (2004) virtue categories and the relationship between leaders' character and workplace outcomes such as, organisational citizenship behaviours, commitment, psychological well-being, and trust of employees. Their results provided support both for the empirical basis of the VIA constructs and associated workplace impacts. Previous research has also explored some links between character and executive performance, for example, from the perspective of studies into leadership within organisations. Gentry et al (2013) cite Sosik et al (2012) who highlighted the importance of the character strengths, integrity, bravery, perspective, and social intelligence, to the performance for top level executives. Gentry et al's (2013) own research explored 'integrity' and its relationship to the performance of middle managers and found a positive correlation between the two variables. Wright and Quick (2011) considered the role of character in ethical leadership from a theoretically grounded perspective. In their paper they concluded that there had been a lack of systematic research in the area, and in particular, research on the moral aspects of character. There is some evidence of research into character and virtue in organisational settings but, as described earlier, this is often focused on links between character and virtue in leaders and their performance (Sosik et al 2012). The character and virtue of leaders has also been considered in studies linking it to employees' feelings of well-being, affective commitment, and organisational citizenship behaviour (Thun & Kelloway 2011). There are fewer articles that focus on the role of character and virtue in EDM. Crossan et al (2013) proposed a model of ethical decision-making that integrates virtues, values, and character strengths and this call is repeated by Nguyen & Crossan (2022).

This review has, so far, considered the call made by scholars for the merging of dispositional trait-based approaches which seek correspondence, i.e., direct links between traits and behaviour, with socio-cognitive models which seek to build more dynamic and interactive models. It has also considered some of the influential dispositional traits that have been examined in empirical studies exploring morally relevant behaviour. The focus of this thesis concerns ethical (or unethical) decision-making by individuals in the workplace and as such the review must also consider how individual differences have been placed in EDM models within the business ethics literature.

Ethical Decision-Making

The focus of this thesis is on individual ethical-decision-making in the workplace which has been the focus of academic interest for decades. Ethical decision-making can be defined as

'a process by which individuals use their moral base to determine whether a certain issue is right or wrong' (Carlson et al. 2009, p. 536)

As highlighted previously, the thesis draws on literature from psychology and its application to business ethics. According to Schwarz (2016), theoretical EDM frameworks typically present the EDM process in a series of sequential steps and identify several individual, organisational, or situational variables that are hypothesised to have a causal or moderating effect. Studies also have considered at what stage in the sequence the variables exert an influence (Schwarz, 2016). Such models have fostered many qualitative and quantitative research studies with varying findings. This section considers the evolution of these models and, specifically, in line with the nature of this research, the individual variables that have been included in EDM and the empirical research findings concerning the role of these individual variables in EDM.

The Evolution of EDM Models – Rationalist and Intuitivist Models

Much of the empirical work and academic debate concerning EDM is rooted in the model proposed by Kohlberg (1969, 1984). Kohlberg's (1969, 1984) stage theory of the development of moral reasoning has been highly influential in the field of EDM. Kohlberg's model proposed that moral reasoning in individuals develops through stages. These stages were, punishment-based obedience, opportunistic self-interest, approval seeking conformity, respect for authority, contractual legalistic observance and finally principled morality based on standards of justice. Kohlberg's work influenced further models, notably Rest (1982;1986). Rest (1982), whose four-component model of morality (FCM) has also been highly influential in EDM research.

Rest's (1986) model of ethical decision-making suggested four components, identifying the moral nature of an issue, making a moral judgment, establishing moral intent, and engaging in moral action. Rest's process model hypothesises five stages in the development of moral reasoning; at stage one individuals consider issues of obedience and avoiding punishment; stage two they consider acting in their own self-interest; stage 3 the influencing factors are their peers and significant others; stage four they consider prevailing rules and laws; finally in stage five principles of rights, justice and societal good are purported to guide the individual's reasoning process.

EDM models, stemming from Kohlberg and Rest, assume a rational, decision-making process (Heyler et al, 2016). EDM models can be classified as rationalist or cognitive models with the rationalist or cognitive approach to ethical decision-making assuming that the individual follows a systematic approach when making a decision, i.e., moral awareness leads to a judgement being made which leads to an intention being formulated, which then results in behaviour. Although it is noted that not all models assume a strictly linear process. EDM models applied to research in business ethics have also been significantly guided by rationalist approaches. For example, Uysal, reported that studies in ethical business accounting predominantly frame their research around Kohlberg's model (2010) and Zollo et al (2017) assert that Rest's model is one of the most cited in the management literature concerning EDM. Examples of EDM models that consider EDM in the business or management domain from a predominantly cognitive or rationalist perspective include, Ferrell and Gresham (1985); Hunt and Vitell (1986); Jones (1991); and Trevino (1986). However most recent scholarly discussions acknowledge the importance of intuitive processes (Trevino et al, 2014).

In contrast to rationalist models, implicit models propose an intuitivist approach whereby EDM by the individual is not necessarily assumed to follow a rational stepped process. Robertson et al (2017) state that more recent social intuitionist model considers moral judgement to be initially an intuitive process that is sometimes but not always followed by rational thought. They review what they describe as the 'promise' of neuroscience in advancing study in business ethics research. Functional imaging technology has allowed observations to be made about what happens in the brain when individuals encounter an ethical issue. They propose that widening the inter-disciplinary approach to this area potentially valuable insights into ethical behaviour.

Clifford et al (2015) posit that the growing interest in moral psychology concerning the intuitive and emotional aspects of moral judgement are in part due to Haidt's (2001) social intuitionism model and Haidt and Joseph's (2004) moral foundations theory. Haidt (2001) argued for a social intuitivist model of moral thought where moral judgements are the direct result of intuition which results in a quick and effortless judgement; these decisions are affective and automatic. Scholars have noted that Haidt also included an affective component proposing that both emotion and intuition played a part in moral judgment (Haidt, 2003; Zollo et al, 2017). The importance of automatic, intuitive moral judgements, often

rationalised after the event, was also posited by Sonenschein, (2017). Weaver et al (2014) comment that, whilst the important role of intuition in human functioning had been established in many areas of psychology and social science, it had been little discussed in organisational studies. They clarify that intuitionist approaches consider both the process, which is automatic, and the content i.e., the moral domain. Trevino et al, in a review of Un(ethical) decision-making, proposed that more research was needed to understand the connection between deliberate and rational and the intuitive and affective components (2014). They also indicated that it was not clear whether the intuitive or rational response produced more desirable outcomes citing contradictory evidence from two studies, one where allowing participants contemplation time produced more ethical response (Gunia et al, 2012) and the second where intuitive and affective response produced the more ethical outcomes than when participants were given time to contemplate (Zhong, 2011).

Moral Foundations Theory

Haidt and Joseph (2004) proposed moral foundations theory (MFT) as an alternative to rationalist approaches such as those of Kohlberg. A social-intuitionist approach, it emerged from the work of previous scholars focusing on the consideration of what and how moral concerns develop in individuals. Put, very simply, it is hypothesised that these intuitions have developed as part of human evolution and result in all individuals possessing 'intuitive ethics' which shape their reactions to events. As an alternative to the latent variable approach, moral foundations are purported to be culturally determined and learnt. Moral intuition is defined as,

“the sudden appearance in consciousness, or at the fringe of consciousness, of an evaluative feeling (like-dislike, good-bad) about a person or event without any conscious awareness of having gone through steps of weighing evidence, crafting evaluative arguments, or inferring a conclusion” (Haidt & Bjorklund, 2008, p188).

Some evidence of an affect-based process has emerged from neuroscience. Damasio, for example, found that damage to the ventromedial prefrontal cortex rendered individual unable to make ethical judgements (Damasio, 2003;2007) and moral judgements have also been linked to the parts of the brain that control emotion (Greene et al., 2001; Hotz, 2007). Whether moral choices are the automatic outcome of moral intuitions and not the deliberated outcome of some reasoning process has also been, and continues to be, debated. Saltzstein & Kasachkoff (2004) critique Haidt's Moral Intuitionist Theory from the perspectives of psychology and philosophy and conclude by stating that the moral reasoning and judgement process is most likely to be an iterative process with intuitive and rational processes intermixed and that reason plays a critical role. In Haidt's view any reasoning by the individual about the ethical dilemma takes place *after* the individual has made the decision to act unethically and this moral reasoning process helps to justify their actions to themselves (2001, 2008).

Thinking concerning MFT foundations originally proposed by Haidt and Joseph (2004) has been refined and developed over the last two decades, (Haidt & Graham, 2007; Graham et al., 2013). The most recent description of the moral foundations below is taken from the website set up to foster research and discussion.

1) Care/harm: *This foundation is related to our long evolution as mammals with attachment systems and an ability to feel (and dislike) the pain of others. It underlies virtues of kindness, gentleness, and nurturance.*

2) Fairness/cheating: *This foundation is related to the evolutionary process of reciprocal altruism. It generates ideas of justice, rights, and autonomy. [Note: In our original conception, Fairness included concerns about equality, which are more*

strongly endorsed by political liberals. However, as we reformulated the theory in 2011 based on new data, we emphasize proportionality, which is endorsed by everyone, but is more strongly endorsed by conservatives]

3) Loyalty/betrayal: *This foundation is related to our long history as tribal creatures able to form shifting coalitions. It underlies virtues of patriotism and self-sacrifice for the group. It is active anytime people feel that it's "one for all, and all for one."*

4) Authority/subversion: *This foundation was shaped by our long primate history of hierarchical social interactions. It underlies virtues of leadership and followership, including deference to legitimate authority and respect for traditions.*

5) Sanctity/degradation: *This foundation was shaped by the psychology of disgust and contamination. It underlies religious notions of striving to live in an elevated, less carnal, more noble way. It underlies the widespread idea that the body is a temple which can be desecrated by immoral activities and contaminants (an idea not unique to religious traditions). <https://moralfoundations.org/> Accessed 15th August 2022*

The scholars involved focus on moral and political psychology and are described as social psychologists and political scientists. As a result of their work a further foundation is proposed as worthy of research and discussion.

6) Liberty/oppression: *This foundation is about the feelings of reactance and resentment people feel toward those who dominate them and restrict their liberty. Its intuitions are often in tension with those of the authority foundation. The hatred of bullies and dominators motivates people to come together, in solidarity, to oppose or take down the oppressor.*

The first five foundations have been summarised into two categories. The first, 'individualising', includes the two foundations that focus on individual rights and well-being i.e., harm/care and fairness/justice/reciprocity. The second category titled 'binding' include the foundations that represent group concerns, ingroup/loyalty, authority/respect, and purity/sanctity (Haidt and Graham, 2007; Graham et al. 2009). To facilitate research the Moral Foundations Questionnaire (MFQ) was developed to measure moral foundations (Graham et al, 2009; Graham et al, 2011)

Moral Foundations – Measurement and Structure

The most frequently used measure of the five moral foundations is the MFQ30 (Graham et al, 2011). It consists of 32 items, two items are 'catch questions' designed to identify random or inattentive responses. Despite being widely used in research, the questionnaire has been criticised most notably concerning its reliability, validity, and factor structure. A three-factor solution was found and the factors were labelled as Traditionalism, Compassion and Loyalty (Harper & Rhodes, 2021). A cross-cultural study suggested that a five-factor solution did not have a good fit to the data (Iurino & Saucier, 2019) although it must be noted that the authors used the short, 20 item version of the MFQ not the MFQ30 used in other studies and usually recommended.

Zakharin & Bates (2021) offered some support for the factor structure in their large study (N=2271) finding that Harm/care and Fairness/Reciprocity were retained as individualising foundations but that the binding foundations were better represented by five factors rather than three. These were, purity, sanctity, loyalty to clan, loyalty to country and the fifth factor was named hierarchy (previously authority). The support for the higher order factors of individualising and binding were confirmed. Evidence that the five factor model was valid,

was found in a cross cultural (WEIRD and non-WEIRD countries) study but the two higher order factors were not supported (Doğruyol et al, 2019). Davies et al (2014) also confirmed support for the five factors in a New Zealand sample thereby replicating Graham (2011) American sample results. The five-factor structure of the MFQ was confirmed and the questionnaire was found to have overall acceptable internal consistency in a study involving Chinese, predominantly female participants Yanyan & Li (2015). Hirsch et al (2010) determined that the five foundations did cluster into the two super-factors, confirming previous research.

Graham et al (2011) reported Cronbach's Alphas for MFQ-30 ranging from .65 - .84. Referring to the MFQ, Graham et al. (2011) suggest these low Cronbach's alpha levels are a desirable trade-off between internal consistency and content validity, i.e., the ability for a scale to exhaustively measure a concept (Bannigan & Watson, 2009). Yanyan & Li, although reporting overall internal consistency for the MFQ as Cronbach's $\alpha = .88$, their results for the individual foundations were mixed, ranging from $\alpha = .43$ – $\alpha = .86$, although it is worth noting that α are reported separately for Part A and Part B of the questionnaire.

Doğruyol et al's (2019) study found that the five-factor solution held across WEIRD and non-WEIRD countries. They found that the level of internal consistency was broadly acceptable. Cronbach's α for WEIRD countries were Care $\alpha = .74$, Fairness $\alpha = .68$, Loyalty $\alpha = .62$, Authority $\alpha = .49$, Purity $\alpha = .71$. – $\alpha = .86$, for non-WEIRD countries the figures were .78, .77, .6, .48, .72 respectively. The same study determined internal consistency for the individualising and binding super factors to also be acceptable, WEIRD - Individualising $\alpha = .73$ non-WEIRD $\alpha = .86$; Binding - Weird $\alpha = .76$ non-WEIRD $\alpha = .79$. Hirsch et al (2010) reported alpha reliabilities as follows, Harm-Care = .61, Fairness-Reciprocity = .70, IngroupLoyalty = .70, Authority-Respect = .63, Purity-Sanctity = .77.

To conclude, the picture concerning the factor structure of the MFQ and its internal consistency is mixed. Nevertheless, it has been used in some studies considering morally relevant behaviour in business ethics and individual difference studies.

Moral Foundations – Morally Relevant Behaviour

The majority of the empirical and theoretical papers concerning MFT are situated in the cultural and political spheres. There is some research which has applied MFT to business and organisational literature and individual difference literature but it is sparse, with even fewer papers focusing on the role of moral foundations in individual workplace EDM.

Within individual difference research, Hirsh et al (2010) found links between 'agreeableness' and moral foundations theory. Lewis & Bates (2011) confirmed that the traits of openness, neuroticism and agreeableness were significant predictors of the individualising moral foundations and conscientiousness, neuroticism and extraversion were associated with the binding foundations. They contend, in line with McCrae & Costa, (1999) that basic traits (personality) do not directly link with behaviour but would be mediated by 'characteristic adaptations' and, in the case of their study on political beliefs, these were the moral foundations. Webster et al (2021) found that the agreeableness trait (HEXACO) and the moral foundation Harm/Care both predicted Belief in Pure Good (BPG), which is a belief that people should help others as much as possible. The Dark Triad traits were found to be negatively associated with the individualising moral foundations (Karandikar et al, 2018). The individualising moral foundations (Harm/Care and Fairness/Reciprocity) were associated with more prosocial behaviour in economic exchange games. O'Grady et al (2019) found that the moral foundations were predictive of other-regarding behaviour, as opposed to self-interested behaviour, in field tests. Individualising foundations were predictive of individual survey return but binding foundation had a negative correlation with

social demographic factors and considers whether membership of a particular category affects an individual's approach to an ethical dilemma. Secondly there is a strand of research interest that focuses on the nature of individual differences such as personality characteristics, traits or the stage of moral development and whether they might affect individual choices and behaviour when faced with ethical dilemmas.

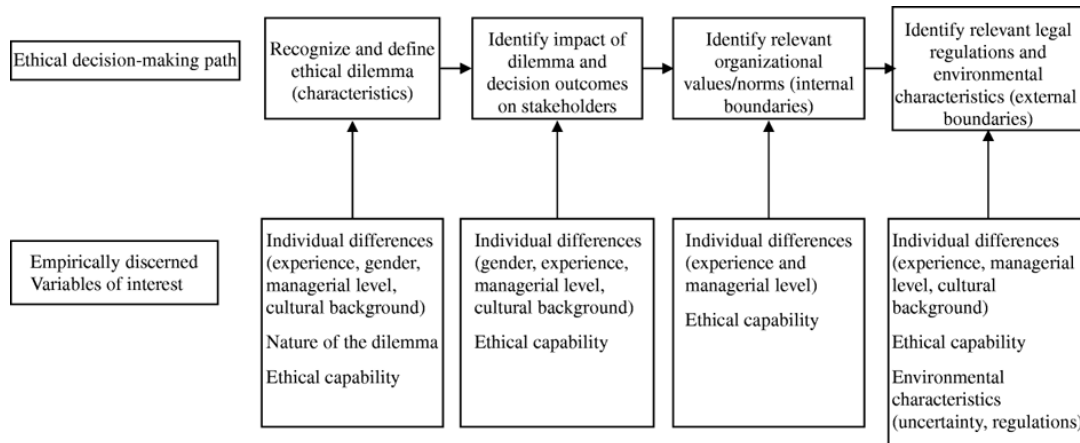
Na and Jian (2014) reviewed the nature of individual differences that had been studied in ethical decision-making literature and classified them as those that referred to 'demographic' factors and those that referred to 'psychological' factors. Craft's (2013) comprehensive review of ethical decision-making literature from 2004 – 2011 concluded that individual factors were the most studied element (77% of studies). Examples of some of the individual factors studied were personality factors, gender, age, religion/spirituality, personal values, cognitive moral development. Haines & Leonard (2007) consider individual differences and ethical decision making in an IT context. They describe two approaches to study in this area, the first which considers individual characteristics such as aspects of personality and demographic information which impact on individual judgments about moral or immoral behaviour. The second approach considers individual differences as external variables which impact on the decision-making process. Haines and Leonard (2007) restrict their study to some personality and demographic variables which some research has found to influence ethical behaviour i.e., age and gender (Leonard et al 2004), and locus of control and ego strength (Trevino 1986). Detert et al (2008) hypothesised that certain individual differences might act as antecedents to moral disengagement and that unethical decisions might be the outcome. What is clear from their research and the wider literature is that key areas reflecting the complexity of the psychology of individual differences and the interaction between them, and ethical decisions remain to be explored. The extent of research which focuses on individual factors related to demographic, categorical variables is not the focus of this thesis, so such studies are not covered in this review. However, some discussion is necessary where they have been included in EDM models.

EDM models represent attempts to describe and capture the complexity of the factors that may come into play as antecedents, mediators, moderators, outcomes, and consequences of EDM. Many of the EDM models reviewed refer to 'individual factors', and the next section will explore the literature in this area. Literature that has considered the role the individual factors play in ethical decision making is also considered. The models present increasingly more detailed representations of the individual factors that have been considered but also demonstrate that gaps that remain to be explored.

Models of EDM derived from business practice, according to Pimental et al (2008) often refer to four steps which they summarise as identification of the issue as holding an ethical dilemma, identification of parties affected by the outcome of the decision, identification of organisational norms, and identification of environmental factors that influence the decision-making process and possible outcomes. They further point to alternative research frameworks that look at individual characteristics and business decisions. Their paper proposes a model which purports to link the two research frameworks claiming that the model '*elucidates how individual, organisational and environmental variables interact to influence attitude formation across critical components of an ethical issue*' (p.359). Whilst individual differences are identified the precise nature of these individual differences is not specified beyond demographic categories such as age and gender, (Figure 2).

Figure 2

Framework for Ethical Behavior in Applied Business

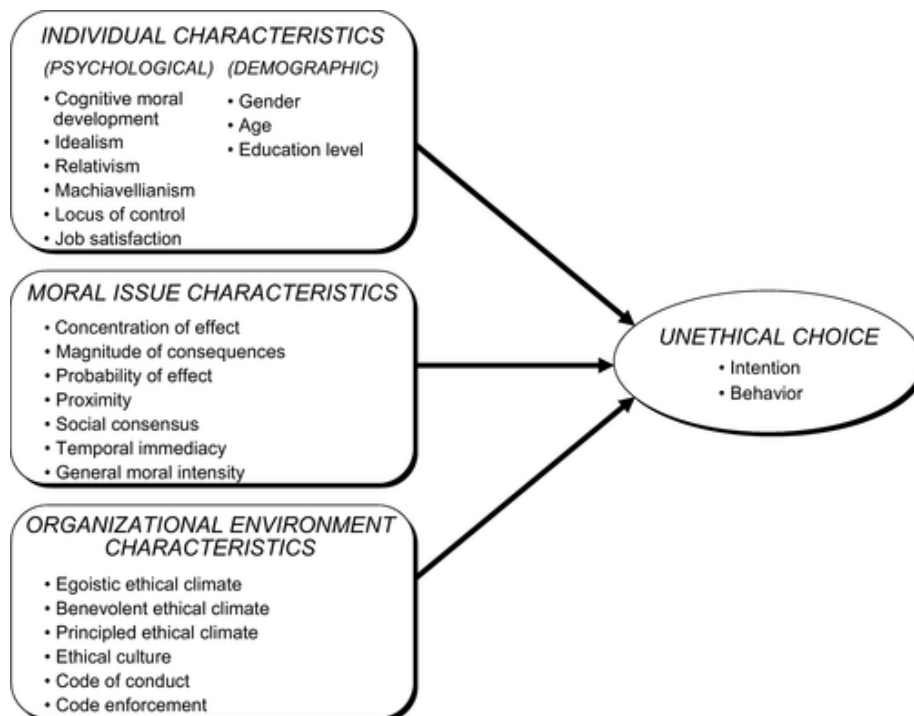


Source: Pimental et al (2008, p371)

Kish-Gephart et al (2010) conducted a meta-analysis covering 30 years of empirical research to clarify the antecedents of unethical choices made by individuals in the workplace. Their analysis considered studies which had focused on factors related to the individual, the nature of the issue and also the organisational context. As a result of the analysis, they suggested the following framework.

Figure 3

Meta-Analytic Framework for Antecedents of Unethical Choices in the Workplace



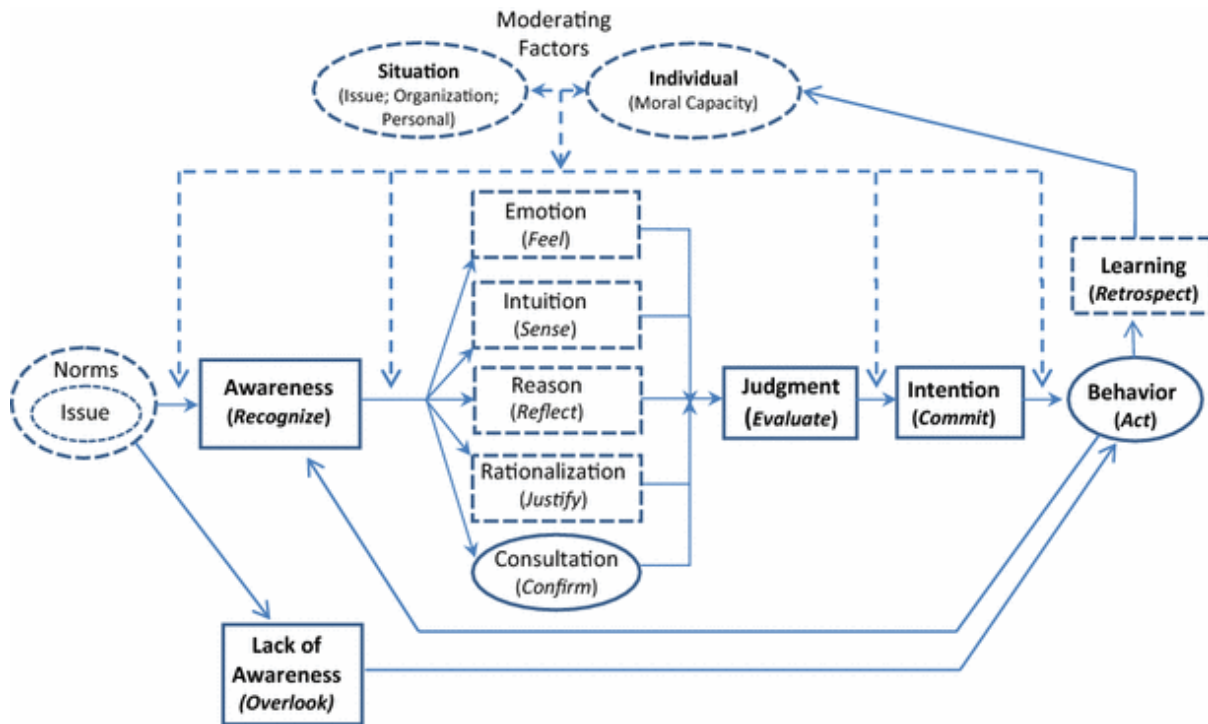
Source: Kish-Gephart, J., Harrison, D., & Treviño, L. (2010, p3)

It appears from this model (Figure 3) that the hypothesised antecedents would have independent, unrelated effects on the unethical choice.

Schwarz (2016) reviewed the field of academic work on EDM and proposed that it would be beneficial to merge the rationalist and non-rationalist approaches to EDM, to enable more progress to be made in this area and suggesting an integrated model (Figure 4).

Figure 4

Integrated Ethical Decision-Making Model



Integrated ethical decision-making model. Primary sources of the model: Rest (1984, 1986) (four-component model); Jones (1991) (issue-contingency model); Treviño (1986) (person-situation interactionist model); Tenbrunsel and Smith-Crowe (2008) (lack of moral awareness); Hannah et al. (2011) (moral capacity); Haidt (2001) (social intuitionist model). *Legend* solid box—mental state; dotted box—mental process; solid circle—active conduct; dotted circle—factor/variable

Source: Schwartz, M. S. (2016). Ethical decision-making theory: An integrated approach. *Journal of Business Ethics*, 139(4), p761.

Schwarz further proposed that whilst most EDM models include individual factors or variables that these should be merged into a broader construct which he refers to as ‘one’s moral capacity’, illustrated in Figure 5. This construct consists of (i) moral character and (ii) integrity capacity. Of most relevance to this research is the construct of moral character which is defined as

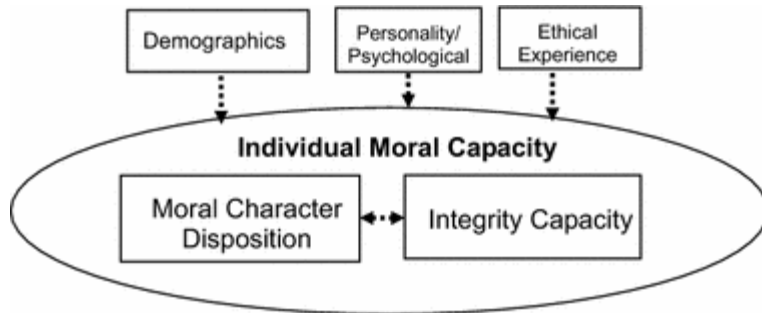
‘defined as the ability of an individual to avoid moral temptations, engage in the proper resolution of ethical dilemmas, and ultimately engage in ethical behavior.’ (p761)

Moral capacity is linked to integrity capacity (Petrick & Quinn, 2000), Rest’s moral capacity and Hannah’s (2011) moral connotation. Schwarz refer to ‘moral character disposition’ and the role of individual personality/psychological variables, however the components of this individual level moral character disposition are not discussed in relation to dispositional,

personality traits, other than those previously studied in the literature, e.g., locus of control, ego strength etc.

Figure 5

Individual Moral Capacity



Source: Schwartz, M. S. (2016). Ethical decision-making theory: An integrated approach. *Journal of Business Ethics*, 139(4), p763

Moral disengagement by the individual has been offered as an antecedent of unethical behaviour in organisations. Originally conceptualised by Bandura (1999), it is a process which enables an individual to disassociate from moral standards, through a series of cognitive steps, without experiencing distress. Newman et al. (2020), conducted an extensive review of the literature and offered a more global model which considers the role of moral disengagement as a mediator between antecedents and negative outcomes, and also research that had considered it as a moderator on outcomes. The authors include a summary, shown below in Figure 6, which demonstrates the large number of antecedents that have been considered by researchers. Since unethical decision-making sits within this model the individual level antecedents reviewed in the paper are relevant to this thesis. Importantly the individual level antecedents listed in Newman’s model do include Honesty/Humility, a personality trait but do not include character strengths, virtues, or moral foundations.

Figure 6

Overview of Moral Disengagement Research

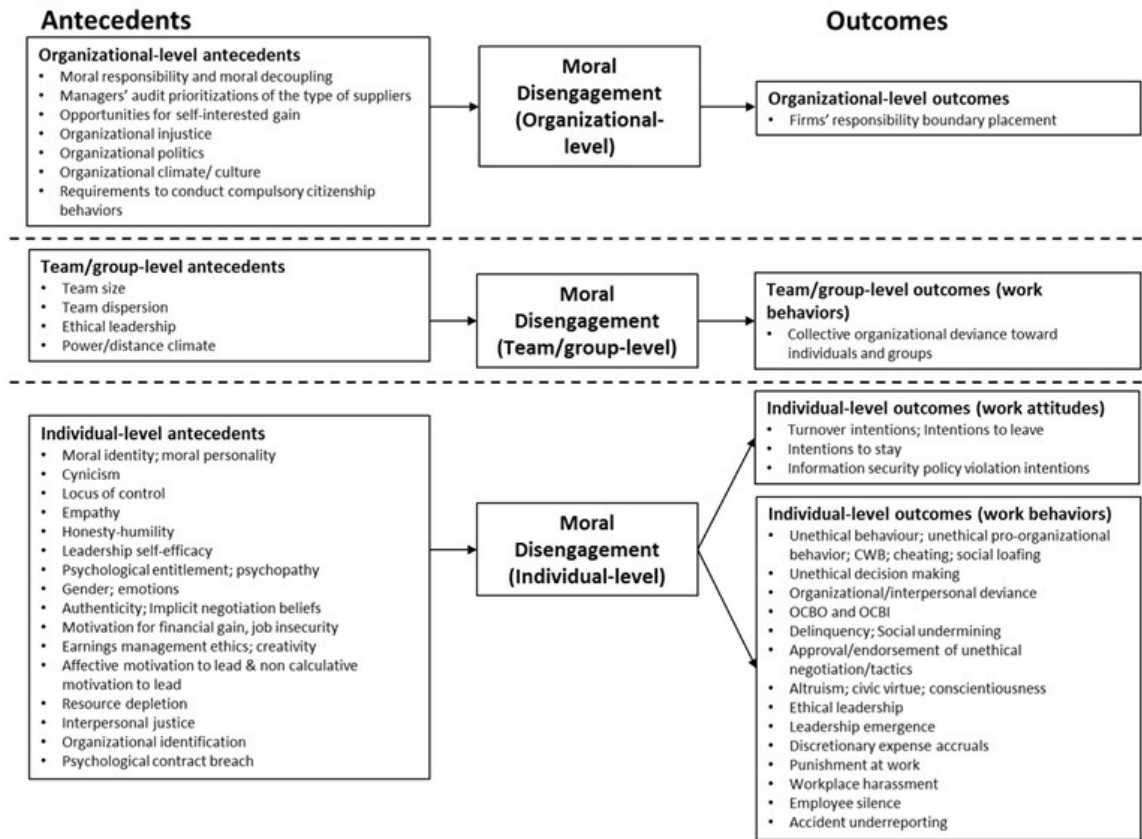


Fig. 1 Overview of moral disengagement research

Source: Newman, A. et al. (2020) 'Moral Disengagement at Work: A Review and Research Agenda', Journal of Business Ethics, 167(3), pp. 535–570. doi: 10.1007/s10551-019-04173-0.

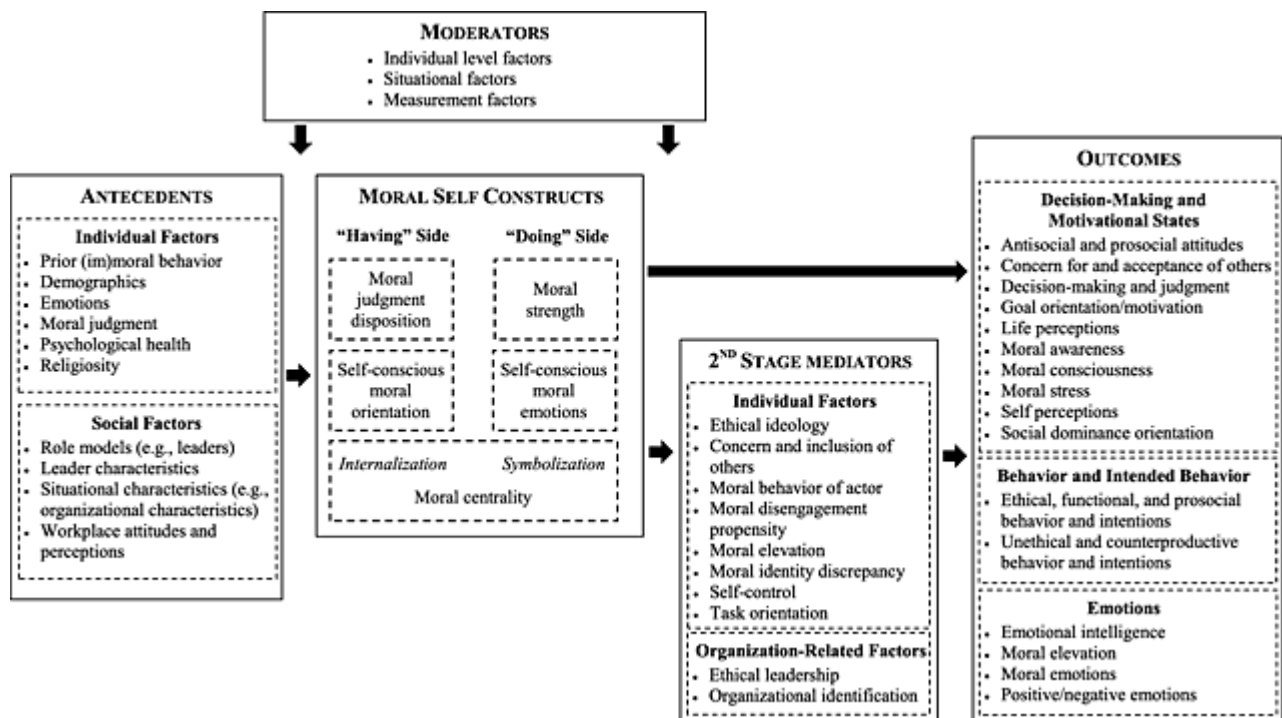
According to Jennings et al (2015) there is now a general consensus that the self plays a vital role in the individuals' moral agency. Jennings et al (2015 pS106) defined the moral self as,

“a complex system of self-defining moral attributes involving moral beliefs, orientations, dispositions, and cognitive and affective capacities that engage regulatory focus toward moral behavior.”

The authors explain that the concept of moral self has its root in the Aristotelian premise that morality has its root in the nature of the person i.e., it is a characteristic of a person and central to the concept of being a person. The moral self is not just the result of moral reasoning. From their comprehensive review of research in the field of moral self they produce an emergent process model (Figure 7).

Figure 7

Synopsis of Empirical Work on the Moral Self (from Jennings et al 2015)



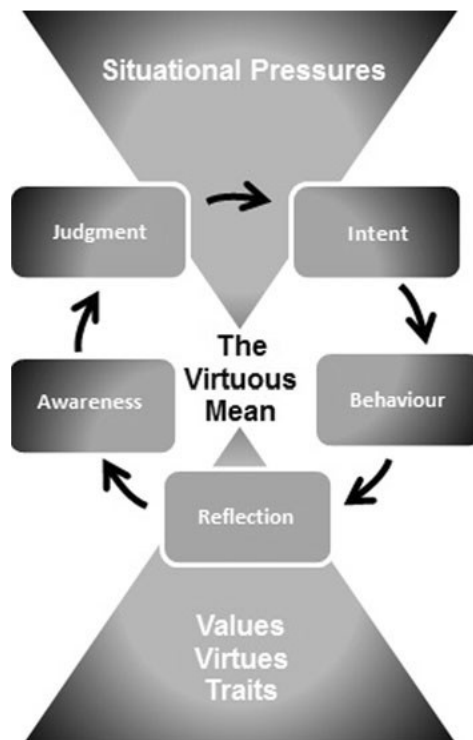
As in other models, Jennings et al's model refers quite generally to 'individual factors', but it is noted in the paper that the role of some moral traits has not been fully investigated and virtue is referred to within those traits.

This thesis focuses on morally relevant dispositional traits, character strengths and virtues and moral foundations. Some scholars have indicated that character and virtue should be included in EDM research. Nonaka et al (2014), repeat the distinction between knowledge and wisdom and assert that wisdom appeared to be lacking in the judgements behind many of reckless decisions made in financial institutions that led to the 2008 financial crisis. Practical wisdom is a virtue. Empathy and moral courage were found to have an indirect positive effect on leader in-role performance leading to a conclusion that they should be added to the list of individual level antecedents in Brown and Treviño's (2006) model of ethical leadership but there are few studies that have focused on character and virtue in EDM. Lehnert (2015) stated, "there are still a wide range of variety of moderators which need to be further investigated or validated to better understand the ethical decision-making process", (p206). Nevertheless, neither Craft's review (2013) nor Lehnert's (2015) updated review discussed the role of character and virtue or moral foundations in EDM.

Crossan et al (2013) proposed an integrative model of EDM, applying the structure of Rest's (1986) model of EDM and considering Schwarz's values model (1996) and Peterson & Seligman's (2004) classification of character strengths and virtues. They propose that a values-based orientation would sit with Rest's model as illustrated below in Figure 8.

Figure 8

Integrative Model of EDM



Reprinted from “In Search of Virtue: the Role of Virtues, Values and Character Strengths in Ethical Decision Making.” Crossan et al (2013) *Journal of Business Ethics*, Apr2013, Vol. 113 Issue 4, p567-581, 15p, 1 Diagram, 1 Chart Diagram; found on p568. Reprinted with Permission.

Crossan et al, (2013) suggested that the model offered researchers a route to explore the relationship between the virtues and EDM in more depth. Additionally, they posited that some values, virtues, and traits may be found to be more influential than others and that different combinations may be found that result in unique outcomes. Since the article was published, some papers have considered the role of character and virtue, but not specifically in relation to EDM models. The research published since tends to focus on Character and virtue in, for example selecting leaders (Cavanagh & Williams 2022), leadership character and organisational culture (Seijts & Milani, 2022), ethical behaviour in leadership (Gamarra & Giroto, 2022) and articles considering leader education and development (Newstead et al, 2021). Sosik et al, (2019) considered aspects of character in leadership and Nonaka (2014) considered the role of (lack of) wisdom decisions but there have been no studies focused on incorporating character strengths and virtues into EDM models.

Nuygen & Crossan (2022), once again, repeated the call for the inclusion of character in EDM models, stating ‘*current theorizing on how character applies to the EDM process has not been well developed*’ (p171). For example, they theorise that in cases of misconduct where bad judgement led to poor decisions, practical wisdom (phronesis) can be deemed to have been absent. The authors suggest that Rest’s model describes the process of EDM but does not consider that the character of the individual, i.e., the moral agent, involved would impact on the outcome. If, as stated by Peterson & Park, ‘*Character matters because it leads people to do the right thing, and the right thing can be productive and profitable*’ then the role of character and virtue in ethical decision-making by individuals in the work-place merits further research (2006, p1149).

The role of Individual Difference in Workplace EDM – Measurement

Empirical studies of ethical decision-making require tools and techniques to assess and/or measure hypothesised factors and variables. Many of the early measures of moral reasoning stem from the influential work of Kohlberg and Rest in psychology. To measure the stage of moral development Kohlberg developed the Moral Judgment Interview (MJJ; Colby & Kohlberg, 1987). Rest (Rest, 1993; Thoma, 2006) developed a standardized questionnaire with three or six hypothetical dilemmas (Defining Issues Test, DIT). Whilst these measures, questionnaires, and assessments were designed to study general issues of moral reasoning, judgement, or intention, measures of ethical judgement or intention situated in work-based settings are needed to aid understanding of contextual decision-making. As Trevino et al (2014) concluded, studies of (un)ethical behaviour in organisational settings have predominantly used surveys or laboratory experiments. As is the case in many business, management and applied psychology settings, the generalisability of results from these studies is a potential limitation. From the standpoint of behavioural ethics other authors have argued that experimental studies, whilst providing important contributions to knowledge lack generalisability (Mitchell et al, 2020).

Surveys designed to measure workplace ethical decision-making include, Organizational and Interpersonal Deviance Scale (Bennett & Robinson, 2000), Ethical Leadership Scale (Brown et al, 2005), Attitude and Behaviour Comparison Surveys (Chen & Tang, 2006). Much research in EDM in organisational settings has relied on the use of vignettes. Vignettes are described as stimuli, often stories or scenarios, designed to elicit responses from participants and are frequently used in social science research (Hughes & Huby, 2004). They are used to prompt participants to draw on their experience and discuss beliefs, values, and norms, and discuss how they think people should or will behave (Mah et al, 2014). Mostly, vignettes are presented as hypothetical stories and used in qualitative research. In a qualitative study, Robinson et al (2022) developed vignettes to explore military leaders' responses to moral dilemmas. A study with a sample of Slovenian managers sought to identify the philosophical stance taken by managers when considering work-based ethical dilemmas and used scenarios drawn from interviews with managers to develop the content (Drašček et al, 2021).

Moral dilemmas presented to participants who then have to make a decision have been, and continue to be, used widely in behavioural ethics research. They include the trolley dilemma (Foot, 1967) and various economic games such as the coin-tossing experiment. They are often criticised for the unrealistic content (Bauman et al., 2014; Körner et al., 2019). Additionally, they typically are based on deontological versus utilitarian principles and not virtue ethical considerations. Empirical studies of ethical decision-making often use vignettes or scenarios which are written by the researchers without explanation of the source, derived from SMEs, or written to focus on constructs drawn from the literature. Limitations are raised about the use of scenarios in terms of relevance, lack of realism and generalisability (Lehnert et al 2015). Schwarz (2016) also comments that the lack of consistency of findings from empirical studies of EDM might partly be due to the use of scenarios/vignettes.

Other studies have adapted real world cases that fostered moral debate, thus dealing with the realism issue (Gawronski et al., 2017; Körner et al., 2020). The latter study identified that the moral relevant scenarios could be used to identify individual differences, e.g., psychopathy, religiosity etc, although the scenarios were not business or workplace focused and considered the individual preferences for deontological as opposed to utilitarian choices.

Drawing from other scholastic disciplines, SJTs have been developed and used in assessment and selection settings and are well established in organisational psychology as a valid and reliable measure, although some issues remain the subject to academic debate.

Such issues include whether SJT are multi-dimensional measurement methods or whether they can, or should, be designed to measure specific constructs (Schmidt & Chan, 2006; Christian et al, 2011). Guidance concerning the development of SJT content has been established in the literature (Weekley & Ployhart, 2014), and does appear to include many of the points given in guidance on how to write vignettes given in social science research (Hughes & Huby, 2004; Mah, (2014). SJTs have been designed to measure constructs relevant to (un)ethical or (im)moral constructs and some are discussed in the next section. An SJT which targets EDM and measures several morally relevant dispositional traits and constructs has not been developed and, although predominantly used in selection, SJTs have the potential to be used in research into EDM in the workplace providing a more reliable and valid measurement tool.

Situational Judgement Tests

“SJTs have taken their place amongst the most important predictor methods in applied psychology” (Campion et al, 2014 p284)

SJTs present the test taker with job related scenarios and ask them to choose from a range of plausible courses of action (Whetzel & McDaniel, 2009). Typically, they assess an applicant’s judgement when faced with a situation in the workplace (Weekley & Ployhart, 2005). SJTs consist of a STEM, which is the item including a description of the situation, and the response options or choices. There is much debate concerning the most effective way to present STEMS, response options, scoring systems and many questions about what SJTs are measuring. SJTs are primarily used as part of the selection process in recruitment.

Fleeson et al (2014) proposes that tools and techniques used in the study of personality would be likely to bring valuable insights to the field of morality. Reinermann-Jones & Teo (2016) assert that moral judgement is both a relevant personal quality on which individuals differ and is relevant to decision-making in ambiguous situations. They posit that tools to examine individual differences in many studies concerning decision-making, whilst providing useful insights, have not fully captured the multi-dimensional complexity of decision-making in the real world. Following this they argue that SJTs offer the prospect of capturing this complexity more effectively for a number of reasons. One which they refer to is that SJTs are based on the concept that traits exist in individuals (implicit trait theory) and that there is a causal relationship between traits and behaviour. There is clearly an argument that supports the use of SJTs, developed using best practice principles, as a measurement tool to contribute to the study of workplace EDM.

Situational Judgement Tests – Measurement

As previously described, SJTs present the test taker with job related scenarios and ask them to choose from a range of plausible courses of action (Whetzel & McDaniel 2009). Typically, they assess an applicant’s judgement when faced with a situation in the workplace (Weekley & Ployhart 2005). According to Weekley and Ployhart (2014) however, there is little consensus on how SJTs should be developed. They also highlight further gaps in knowledge about how differing formats of STEMS, response choices, and scoring mechanisms affect the reliability and validity of SJT.

Multidimensional Measures or Construct Focused Measures?

When considering SJTs, Whetzel & McDaniel (2009) highlight the importance of distinguishing between ‘constructs’ which concern a behavioural domain and ‘methods’ which are the specific process or technique. Debate in the literature, has focused on whether SJTs are a method, similar to an interview, or whether they can be measures of

constructs, as with a personality measure. Indeed, some writers propose that in fact SJT are measures of one, over-arching construct, '*practical intelligence*'. Stemler & Sternberg (2006) posit that this debate is relevant to both determining how SJT should be developed and determining and explaining their predictive power.

Schmidt & Chan (2006) argue that there should be much greater research focus on the construct and the construct validity of the SJT as this would enable greater understanding and explanation of the predictive power. However, they conclude (tentatively) that SJTs are both methods and measures of constructs. Furthermore, if an SJT is a measure of *individual difference*, clarity is needed about the constructs (*knowledge, skill, ability, or other characteristic*) that it purports to measure. It is important both to understand that an SJT predicts any criterion successfully but also 'why' and this may be facilitated by isolating the constructs it measures.

Particularly relevant to morally relevant traits and constructs, is the work of Becker (2005) who designed a SJT to measure 'integrity' or more specifically, the values that his theoretical model proposed underpinned 'integrity'. Integrity has been identified as an important personal attribute to predict success amongst medical students. Husband et al (2015) developed a SJT of integrity which they base on the earlier work of Koenig et al (2009). Koenig et al (2009) had included in their core competencies for medical students, 'ethical responsibility to self and others' which included honesty to self and others", "willingness to hold others to account", "maintaining confidentiality" and "willingness to challenge unacceptable behaviour".

Whilst much of the literature supports the notion that SJT can be developed to assess morally relevant constructs or traits, there is increasing debate over to what extent this has been or might be successful and this is discussed further.

Constructs

According to Bledow and Frese (2009), whilst SJT are generally regarded as proven to be effective in predicting job performance, they are not often used to measure individual constructs. However, according to Lievens & Sackett, (2007), it had been well established in the literature that SJTs can be designed to measure a broad variety of constructs, depending on the domain/criterion of interest and they developed an SJT of personal initiative (SJT-PI).

Reviews of the literature reveal that SJTs have been designed to measure a broad variety of constructs, depending on the domain/criterion of interest (Lievens & Sackett, 2007; Lievens & Sackett, 2012). SJTs were found to measure decision-making, problem solving, interpersonal, and organizational skills. There is, therefore, evidence of many empirical studies that have involved the construction of a SJT and where the constructs the SJT was designed to measure have been specified. SJTs designed to measure constructs can be classified as to whether they seek to assess an individual's knowledge or cognitive ability or those which seek to determine whether an individual possesses a particular characteristic, often personality traits (Weekley et al, 2006; 2014). As with measures stemming from the psychometric school, the former would seek to measure 'maximum performance' of the individual and the latter, 'typical performance'. In an important paper that highlights both the importance of identifying constructs measured by SJT and also identifies the many constructs measured in published papers is by Christian et al (2010). They chose to use the typology identified by Huffcutt et al, (2001) which specified mental capability, knowledge and skills, basic personality tendencies, applied social skills, interests and preferences, organizational fit, and physical attributes as being the categories that SJT could measure. The typology was then applied to categorise constructs in published research on SJT development. Christian et al (2010) report that within the category of 'personal characteristics', conscientiousness was the most reported and most frequently targeted trait.

Other personality traits that they identified in their research include agreeableness, emotional stability, adaptability, and integrity.

Examples of SJTs designed to measure specific constructs are; emotional management, a component of emotional intelligence (Allen et al, 2015), achievement motivation (Sander and Muck, 2014), integrity based SJT for medical school applicants (Husbands et al, 2015) emotional management (Freudenthaler & Neubauer, 2005) moral disengagement (Fisher et al, 2021) and personal initiative (Bledow & Frese, 2009). In a study seeking to identify the effect of leadership style and student experience level on decision-making Grossman & Shaff (2018) used a SJT of 'decision quality'. Oostrom et al (2019) developed a SJT that was constructed to target the HEXACO domain and demonstrated good levels of construct and criterion validity however the results for Cronbach Alpha reliability were between $\alpha = .55-.74$. They assert that there is sufficient evidence that a SJTs can be developed to measure several constructs as opposed to those that focus on single constructs. A SJT to measure self-consciousness, openness to ideas, compliance, gregariousness, and self-discipline also demonstrated high convergent and low discriminant validity with corresponding self-report measures (Mussel et al, 2018). As Lievens (2020) indicates (citing Dalal et al, 2014), when an SJT is developed to target specific traits, it would be possible to examine whether individuals behave differently in different situations so shedding light on within person variability.

In contrast, other scholars posit that within SJTs any one item may load onto several constructs or variables and therefore SJTs may be described as construct heterogeneous McDaniel and Whetzel (2007). Guenole et al (2017) discuss the lack of evidence to support appropriate factor structures in SJTs and low internal consistency. They conclude by suggesting that the pursuit to create SJTs that measure psychological constructs is nevertheless desirable and make several recommendations to assist SJT developers. They note that construct driven SJTs may be written by psychologists rather than from SMEs on the basis of trait activation theory (TAT) although SMEs may also play a part. Stems can be written to activate the trait and are often shorter, less contextualised, unidimensional, and more easily scored. Writing situations that include deliberate triggers, relevant to the target construct and which evoke individual differences in behavioural responses is now considered to be an effective practice (Mielke et al, 2022). McDaniel and Whetzel (2007) describe how both correlational and factor analytical methods demonstrate that SJTs are multi-dimensional (including at item level) and can be shown to measure a variety of constructs including the Big 5 and Cognitive Ability. Whetzel & McDaniel, (2009) confirm the multi-dimensional nature of SJTs and state that a single item with different response options may measure different constructs. Whether this can be avoided and indeed, whether it renders SJTs to problematic from a psychometric perspective, continues to be debated. SJT items are often correlated with orthogonal constructs such as cognitive ability and personality traits and efforts to identify clear factor structures often fail ability (McDaniel & Whetzel, 2005; McDaniel et al, 2016). It is also asserted that SJTs measure tacit knowledge and practical intelligence that reflects the individual's ability to 'shape, and select real-world environments' (Stemler & Sternberg, 2006, p. 109).

Referring to the current situation as 'a hot mess' it is asserted that SJTs are measures of general domain knowledge (McDaniel et al, 2016, p50). These scholars also suggest caution against seeking to assess compound traits through SJTs, such as prosocial action, stating that this would

'contribute to the construct proliferation that plagues the industrial-organizational psychology and management literature like an ever-expanding clump of fungus devouring our discipline (Le, Schmidt, Harter, & Lauver, 2010; Schwab, 1980).'' (p50)

Reasserting that SJTs consistently show evidence of construct heterogeneity at item level and that SJTs typically do not show discriminant validity, the authors offer some suggestions to advance empirical studies in the area, i.e., that situational scenarios can be used to reduce ambiguity and that Likert scale type responses would allow scoring of several constructs with one scenario (McDaniel et al).

Stem Content

The most effective method of determining the stem content has also been the focus of much debate. Weekley and Ployhart (2014) suggest that the choice is between a deductive approach or an inductive approach. The former is when the stem items are derived from a particular source such as a chosen theory, conceptual model, or review of the literature and the content is written by the test designer. In the latter approach the content is derived from data obtained from subject matter experts (SME), typically using critical incident interviews (Flannigan 2014). Weekley et al (2014) reviewed the published literature concerning SJTs to determine how the item/stem content had been developed in the reported studies. They report that stems were most typically developed from material collected through critical incident interviews (Anderson and Wilson 1997; Flannigan (1954) with job incumbents or other SMEs (Cabrera & Nguyen 2001). The SMEs would also be asked to provide data on what led up to the incident (antecedent), what the person did (behaviour) and what the result was (consequence). Weekley & Polyhart (2014), point to the lack of research to determine which approach is to be preferred. They suggest that writing items to fit a conceptual model would seem to offer opportunities to measure dimensional constructs and that data obtained from critical incidents is potentially rich data. They conclude that 'developing a model from theory or job analysis and then collecting critical incidents from a variety of sources to fit the model, would seem to be the most comprehensive means of developing SJT items.' (2014, p161).

Montowidlo et al (1990) used the critical incident interview approach to develop the item stems for an SJT. They interviewed samples of managers and supervisors to obtain information about situations which demonstrated either managerial effectiveness or ineffectiveness. From these the researchers wrote brief descriptions of task situations that seemed to encompass elements of the interpersonal and problem solving aspects of management performance.

Response Options

It is considered by some that it is preferable to use SMEs at all stages of development and that includes developing the response options; they are more likely to offer realistic options and to generate a larger number of possible responses than the SJT developer would (Weekley et al, 2014). Therefore, data for the response options can also be obtained from interviews and focus groups. However, as with stem content, response options have been written to target specific constructs in SJTs or to reflect an underlying model. For example, the HEXACO SJT contained twenty four STEMS, four STEMS per domain, with four response options for each STEM representing different levels of the target trait. This latter approach demonstrates again, the difference between approaches to SJTs that consider them to be measurement methods or as measures capable of being construct focused.

Whilst SJTs have typically been developed from data acquired from critical incident interviews, focus groups, or questionnaires with subject matter experts, Weekley et al (2014) also identified that some SJT items (stems) had been written with content developed from, and based on, an underlying model and that the model chosen may have been developed through either undertaking a job analysis with SMEs, or by reviewing existing literature or finally, and alternatively, written by the developers from a theoretical basis.

A further variation on the design process for STJ items is when the items are written solely on the basis of a conceptual framework or model with no prior data gathering from a sample group. In this mode of development, the test developer becomes the SME. An example is the work of Arad et al (1999) cited by Weekley et al (2014), where psychologists were used to write the scenarios to assess adaptive behaviour. Campion et al (2014) conducted a review of the current state of research on STJ development and pointed to a number of areas where questions remained to be answered by further research. Notably they draw attention to the fact that alternative ways of developing STJs, other than through critical incidents, needed exploration. They reviewed development methods of STJs from published material since 1990 and determined that 45 studies had used critical incident techniques to gather the data and 10 studies had utilised the literature and rational judgement as a basis for writing the items.

Weekley et al (2014: p 161) conclude in their review of development methods for STJ items,

'At present, developing a model, from theory or job analyses, and then collecting critical incidents from a variety of sources to fit the model, would appear to be the most comprehensive means of developing STJ stems.'

Campion et al (2014) review opined that development of STJ items may have been hampered by too heavy a focus on critical incident technique and that research appeared to suggest that SJTs based on a deductive approach may have greater reliability. However, most SJT development continues to use inductive approaches. Guenole et al (2017) observe that construct driven SJTs clearly need to determine the construct in advance; that the broader the construct the more items will be needed in the SJT; that multidimensionality might be addressed by breaking them into multiple unidimensional constructs and that items from a particular stem may contribute to scores on multiple constructs. They observe that there appears to be no distinct advantage to whether items are obtained from SMEs or derived from theory provided that the SMEs were required to focus on the relevant construct. The choice of approach for developing SJT items has been generally represented as between an inductive one based on data obtained at the initial research stage or a deductive one guided by a theoretical framework. However, as indicated earlier an abductive approach can also be used.

Stem Complexity

Once the content of the item has been determined, a further question arises as to the level of detail required in both the description of the situation and the response options. According to Krumm et al (2015), this is an important debate and that, historically, an implicit assumption had been made by test developers, that SJT capture context dependent knowledge and therefore context descriptions of the situations were important. They also comment that as a result SJTs have often been developed by consultation with subject matter experts and that this has added to the complexity and cost of developing the SJT, particularly since data for stems and response items is often collected separately from different sample groups. Their empirical study examined the extent to which the situational description made any significant difference to the responses and found that for between 43% - 71% it did not. They suggest that for this reason the amount of situational context offered may be varied dependent on what the SJT is being designed to measure. McDaniel et al (2016) disagree and argue that the scenarios reduce any ambiguity in item responses by providing context and reducing the need for the respondent to make assumptions; thereby increasing validity.

Response options may be a source of additional information about the situation, (Leeds, 2012) and the role of such situational clues is of interest to test developers as it may likely affect the 'fakeability' of the SJT. As SJTs are typically developed to use in selection this

issue is deemed to be important. The ability of a measure to discriminate accurately between individuals will be severely hampered if the response options are transparent and the correct response is easily identifiable. To mitigate this Weekley et al (2014) suggest that one option is to offer response options that are all, to some degree, socially desirable or alternatively, offer more than one response options that are socially desirable and more than one that are not. This approach would be similar to that adopted in the format of some personality measures. A final consideration for SJT development concerns the number of items to be included. Guenole (2017) reports finding construct oriented SJTs with between 3 – 18 items per dimension.

Format

SJTs typically have developed as a method of assessment to assist in selection of employees or, less frequently, in employee development settings, and response options have consequently often been developed with a range of possible responses judged to be correct or incorrect, right, or wrong or most or least effective. Sometimes respondents may be asked to rank responses from most effective to least effective. In some cases, respondents may be asked to identify what, from the range of responses, would be most typical or least typical of them. However, the content of the response options and, additionally, the format of presentation of these response items should be, in part, determined by what the SJT is being designed to measure.

The format of the response item instruction is important. SJT developed to measure an individual's knowledge or cognitive ability typically require an individual to identify what 'should' be done in response to the situation item. Those developed to assess particular characteristics typically ask the individual what they 'would do' in the particular situation item.

Ployhart & Ehrhart (2003), studied the effects of response format on content validity and reliability of SJT. They used six different response formats in their study asking the participants to indicate;

1. What they would most likely/least likely do in each situation presented
2. What they would consider the most effective/least effective response
3. Participants were asked to rate the effectiveness of each response
4. How likely they would be to perform each response
5. Which of the responses they should do
6. What they have typically done in each situation in the past

They found that response items using the 'would do' format showed more favourable characteristics than those using 'should do', with the former showing greater criterion validity. As with other measures stemming from the psychometric school, the former would seek to measure 'maximum performance' of the individual and the latter, 'typical performance'.

Scoring

The most appropriate scoring method developed for SJTs is also debated and is likely to affect the validity (Arthur et al., 2014; Campion, Ployhart, & MacKenzie, 2014). There are alternative approaches to scoring SJTs. In developing SJTs used in selection settings typically a group of SMEs are used who identify the correct or most effective responses to the situations described (empirical scoring). In construct oriented or behavioural tendency SJT, response items can be written to target the constructs or traits and therefore the scoring format can be developed to determine the level of the traits as with personality measures. Lievens and Motowidlo (2016) recommend combining both, using the SME

mean effectiveness rating for the scoring key for selection purposes, and the trait based scoring key to assess construct validity. For construct measurement in SJTs, Harvey (2016) recommends combining ratings of each response option to form an overall composite score.

Summary

To summarise, this review has considered literature related to the theoretical and conceptual framework for the focus of this research thesis and identified gaps in current knowledge and understanding. It started with a consideration of the concept of character and virtue from both a philosophical and psychological standpoint. Other constructs identified as relevant to (un)ethical behaviour in organisations and used in studies were also discussed. This thesis attempts to highlight the similarities and potential synergy between these academic disciplines to enable a more thorough evaluation of character traits and virtues in the psychology of individual difference and behaviour in the workplace, therefore scholarly debate concerning the status of individual aspects of character, as traits amenable to being sufficiently well defined and capable of being measured, have been explored. Existential knowledge about individual differences and individual factors as antecedents in workplace relevant situations have been included. The review covered prevailing and influential EDM models, which have included antecedents or moderating variable relating to individuals and demonstrated that there are clear gaps in the literature that remain to be investigated in order to develop a more cohesive and comprehensive model of the role of moral character in ethical workplace decision-making. The interactionist model of EDM that seeks to merge situationist and individual factors was discussed. It has been identified in this review that current models of workplace EDM do not include consideration of character strengths and virtues. HEXACO has been studied as predictive of (un)ethical workplace behaviour but not specifically linked to EDM as measured in a SJT. Moral foundations theory has also been discussed in this review and again, the gap in the literature relates to whether this framework can be used to assess individual workplace EDM using a SJT.

Gaps in the literature are also highlighted in relation to the differentiation between personality and character. Character traits and related concepts were reviewed to determine any empirical evidence of the reliability and validity of individual traits and factors as this was of important in order to demonstrate that character traits should be included in any explanatory model of workplace EDM. This necessitated an examination of methods used to measure character which highlighted further gaps and also provided an opportunity for cross-disciplinary consideration of approaches i.e., applying moral foundations theory stemming from social and evolutionary psychology, in an area of organisational behaviour and work psychology. The issues of measurement of traits also provided an opportunity for cross disciplinary work as fundamental principles stemming from the measurement of individual difference within organisational psychology are discussed and the potential to apply these to EDM research, with the subsequent benefits which might be accrued, are explored. Finally, the potential for development of robust measures of workplace EDM were another gap identified and possible solutions to this area are highlighted. This included reviewing the literature on SJTs, a tool usually used in selection and occasionally development, with a view to developing an SJT capable of assessing workplace EDM and contributing to further understanding of the role of morally relevant individual differences in this field.

Theoretical model and hypotheses

The following hypotheses were set,

Study 1 Hypotheses

To address the question concerning whether SJT are measurement methods, such as an interview, or whether they can sit alongside psychometric tests and questionnaires and be designed to measure target constructs, the following hypothesis was posed.

- H1 SJT can be developed to measure target constructs.
- H2 That an SJT-EDM will discriminate between individuals who endorse ethical response options and those who choose unethical response options.

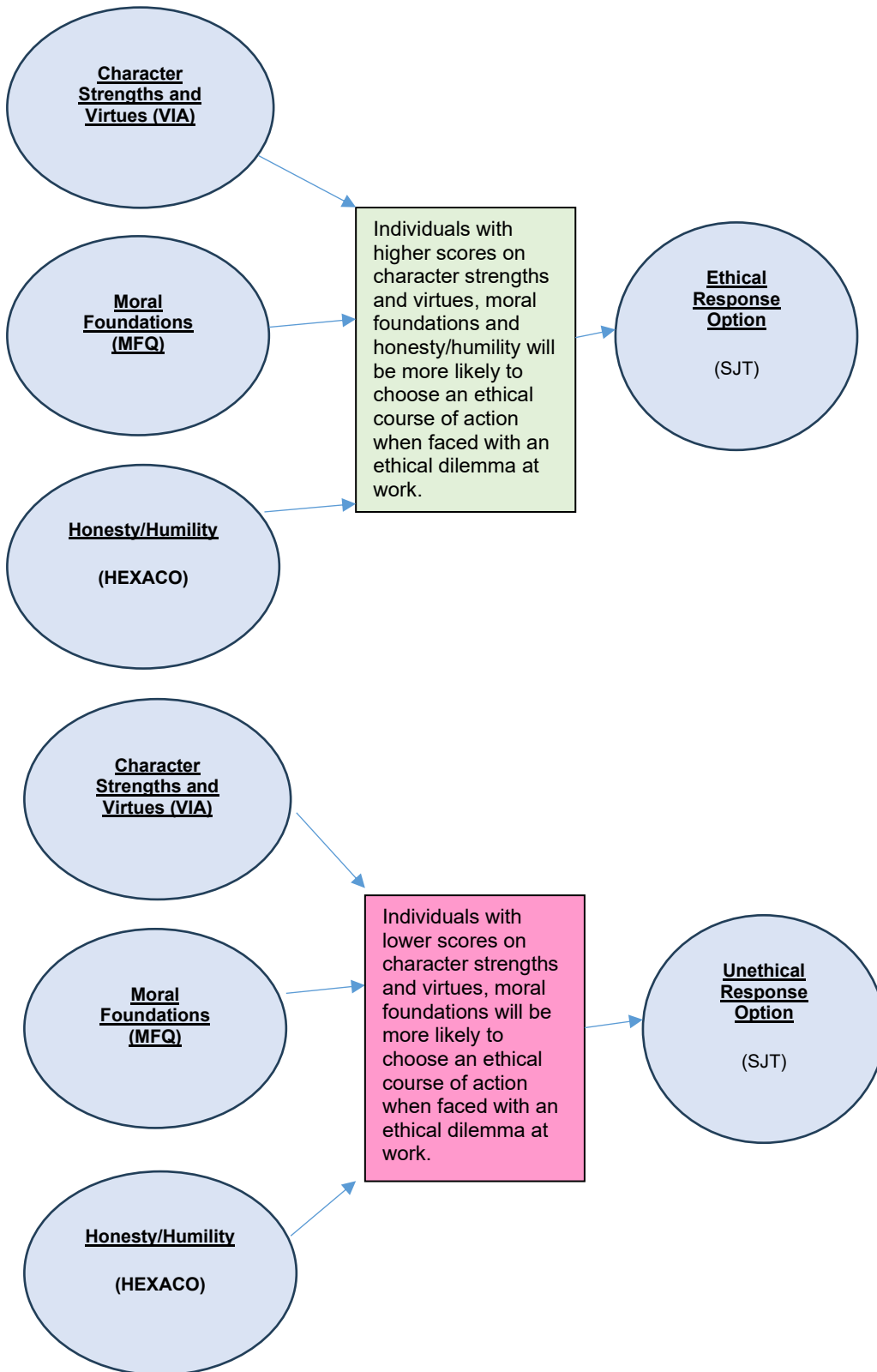
Study 2 Hypothesis

- H3 That morally relevant character and personality traits will predict individuals' choices between ethical and unethical responses to workplace ethical dilemmas

A theoretical model for Study 2 is illustrated below in Figure 10

Figure 9

Theoretical model



Chapter 3 Methodology

Epistemology, Methodology and Methods

Positivism, also referred to as empiricism, has been the major doctrine guiding the study of psychology since psychology was established as a discipline in its own right. As the discipline of Psychology moved forward through the 20th century and, despite the development of more *idiographic* and *holistic* approaches with the work of Lev Vygotsky and George Kelly, logical positivism and logical empiricism still dominated thought. According to Indick, (2002) this was partly driven by a desire to associate psychology with the respected 'hard sciences'. Increasingly, many psychologists found the tenets of positivism restrictive as a tool to study the complexities of human feelings, thoughts and behaviour. Stam (1990), for example, suggests that psychology was hindered from moving forward by the logical empiricism which held sway over the discipline for the large part of its history. This view is further endorsed by Indick (2002) who maintains that the tenets of logical positivism became a constraining factor for modern psychologists as they forced a continued focus on only those aspects of human behaviour that were observable and denied the existence of any other form of knowledge.

Johnson & Cassell (2001) also consider the issue of epistemology and work psychology. They posit that the field, both in research and practice, was dominated by the 'tacit commitment to positivism' and that 'this implies that the researcher can be a neutral collector of data who can objectively access the facts of an a priori reality' (p128). They note that one source of some criticism of the positivist approach within psychology stemmed from the significant issue of the concept of human subjectivity. Positivism had been seen to exclude the concept of human subjectivity from the domain of legitimate science. Such criticism, according to the authors, did ultimately lead to a growth of interest in, and use of, qualitative methods in psychological research; however they further asserted that on closer examination,

'the epistemological stance underlying the use of so-called qualitative methods rarely entails a significant departure from positivism beyond questioning methodological monism.' Johnson & Cassell (2001:129)

Post-positivism, with its ontological roots in positivism (Goff, 2004), emerged as a response to the criticisms levelled at positivism in its purest form. Post-positivism does not reject the scientific method but does consider that reality can only be partly discovered and post-positivists acknowledge the role of social constructionism in researching and understanding reality. The ontological stance of post-positivism is that it is not possible to achieve a perfect understanding of reality but that, from an epistemological standpoint, the researcher should endeavour to remain independent (Shan, 2022). This research conducted for this thesis sits within a post-positivist framework. A post-positivist paradigm recognises the value of both quantitative and qualitative methods and techniques as means of obtaining data.

Methodology - Quantitative Research in Psychology

Based on positivism which maintains that there is only one truth, an independent reality that exists independently of the person, quantitative methodological approaches have appeared to dominate research in psychology as they were considered the most appropriate way to gather and analyse data to uncover the objective reality. As such, quantitative research requires larger samples, deemed to be representative of the population, with highly structured and controlled methods of gathering data, (Breakwell et al, 2020). Quantitative research results in numerical representations of data which, in the raw state, have little

value. Statistical analysis and interpretation of raw data is necessary so that meaningful conclusions can be drawn. A simple categorisation of the type of statistical analysis required is that of descriptive and inferential statistics. Descriptive statistics organise and summarise the data to communicate meaning more effectively. Inferential statistics are used to analyse relationships between variables and draw conclusions to allow meaningful interpretations to be made concerning the data and the population it represents. The research for this thesis required data to be collected and quantitative analysis to be undertaken to draw conclusions concerning the psychometric properties of the SJT-EDM and relationship between the variables in the study.

Methodology - Qualitative Research in Psychology

According to Dolder et al (2017) qualitative research in work psychology and related areas continues to be difficult to find. Cassell and Symon (2011) cite a previous study, Cassell and Symon (2006) in which they reviewed empirical work published during a 5-year period in five key journals: *Journal of Occupational and Organizational Psychology*; *Journal of Applied Psychology*; *Personnel Psychology*; *European Journal of Work and Organizational Psychology*; and the *Journal of Organizational Behavior*. The result of their review appears to demonstrate that there was little in the research published in those journals that demonstrated any move from an unreflexive and deterministic positivist norm. There were very few papers published in the journals that described research based on qualitative methods only. The authors suggest that the reason for this might in part be due to a perception by psychologists that the quality of qualitative research in psychology was difficult to assess.

Bates and Wilson-Smith (2013) reinforce the view that there was a lack of published research in work psychology that included the use of qualitative techniques, citing Krahn et al's (1995) study which found only 30 published works between 1987 – 1993. They argue that despite the lack of published research, qualitative research within work psychology had, in fact, taken place but had remained hidden. To support their argument they point to the development of psychometric tools where qualitative research methods had been used, in particular in developing the initial item pool. Furthermore they assert that qualitative methods were well established in this field but rarely discussed in published material. It is asserted that the use of mixed research methods in psychology and other disciplines has been steadily increasing (Heyvaert et al, 2013) and this is attributed to the growing realisation that most areas of interest are multi-level, dynamic, complex and nuanced (McCrudden et al, 2021).

If qualitative methods are used in psychological research, albeit in the initial exploratory stages of research, it would seem to be important from a post-positivist standpoint to ensure that such research meets the requirements of what might be considered 'good' qualitative research in psychology. Bates and Wilson-Smith (2013) point to the existence of much guidance on the qualitative methods and analysis techniques to be used of qualitative research within psychology. The qualitative research that they conducted with a sample of work psychologists found that there were narratives and subplots which emerged as ways in which these individuals assessed qualitative research within the discipline. The requirement that it should be 'fit for purpose' included the importance of reliability, validity, objectivity, and rigour as criteria. There appeared to be an understanding that qualitative research should only be used alongside quantitative research as it was somehow insufficient as a stand-alone method.

Cassell & Symon (2011) examine in more depth exactly what psychologists consider to be good qualitative research within work psychology and conclude that it was still a minority pursuit and often considered as risky. They also highlight and re-iterate that much qualitative work appeared to have been hidden in the discipline; in their case they cite the

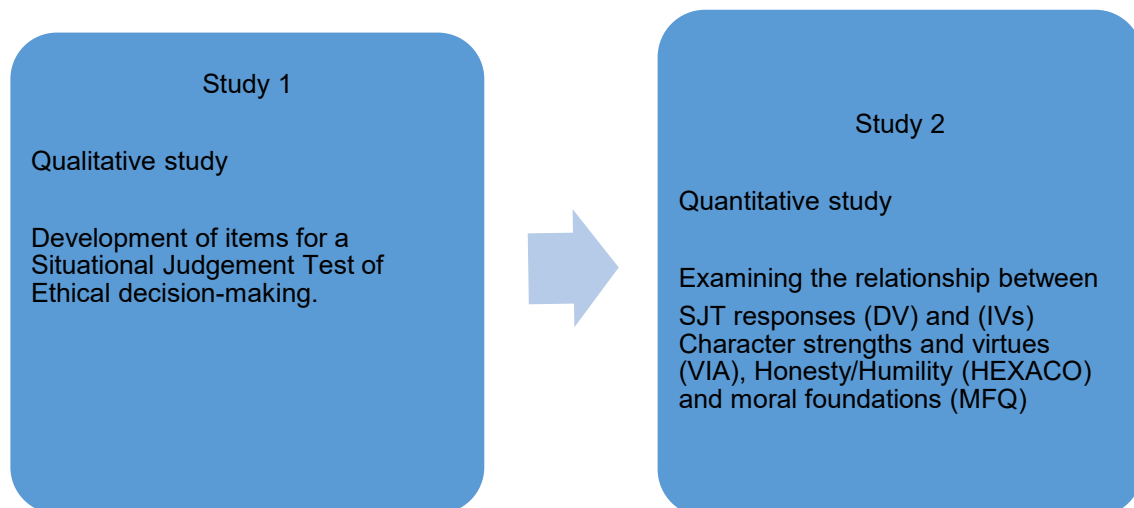
use of interviews in the famous Hawthorne studies as an example. They comment that the measures used to assess quantitative research, e.g. reliability, validity, replicability and generalisability, stem from a positivist standpoint and, they argue, that there is now a consensus that these same criteria cannot be applied to qualitative research. Lincoln & Guba, (1985) and Guba and Lincoln (1989) discuss the concept of a range of 'trustworthiness' criteria for assessing qualitative research which included, credibility, transferability, dependability, and confirmability.

One of the plots that emerged from Cassell and Symon's (2011) work that is particularly relevant to the focus of this PhD thesis is that some work psychologists have viewed qualitative research as exploratory and have used it as a starting point or scoping activity before moving to more quantitative methods. Much of the qualitative research that has taken place within work psychology has involved the use of focus groups, in-depth interviews, and other qualitative data collection methods which are then subjected to structured qualitative analysis, for example, by using techniques such as thematic analysis (Bates and Wilson-Smith, 2013). These authors conclude their paper by recommending that those involved in test construction should acknowledge the valuable role that qualitative methods have played in the development of psychometric measures. Guest et al (2012) use the notation 'qual→QUAN' to indicate both the order and the dominance of the quantitative approaches in such studies. They cite Morse and Niehaus (2009), who assert that this approach is so dominant in the development of quantitative instruments that it should not be considered true mixed methods research. In social sciences Baškarada, & Koronios (2018) note that many researchers applying mixed methods research do not appear to explain their philosophical rationale in published papers. It has also been asserted that mixed methods research should be viewed from a pragmatist perspective and as a third research method (Johnson and Onwuegbuzie, 2004) but others argue that this is insufficient justification (Denscombe, 2008).

Referring to the qual→QUAN approach, Percy (2015) describes such mixed methodological studies as 'sequential' and cited Cresswell (2003) who refers to 'two-phase studies' where the researcher conducts qualitative research to collect qualitative data and then quantitative research to collect quantitative data. In some studies the sequence is reversed but, importantly, the two stages are distinct and separate. Citing Greene (1989), McCrudden et al (2021) describe five different ways mixed methods are used in psychology. One way was categorised by Greene as 'development' and is used when psychologists use information gained by one method at one point in research to inform subsequent use of the other method at another stage. This was the research design for this thesis, shown in Figure (9) The research conducted for this thesis utilised a mixed methods approach, qualitative data was obtained and used to design a SJT of ethical decision-making (Study 1) followed by quantitative research to explore hypothesised relationships between responses to the SJT-EDM, character and virtue, morally relevant traits and moral foundations (Study 2).

Figure 10

Research Stages – Mixed Methods (Development)



Post-positivism - induction, deduction, and retroductive (abductive) reasoning

Aristotle named three different types of reasoning and these are translated into English as inductive, deductive and retroductive. Retroductive reasoning has become known as abductive reasoning in many disciplines, with the term *abduction* introduced in the early 20th century by the philosopher Charles Pierce. It stems from the observation that most great advances in science do not stem from solely inductive or solely deductive research (Kovács & Spens, 2005),". According to Koslowski in Ball & Thompson Ball & Thompson (2018, p366)

'abduction is a strategy for drawing inferences about an event according to which one explanation for an event is preferred to another because it provides the more plausible causal account of the data that is also more causally coherent with what we take, at the time, to be well-founded background information or beliefs.'

Abductive research facilitates creativity and allows the use of intuition (Taylor et al.,2002).

'Epistemically, intuition is an important, independent source of information (Lieberman, 2000; Thiroux, 1985). Intuition is commonly the starting place for one's knowledge and understanding; this is as true for the trained scientist as it is for the average "person on the street."' (Elliot & Covington, 2001 p82)

Creativity is necessary in research to break out of the restriction of inductive and deductive research. Abductive research also enables distinctions to be made between the general and the particular (Danermark, 2001). These two advantages make abductive research suitable for the first phase of research allowing for hypotheses and propositions to be developed that can then be subjected to testing in the later, deductive phase of the research (Kovács & Spens, 2005).

Study 1

Introduction

Techniques for collecting data in qualitative research are 'bottom up' and need to allow for 'participant-generated meaning to be heard' (Willig 2013, p23). As already discussed, it is important in qualitative research within work psychology to ensure the *validity* of the data that is collected. This can be facilitated by ensuring that the techniques chosen to obtain qualitative data enable large quantities of data to emerge whilst also ensuring that the data is relevant to the research question or questions. The approach to qualitative research in this study would be referred to as 'small q' qualitative research as opposed to 'Big Q' qualitative research (Kidder & Fine, 1987, cited in Braun & Clarke (2013). This approach allows qualitative techniques to be used within a predominantly quantitative, realistic research project (Braun & Clarke). It is noted however, that Braun & Clarke (2022) do remain critical of small q TA, they comment,

'However, there is a logic to small q TA that is consistent with its postpositivist leanings, even if these are rarely explicitly acknowledged' (p241/242)

Many researchers continue to use mixed studies in a sequential or two-phase study. Qualitative data is generated first to enable the construction of a psychometric measure which is then quantitatively evaluated.

Debates concerning the process of SJT development were covered earlier in the literature review chapter. Tiffin et al (2020) summarised the differences between a construct driven, and a traditional approach to SJT development (Figure 11, p.69). This process was used to guide the SJT-EDM developed for this research but it is important to note however, that the steps outlined in Figure 11 refer to how SJT have been developed for use in a selection context. The SJT for this thesis was developed, initially, for the purpose of this research and not for use in selection settings. The procedure followed for the development of the SJT-EDM for this research is described, explained and justified in the summary on p. 70.

The principal aim for this research was to establish whether individual differences related to character and virtue were predictive of SJT-EDM choices. This does not preclude the SJT-EDM being used in selection in the future, following further trialling, refinement and validation.

Study 1a and Study 1b

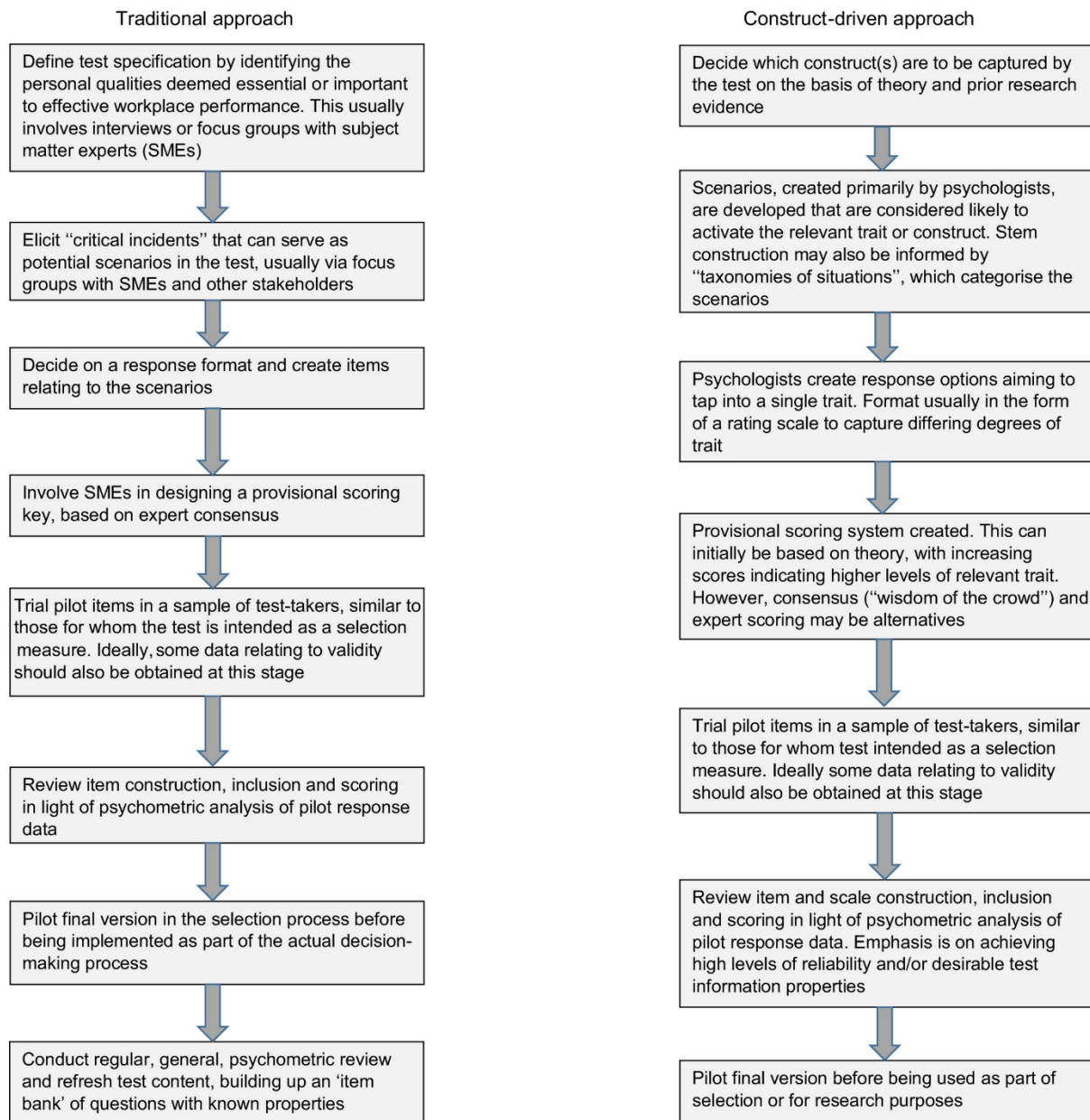
Study 1a refers to the qualitative study resulting in the development of the SJT-EDM and is described in this chapter.

Study 1b refers to the quantitative analysis required to assess the statistical properties of a new instrument.

Once designed the SJT-EDM was loaded onto SoSciSurvey, an online survey platform <https://www.soscisurvey.de/> and used in Study 2 (see p.89). The data obtained allowed quantitative analysis concerning the SJT-EDM reliability (internal consistency) to be determined. SJT-EDM data were also subject to factor analysis. These analyses were necessary to enable the investigation required to address the research questions, objectives and hypotheses. The results of this quantitative analysis are presented in the Results Chapter (p.92).

Figure 11

Traditional versus Conventional Approaches to SJT Design



From 'Situational judgement tests for selection: traditional vs construct-driven approaches.' by Tiffin, P. A., Paton, L. W., O'Mara, D., MacCann, C., Lang, J. W. B., & Lievens, F. (2020). *Medical Education*, 54(2), 105–115. <https://doi.org/10.1111/medu.14011>

Critical incident interviews

Critical incident interviews were developed by Flannigan (1954) and defined by him as

'A set of procedures for collecting direct observations of human behaviour in such a way as to facilitate their potential usefulness in solving practical problems and developing broad psychological principles', (p327)

And an incident is defined as

'any specific human activity that is sufficiently complete in itself as to permit inferences and predictions to be made about the person performing the act' (p327)

And the 'critically' stems from the requirement he describes as follows,

'where the purpose or intent of the act seems fairly clear to the observer and where its consequences are sufficiently definite as to leave little doubt as to its effects' (Flannigan, 1954, p327)

Approaches to using critical incident interviews can vary in the specificity of direction given to participants when seeking the critical incidents (Cabrera & Nyguen 2001). These authors argue that the decision around the nature and extent of the direction given will depend on what type of scenarios are being sought, for example, developing a SJT for customer service may require the researchers to focus participants through their questions on the relevant subject area.

When originally developed, the critical incident technique was used to gather qualitative data from individuals in a face to face interview but the technique has been developed and refined since Flannigan's (1954) original work. Critical incidents can also be obtained from focus groups and from direct or participatory observation as well as from one to one interviews (Edwardson, 1992). Further adaptations to the techniques were made by Johnston (1995) who used a questionnaire to obtain written data on critical incidents from research participants.

Focus groups

Focus groups are a form of group interview in which there is an opportunity for participants to interact and respond to the inputs of other participants. Gibbs (1997) identifies key characteristics of focus groups to include, organised discussions, interaction, collective activity, and social events.

The role of qualitative research in psychology has, as previously indicated, perhaps been underestimated by some and others have questioned whether qualitative research produces the valid and reliable data that positivist approaches require. It follows therefore that the role of focus groups as a data collection method within psychology have also been questioned. The same reservations have been raised by researchers operating in the business and management research areas. For example, Coule (2013) states that concerns about focus group techniques as a method for collecting reliable and valid data stem from doubts about the subjectivity of the technique. As a result she argues that the use of the method has been confined in management research to a minor role and it has mostly been used in the preliminary stages of research.

'First, management researchers may use focus groups to generate or select theoretical ideas and hypotheses for subsequent deductive testing.' Coule (2013 p150).

Within psychology, focus groups have been used to generate qualitative data and have been growing in popularity (Willig 2013).

The notion that focus group interviews can be used in the initial stages of psychological research is reinforced by Howitt (2016). He describes how focus group research in psychology has developed rapidly since the 1970's. They have been used to enable researchers to identify the significant issues in the particular field of study. Additionally he posits that the conversational data obtained from them can be analysed to identify the emerging themes.

Hoyt & Mallinckrodt (2012) advocate the use of focus groups to gather data from the target population about the key constructs that are to be included in a psychological assessment instrument. They suggest that collecting this data will help improve the content validity of the instrument and further maintain that this will overcome any limitations stemming from the researcher's restricted understanding of the overarching construct. Building on this justification, Miles et al (2016) posit that using focus groups to generate items for a quantitative measure does not mean that the principles of postmodernism have been abandoned. They argue that mixed method approaches are in line with the important place that constructivist interpretivist approaches give to the value of subjective data gained through reflection and that this data can be usefully used in addition to objective data gathered from other methods. As such the data is,

“stimulated by the interactive researcher-participant dialogue” (Ponterotto, 2005, p. 129).

Calder (1977) cited in Howitt (2016) described three types of focus group as 'exploratory', 'clinical' and 'phenomenological'. The 'exploratory' form allows the researcher to use the focus group to generate information about an area that is not known about. The exploratory format was used in this study.

Semi-structured interviews

The semi-structured interview allows researchers to focus questions related to their research questions and interviewees to recount relevant aspects, experiences, feelings and thoughts. The interview technique requires that the interviewer maintains some control over the nature and scope of the interviewee's accounts whilst also allowing the participant some leeway. As such the interview needs careful planning and skilful facilitation from the researcher. An interview agenda allows the researcher to return to the research focus when necessary. Focus groups and semi-structured interviews were used to gather data in Study 1. Participants were asked questions, based on critical incident technique, that ensured that their answers focused on ethical dilemmas, ethical decisions and ethical choices they had faced in their workplace as well as the possible responses to these situations and, when appropriate, the decisions they had made and any outcomes that resulted.

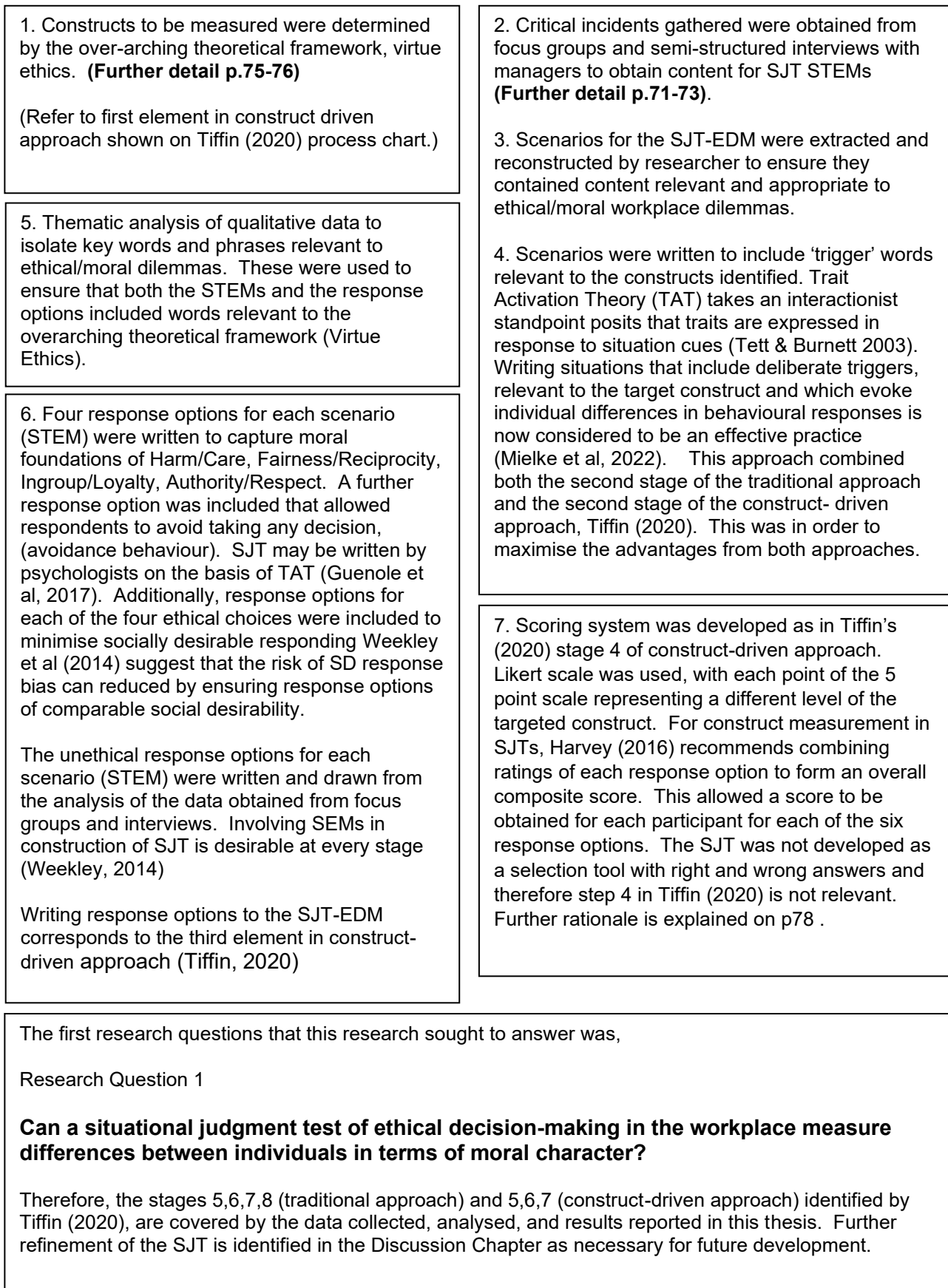
In both structured interviews and focus groups the researcher may start by asking general open-ended questions around the research questions and move to more specific and probing questions to gather more detail from the individual. The same critical incident interview approach was used in the interviews as with the focus groups. Questions asked by the researcher may be classed as descriptive, structural, contrast or evaluative (Spradley, 1979). Descriptive questions ask the individual to describe a situation and recount what happened. Structural questions ask the participants to focus on how they construct knowledge in their world and enable the researcher to gather categories and frameworks of meaning. Evaluative questions ask about the individuals' feelings towards someone or something. These three categories of questions were used in this study either to determine the questions used to start the interview or focus group e.g. structural 'what

does the word ethics mean to you in your workplace?' Descriptive questions were used to gather data on specific and critical incidents e.g. Can you think of a situation in your workplace that has posed an ethical dilemma and describe it? And finally, to probe and expand on situations described by participants towards the situations or people (evaluative), e.g. how did that make you feel? Contrast questions which seek to encourage the participants to make comparisons between events, were not found to be needed in this study. A post-positivist approach was followed which demands methodological rigour and in which the objectivity of the facilitator is paramount.

Design

Figure 13 (p.76) summarises the design stages for the SJT-EDM. It indicates where the steps outlined in Figure 11 were used and, where appropriate, adapted or omitted.

Figure 12 Study 1 Design Steps for the SJT-EDM



Participants

In the first phase of this research (Study 1), it was important to identify situations that were perceived by individuals to constitute ethical dilemmas faced by them in the normal course of their working day. Situations that required them to make decisions at work that they viewed as having an ethical component were also needed. Additionally, it was necessary to identify the nature of ethical dilemmas faced, and the range and nature of response options that the participants perceived in those situations.

Purposive sampling was used in Study 1, with participants chosen from working individuals in the UK as the objective was to gain situations involving ethical dilemmas experienced and ethical decisions taken by working individuals in the course of their job roles. The concept of sample size in qualitative research is often debated but there is guidance in the literature. Howit (2016) suggests that research using focus groups requires groups of homogeneous participants numbering between six to twelve participants. However Braun & Clarke (2013) suggest that where the data obtained from a qualitative study is to be subjected to thematic analysis as part of a PhD study then three-six focus groups is sufficient with each group consisting of four – eight participants

For this study four focus groups were conducted ranging in size from four to nine members. Focus group participants were as follows,

Group 1 - Students with prior management experience enrolled to study a postgraduate course on Internal Auditing.

Group 2, 3, 4 – Mixed groups of working managers from leisure, food and retailing sectors.

Although, following Braun & Clarke (2013) guidance, four focus groups conducted would produce sufficient data for the purpose of this thesis, further data was obtained from semi-structured interviews to ensure that sufficient diversity of experiences were gathered from working managers who were working in different contexts, at different levels of seniority, and from different industry sectors. Purposive sampling guided the choice of participants and these individuals were chosen because of the nature of their job role e.g. internal auditors, or their industry sector e.g. manufacturing and constructions. The individuals represented different sectors to the focus group participants which allowed a more diverse range of situations and incidents to be gathered. Additionally, the seniority of the individuals chosen for individual interviews meant that they were more willing to discuss examples from different contexts than the managers included in the focus groups. All participants were hypothesised to have observed or been involved with ethical dilemmas or ethical decisions in the workplace due to the nature of their role.

Participant 1, Internal Controls Manager

Participant 2, Director of Construction

Participant 3, Director Corporate Auditing and Ethics Officer

Participant 4, Internal Controls Manager

Procedure

Data Collection

Both the focus groups and the semi-structure individual interviews used critical incident techniques.

Focus group meeting lasted between 45 – 60 minutes. Interviews lasted between 45 minutes to one and a half hours.

Participants in both the focus groups and individual interviews were asked to give examples of any ethical decisions or ethical dilemmas they had faced in the course of their work. Open ended questions were asked in order to encourage participants to expand on the ethical dilemmas faced and decisions made. Participants were also asked to describe how they had responded to the dilemmas they had made and also to explain what other alternatives responses they had considered or might have considered.

Probing questions were asked when the facilitator judged that more information was needed. A funnelling technique to structure the interviews was used. The researcher followed a semi-structured approach and remained neutral and objective. Occasionally steering questions were used to keep the participants focused on the area to be discussed. All questions asked by the moderator (the researcher) were guided by the research and therefore focused on ethical dilemmas and ethical decisions in the workplace. Participants were repeatedly asked to recall and describe any ethical dilemmas they faced or ethical decisions they had had to make until no more examples could be offered by them.

The process followed was in order to ensure that the resulting data was relevant to the target constructs to foster construct validity of the SJT-EDM STEMS and response options. All participants received and signed the briefing documents and informed consent forms before the meetings started. The importance of confidentiality was discussed and interviews and focus groups were recorded. Notes were taken during the session by the researcher.

Data Analysis – Interviews and Focus Groups

The primary aim of completing the interviews and focus groups was to ascertain relevant situations for use in the SJT-EDM. Approaches to designing STEMs for SJT were discussed earlier in the literature review chapter. Participants in this study were considered to be subject matter experts. This corresponded to step 2 as indicated in Figure 11 (p.69), and is in line with common practice in SJT development. The situations that were considered suitable for inclusion in the SJT-EDM were extracted and adapted to produce STEMs. The primary criterion for suitability was that they had to contain sufficient content that would enable an ethical dilemma to be written into an easily understood situation. Jargon, particularly sector specific jargon, was removed. Situations were also adapted by the researcher to be as simple as possible. The STEMs derived from the situations also needed to be such that six realistic response options could be written that would correspond to the constructs identified deductively from the literature. The situations also had to be suitable for an unethical response option to be written. The following table summarises the analysis of the data obtained and the third column highlights which of the SJT STEMs was obtained from which source.

Table 1

Qualitative Data Analysis (Study 1)

Source	Themes identified and used in STEMS and response options.	Situations identified to use for STEMS and Response Options
<p>Interview 1 Internal Controls Manager (Engineering, Manufacturing, Building Society). Gave examples from current and previous organisations.</p>	<p>Ignoring situations (Used in response options)</p> <p>Avoiding situations (Used in response options)</p> <p>Leaving organisation if perceive unethical practice (Used in response options)</p> <p>Nepotism (Used in response options)</p> <p>Transparency</p> <p>Fairness (used in response options)</p> <p>Right and Wrong</p> <p>Values</p> <p>Exploiting a flaw in the system (Used in response options)</p> <p>Manipulative</p> <p>Trusted advisor</p> <p>Open</p> <p>Honest</p> <p>Fair (Used in response options)</p> <p>Moral Dilemma</p> <p>Moral Base</p> <p>Loyalty (Used in response options)</p> <p>Do the right thing</p> <p>Not living up to own side of bargain</p> <p>Political game</p>	<p>Delaying Payments to Suppliers. (Adapted and used in Situation 10)</p> <p>Poor financial reporting practices found when joined new company (Adapted and in Situation 12)</p> <p>Personal relationships in workplace led to collusion rather than independent scrutiny (Adapted and used in Situation 6 – nepotism and in Situation 11)</p> <p>Mortgage fraud – keeping money that should have been repaid to customer.</p> <p>Involving HR (Used in response options)</p>

<p>Focus Group 1</p> <p>Mature students with prior work experience on an Auditing Course.</p>	<p>Values</p> <p>Code of Conduct</p> <p>Culture</p> <p>Trust</p> <p>Ethical/unethical</p> <p>Adverse effect on customer (Harm/Care) (Used in response options)</p> <p>Duty</p> <p>Feel part of the company (Loyalty) (Used in response options)</p> <p>Mis-selling/overselling (Used in response options)</p>	<p>Room availability at hotel. Takes money from customer when no hotel or car available. Customer pays more than needs to. Catching the customer unfairly (Adapted and used in Situation 1)</p> <p>Maximising cash flow (Adapted and used in Situation 10)</p> <p>Not following instructions if unethical (Used in response options)</p> <p>Taking money from safe. (Adapted and used in Situation 4)</p> <p>Selling travel insurance to customer that they do not need (Adapted and used in Situation 5)</p> <p>Giving job to a friend on grounds irrelevant to whether they can do the job (Adapted and used in Situation 6)</p>
<p>Interview 2 - Director of Construction (Engineering, Manufacturing) Global Organisation employing over 50,000 people. Oversees existing building worldwide and new manufacturing, storage and office construction. Previously worked in construction companies.</p>	<p>Taking advantage of situations inappropriately</p> <p>Do the right thing</p> <p>Illegal</p> <p>Personality</p> <p>Unethical/immoral</p> <p>Ethical dilemmas</p> <p>Doing what told to do by boss (Authority) (Used in response options)</p> <p>Courage (I was on my own)</p>	<p>Accepting corporate hospitality Formula One tickets offered (Adapted and used in Situation 8)</p> <p>Bid for contract. Win with lowest price but then suggest add-ons needed once job has started. (Adapted and used in response options)</p> <p>Building a new building in (South American Country). Permissions needed. Had deadline to complete the building. Told would get permissions quicker if made payment to intermediary. (Adapted and used in Situation 9)</p> <p>Demolition of buildings . Valuable materials removed</p>

		<p>and not declared. (Adapted and used in Situation 14)</p> <p>Told by boss to take cheapest bid (of 3) but knew it would result in poor safety practices. (Adapted and used Situation 14)</p> <p>Bid rotation – received 3 bids that were remarkably similar and companies bidding had clearly colluded. (Adapted and used in Situation 2)</p> <p>Transferring risk to client</p>
<p>Focus group 2 – Managers (Retail and Leisure)</p>	<p>Morals</p> <p>Do the right thing</p> <p>Fair and Just</p> <p>Decent human being</p> <p>My values</p> <p>Care</p> <p>Fair</p> <p>Make judgment based on experience (practical wisdom)</p> <p>Ethical dilemma</p> <p>Trust</p> <p>Honesty</p> <p>Experience helps you to see signs earlier (practical wisdom)</p>	<p>Employee had not declared criminal convictions on application. Had to dismiss but felt deserved second chance. Reported to HR. (Adapted and used in Situation 11)</p> <p>Customer spending all pension money on gambling – customer banned (Not Used)</p> <p>Regular customers disappeared Came back a few weeks later with a lot of money to spend. Heard on grapevine armed robbery locally at Post Office. Informed police (Adapted and used in Situation 3)</p> <p>Customer prosecuted and served prison sentence for mortgage fraud – allowed to gamble in company shop. (Not used)</p> <p>Customer gambling money they had inherited and in danger of becoming homeless. (Not used)</p> <p>Employee in debt -stole from company to clear debt. Decision whether to dismiss. (Adapted and used in Situation 4)</p>

		Vending machine – free vending manager didn't report it – dismissed (not used)
Interview 3 – Director Corporate Auditing (Global Engineering Company) (Also gave examples from serving in Local Government)	<p>Values</p> <p>Doing the right thing</p> <p>Taking care of employees (Care)(Harm) (Used in response options)</p> <p>Personal relationships in workplace</p> <p>Are they doing any Harm</p> <p>Truthful, transparent, honest</p> <p>Could have ignored (Avoidance) (Used in response options)</p>	<p>Engineers not being completely honest about progress on projects. (Adapted and used in Situation 7)</p> <p>Bribery example (not used as already had an example from Interview 1)</p> <p>Golf club example (not used)</p> <p>Involve HR (Used in response options)</p>
Focus Group 3 (Retail and Leisure)	<p>Moral</p> <p>Values</p> <p>Culture</p> <p>Legal/illegal</p> <p>Led from top</p> <p>Step in or stand down (Avoidance) (Used in response options)</p> <p>Has to be a viewpoint from employer (Authority) (Used in response options)</p> <p>Directed by manager what to do (Authority) (Used in response options)</p> <p>Experience guided (Practical Wisdom)</p> <p>Sort guidance from HR (Used in response options)</p> <p>Protecting the wider team from 'harm' (Care/Harm) (Ingroup/Loyalty) (Used in response options).</p>	<p>Pregnant customer smoking and drinking. Customer behaving in a way that was self-destructive. (Adapted and used in Situation 13)</p> <p>Customer's personal choice (Used in response options)</p> <p>Alcoholic employee allowed time off when drunk or hangover (Caring)</p>

Thematic Analysis

In addition to analysing the data obtained from the focus groups and interviews to obtain content material for STEMs, thematic analysis was completed. It should be noted however, that as the primary purpose of the qualitative data collection was to inform the development of a quantitative instrument, a full analysis of the text was not required (Guest, 2012). However, thematic analysis was used both deductively and inductively, and constructs, words and phrases were identified that were used to guide the wording within the STEMs and response options. These are highlighted in Table 1 (p.76-79), and this method corresponds with the construct-driven approach to designing SJT.

Thematic analysis (TA) is the most appropriate analysis technique for data obtained from focus groups and semi-structured interviews where the research question stems from a realist perspective (Willig, 2017). It is regarded as unique in terms of qualitative research as it is not inextricably linked to any theoretical stance, or epistemological or ontological paradigm (Braun & Clark, 2013). Willig et al in Sage, state that because TA can be used within any epistemological/ontological approach, the theoretical independence gives valuable flexibility to the researcher. TA is often used in the analysis of the qualitative portion of the data collected in a mixed methodology study. Qualitative researchers in organisational psychology are considered to take a constructivist approach i.e. that individuals socially construct their reality and that there are potentially different perspectives of that reality. Some scholars have described TA as a post-positivist method (Aronson 1995; Boyatzis 1998). Boyatzis (1998) considered that TA bridged the gap between qualitative and quantitative divide in that post-positivism pursues the goal of understanding a reliable, objective, fact-based reality, whereas many social science researchers pursue more interpretive aims. Braun & Clarke (2006), dispute this however, arguing that it sits firmly within the qualitative paradigm. They expound that TA typically has been used in either an 'experiential' manner or a 'critical' manner. The former assumes that the language used by participants in the focus groups and interviews reflects reality, either a universal one or their individual perspective of reality.

TA is a technique which can be guided either by inductive or deductive approaches. The difference lies in the way in which the codes are developed. In the former, codes, categories and their names are concluded inductively from the raw data, i.e. the transcriptions of interviews, focus groups etc. or observational notes of the researcher. On the other hand, a deductive approach is based on existing concepts or theory. Guest (2012) recommends that if a deductive approach is used then the concepts or theories used should also guide the development of any questions asked in interviews, focus groups or other methods. This was the process used for this study, but additionally abductive reasoning was also used in line with Koslowski in Ball & Thompson (2018),

'it provides the more plausible causal account of the data that is also more causally coherent with what we take, at the time, to be well-founded background information or beliefs' (p366).

In this research interview questions for both the focus groups and the interviews were guided by the overarching theme, i.e. ethical dilemmas and ethical decisions in the workplace. Once the data obtained from the interviews and focus groups had been transcribed, following Willig (2013), the initial approach to analysis was deductive and latent where latent refers to gleaning the underlying meaning and seeking patterns and stories. Subsequently, as a second stage, data was revisited and an inductive approach led to the identification of constructs, words and phrases that guided the wording of the STEMs and response options. Whilst thematic analysis can require a systematic and robust approach to analysis, it has been established that in cases where the primary purpose of the qualitative research is to

collect data to inform a subsequent quantitative measure a complete textual analysis is not necessary.

‘in certain mixed methods designs, for example, the primary purpose of collecting qualitative data can be purely to inform a quantitative instrument (sic). In such a context, the analysis is narrowly targeted to inform specific response categories, question stems, or domains of inquiry on an instrument. A complete textual analysis in this case is not necessary’ (Guest, 2012 p31)

Therefore, the analysis in this research was narrowly targeted to inform the general domain of interest, specific response categories, or question stems. The purpose of conducting focus groups and interviews with working individuals was to identify the nature of ethical dilemmas they faced, the nature and difficulty of ethical decisions they typically had to make and any outcomes and consequences.

Thematic analysis (coding)

According to Guest et al (2012), the first step in TA is to revisit the objective of the analysis. In this research, the objective was to gain data on the ethical dilemmas and decisions experienced by, and discussed with, research participants. Focus group and interview questions were targeted to elicit relevant data and the facilitator directed the discussion to stay focused on the area. In ‘small q’ TA, codes can be deductively determined and applied before any interaction with the data (Braun & Clarke, 2022). The researcher then looks for the themes in the data. Themes might be ‘manifest’ with explicit or surface meanings or ‘latent’, where there are deeper meanings, assumptions or ideologies (Boyatzis 1998; Braun & Clarke 2006). What is important is that the identified themes provide important insights to the research question.

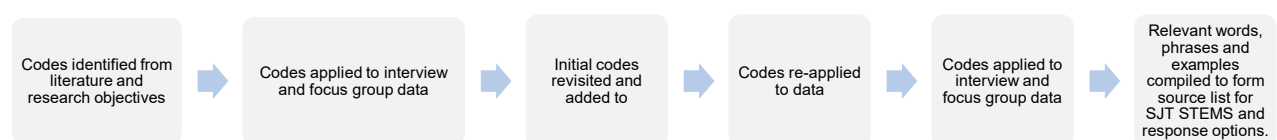
The codes determined for analysis of data in this research broadly followed the techniques of framework analysis as described by Braun & Clark (2006). Framework analysis is used when the objective is clearly established in advance and themes can be established after initial data is scrutinised, and/or on the basis of the pre-determined topics or questions. Although the research utilised small q TA, the process followed was similar to Big Q TA as far as possible, to ensure validity.

Thematic Analysis of Data Obtained

The data were subjected to an initial review using the codes identified from the literature review (see below). It was determined that no further qualitative data was needed as saturation was achieved i.e. sufficient data had been gathered about the target phenomena (Morse, 1995). This was important in order to achieve content validity of the SJT-EDM. Content validity is defined as ‘the extent to which a test measures a representative sample of the subject matter or behavior under investigation’ (APA Dictionary of Psychology, 2022).

Figure 13

Process for Qualitative Data Analysis and Codes



Initial Codes (highlighted in bold) plus additional codes identified during analysis

(un)ethical, (im)moral, wrong, right, harm, fair, fairness, care, justice, hurt, moral/ethical dilemma, loyal(ty), avoid(ing), avoidance, ignore, told to/authority/directed, team/loyalty,

The data obtained were analysed to identify situations, described by the participants, which included the initial codes (deductive). A second review of the data identified additional codes that were not originally identified but deemed relevant by the researcher (inductive).

SJT STEM and Item Development

Content for surveys, questionnaires and measures needs to include sufficient material from the domain of knowledge concerning the subject matter or constructs to be measured to achieve content validity or content relevance (Coaley, 2014). The researcher needs to provide theoretical support for the content included. Psychometric scales can be, and have been, developed using inductive, and/or deductive, and/or abductive approaches. Commonly referred to as the item generation stage, deductive determination of scale content involves searching and drawing from the literature (Hinkin, 1995), inductive item generation draws on data derived from sources such as interviews and focus groups using expert panels or subject matter experts (SMEs), abductive reasoning allows for inferences to be drawn concerning the focus which offer a plausible and coherent account based on well-founded information or beliefs (Koslowski).

STEM Content

For this research the content of the STEMs was, in the main drawn, from the critical incidents described by the participants. Some examples were excluded as they did not present a significant enough of a dilemma to enable a range of response options to be written. In most cases examples needed to be modified, for example to protect the participant's or organisation's anonymity or confidentiality. In most cases the scenarios needed to be simplified as they contained organisationally specific or technical data that would not be needed in a SJT-EDM. Some also needed to be simplified as they contained too much content for the STEM. In all cases the situations obtained contained at least one, and in most cases several, of the themes identified from the TA.

A few cases where situations were provided that resulted in illegal acts and prosecution were not used or were modified by the researcher. The research was seeking examples of moral dilemmas rather than situations where action might be determined by legal requirements. A final consideration for the STEM content was that the content should not be too lengthy or complicated. Participants' words were used wherever possible in designing the stems and response options. Where necessary they were adapted by the researcher to ensure that the language used was generic rather than industry specific and that reading level was as low as possible to aid comprehensibility.

Seventeen situations were identified as potentially suitable for STEMs. The criteria for inclusion was based on the definitions used for EDM, and moral (or ethical) dilemma described in the introduction and literature review. They needed to include a scenario which would facilitate the respondent drawing on moral principles, or their personal moral base, in order to decide between several courses of action. Three stems were discarded as they did not fit with the response option design criteria.

An example is provided in Figure 14 (p.83). The basis of the content for this STEM was obtained from Focus Group 1 but adapted by the researcher in order to simplify the language used and to ensure that the ethical dilemma is clearly conveyed.

Response Content

The response options were then written using material gained from the data provided by the participants but, supplemented by researcher-written responses when needed. This is in line with Tiffin (2020) Response options were modified in order to represent the constructs identified in the literature review i.e. moral foundations. The foundation of Purity/Sanctity was excluded from the response options as it was not considered relevant to the study which is focused on everyday workplace decisions or dilemmas. Therefore four response options were written to include triggers (TAT) representing the MFT moral foundations of Harm/Care, Fairness/Reciprocity, Ingroup/Loyalty, and Authority/Respect. A fifth response option was included allowing participants to avoid making a decision. This emerged as a code when participants described courses of action they could have taken in response to a moral/ethical dilemma (see Table 14 Summary of Qualitative Data Analysis and SJT STEM and Response Option Content). The sixth option offered the unethical response, which was derived from the SME data or, in a few cases, written by the researcher. Response option content can be determined by the researcher or provided by SME's (see Figure: 11 Traditional versus Conventional Approaches to SJT Design p.69).

An example of one STEM with response options is shown in Figure 12. The construct to be measured in the response option is shown in Figure 12 below in bold and in brackets but was not included on the version presented to participants.

Figure 14

Example of SJT-EDM STEM and Response Options

<p>Question 5</p> <p>You work as a salesperson for a company that sells travel insurance. Your salary is partly based on commission for the monetary value of sales you make. There are three products, 'gold' (most expensive), 'silver' (middle-priced) and 'bronze' (the cheapest). The cover needed by the customer will depend on where they are traveling, how long they are going for, and other factors. You have been passed a potential customer by your supervisor who has told you that the customer has agreed to buy a 'gold' package. After listening to the customer you realise that they only need a 'bronze' package.</p> <p>Please rate each statement according to how much you agree or disagree with whether the statement describes how you would act and why. Please rate each of the 6 options. Please try to avoid giving the same rating to each of the options.</p>
<p>Because you care about your customers you explain to them that you think the bronze package will suit them better and complete the sale on that basis. (Harm/Care)</p> <p>Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Neutral <input type="checkbox"/> Agree <input type="checkbox"/> Strongly Agree <input type="checkbox"/></p>
<p>It would not be fair to the customer if you sold them something they did not need so explain to them that you think the bronze package will suit them best and complete the sale on that basis. (Fairness/Reciprocity)</p> <p>Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Neutral <input type="checkbox"/> Agree <input type="checkbox"/> Strongly Agree <input type="checkbox"/></p>

<p>You consider that any sales that will help you and the team achieve your target are good so you accept that the customer has agreed to buy the more expensive 'gold' product and complete the sale. (Ingroup/Loyalty)</p> <p>Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Neutral <input type="checkbox"/> Agree <input type="checkbox"/> Strongly Agree <input type="checkbox"/></p>
<p>Put the customer on hold and explain to your supervisor that you think they need the cheaper 'bronze' package and ask what to do. Then do as your supervisor instructs. (Authority/Respect)</p> <p>Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Neutral <input type="checkbox"/> Agree <input type="checkbox"/> Strongly Agree <input type="checkbox"/></p>
<p>Although it involves selling the customer something that is more than they need complete the sale of the 'gold' package. (Unethical)</p> <p>Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Neutral <input type="checkbox"/> Agree <input type="checkbox"/> Strongly Agree <input type="checkbox"/></p>
<p>Deliberately end the telephone call. There is a strong chance that when the customer calls back they will speak to a different person. (Avoidance)</p> <p>Strongly disagree <input type="checkbox"/> Disagree <input type="checkbox"/> Neutral <input type="checkbox"/> Agree <input type="checkbox"/> Strongly Agree <input type="checkbox"/></p>

Response Option Format

Data obtained from any survey, questionnaire or test need to be valid and much research on design has focused on the issue of the response set of the test taker. Response bias was defined by Paulhus (1991) as "a systematic tendency to respond to a range of questionnaire items on some basis other than the specific item content,". Response sets include social desirability (SDRB) which may negatively impact on construct and criterion validity of the SJT.

The SD response bias refers to the tendency of individuals to over-report socially desirable characteristics and behaviours and under-report undesirable characteristics and behaviours (Zerbe and Paulhus, 1987). It is considered a pervasive issue in self-reported data (Dalton & Ortegren, 2011). A socially desirable response set of an individual test taker may lead to a pattern of responses which results in misleading or false information and, as a result, the obtained test score may not be an accurate, valid or reliable indication of the characteristics and behaviours of the individual. Also referred to as socially desirability bias, the importance of SDRB was demonstrated by the work of Edwards (1959).

It is considered that the study of business ethics is considered to be particularly prone to SD (Randall & Fernandez 1991). In a comprehensive review of research into ethical behaviour in organisations Brown et al (in Agle et al, 2014 p50) acknowledge that 'response bias can be particularly troublesome' in self-report measures related to ethical behaviour and, whilst elsewhere in the review alternative research approaches to measuring ethical decision-making are suggested, none consider ensuring that the design of self-report measures minimises the risk of SD with techniques drawn from the psychometric literature. A cross discipline approach drawing on the principles of psychometric best practice and applying it to the measurement of ethical decision-making would seem to bring benefit in this area.

The SJT-EDM was developed for research purposes and therefore the choice of format for the response options was determined by the research objectives and not applied selection settings. This allowed more flexibility of choice in determining format. A five-point Likert scale format was used which allowed the respondent to indicate to what extent the response described was like them. The five point Likert scale format enabled statistical analysis to be

undertaken in the second stage of the research. The SJT-EDM response options included four response options, each of which allowed the respondent to endorse an ethical response as 'most like' or 'least like' them, therefore an individual responding in a socially desirable way might still choose the option most closely like their true response as most like themselves. Weekley et al (2014) suggest that the risk of SD response bias can be reduced by ensuring response options of comparable social desirability. In the SJT-EDM designed for the purpose of this study four of the six response options were designed to be of comparable social desirability. This would address both issues of SD response bias whilst also ensuring that there was no obviously correct answer.

The four ethical response options were written to be equally socially desirable as far as possible. The 'most like' and 'least like' format is recommended for SJT where personal characteristics are to be measured and what is sought from the respondent is their 'behavioural tendency' (Weekley et al 2006). This was a variation on the most common formats which often ask respondents to indicate which of a number of responses they would do, should do or rank choices in order. It was necessary to include two further response options which would allow test takers to choose an unethical response or choose to take no action. Avoidance emerged as an important construct from the thematic analysis of Study 1 data. It was identified as a possible (or actual) response to situations containing an ethical dilemma and, as distinct and separate from the deliberate unethical choice. An unethical response option was included as analysis of this data would address the research questions.

The final SJT-EDM consisted of 14 situations, each with six response options with each linked to a five point Likert scale.

Scoring

Each scale allowed both a total and mean score to be calculated for each participant on each of the six scales, i.e. Harm/Care, Fairness/reciprocity, Ingroup/Loyalty/, Authority/Respect, Avoidance and Unethical response. The resulting SJT-EDM was used alongside the other study measures in Study 2.

Study 2

Introduction

The second phase of the research was designed to answer the research question and objectives,

Research Question 2

Is there a relationship between character strengths and virtues and courses of action chosen by an individual when faced by a workplace ethical dilemma?

Research Objectives

To identify relationships between specific individual character strengths and courses of action chosen by an individual when faced by a workplace ethical dilemma.

To investigate the validity of moral foundation theory and honesty/humility domain when applied to workplace ethical decision-making.

Design

A positivist approach was required which seeks to establish general principles which can be tested and replicated across populations and situations. Therefore quantitative techniques were used. A cross-sectional design was used with the SJT-EDM response options as dependent variables. The H/H domain and four facets, the MFQ foundations and VIA three virtue structure, were the independent variables. These are shown in Table 2 below.

Table 2

Study Variables

Dependent Variables (SJT-EDM response options)	Independent variables (HEXACO)
Ethical Response Options Unethical and Avoidance Response Options	Honesty/Humility (domain)
Ethical Response Options Unethical and Avoidance Response Option	Harm/Care (Foundation) Fairness/Reciprocity (Foundation) Ingroup/Loyalty (Foundation) Authority/Respect (Foundation) (Purity/Sanctity) was excluded from the analysis*
Ethical Response Options Unethical and Avoidance Response Option	Individualising (MFQ) Binding (MFQ)
Ethical Response Options Unethical and Avoidance Response Option	VIA Character Strengths
Ethical Response Options Unethical and Avoidance Response Options	VIA 3 factor structure Caring Inquisitiveness Self-Control
Ethical Response Options Unethical and Avoidance Response Options	VIA 6 factors Wisdom and knowledge Courage Humanity Justice (Temperance and Transcendence were not included)*

* These were not considered relevant to workplace behaviour

Participants

Participants were recruited through the researchers professional and personal contacts. 65 participants were obtained through this means. A further 260 participants were recruited through Prolific, an online, on demand platform that recruits participants for research

projects. Participants from both sources were required to be over 25 years old and be currently in employment or recently retired. Data were obtained from 325 participants. Five data sets were incomplete and not used in the analysis.

Of the 320 participants whose data were included in the analysis, 192 identified as female (60%), 126 identified as male (39.4%) and two participants did not identify as either male or female. The average age of participants was 36 and the ages ranged from 24 to 75. The average job tenure of participants was 5.7 years. 83% of the sample reported as full-time employees and 17% part-time. Further descriptive data related to the sample is provided in the results chapter (Tables 2 &3).

Materials

The measures used in this part of the research were the SJT-EDM developed for Study 1, The VIA -IS- M, the Honesty/Humility domain and facet items from the HEXACO questionnaire, and the MFQ30. The VIA-IS-M consists of 96 items and responses are Likert 5 five point scale. There are four items measuring each of the 24 character strengths and scores are also computed for the six and three virtues super-factors. The questionnaire contains both positively and negatively keyed items to mitigate acquiescence response bias. The H/H items were extracted from the HEXACO-PI-R questionnaire. There are 32 items, eight items per facet and the overall H/H domain score is also calculated. The responses are scored on a five point Likert scale with some reversed items. The MFQ30 is a 32 item questionnaire, two of the items are not scored. This version includes 6 items per scale and items are rated on a five-point Likert scale. The SJT-EDM consisted of 14 scenario descriptions followed by six possible responses. Participants are asked to rate whether the response described is like them or not on a five point Likert scale.

Procedure

The participant information sheet (PIS), informed consent form (ICF), demographic information questions, the SJT-EDM, MFQ30, H/H (HEXACO) items and the VIA-IS-M were loaded onto SoSciSurvey, an online survey platform <https://www.soscisurvey.de/>. Participants were sent the link to the site. Participants could not proceed to the demographic questions, the SJT-EDM and the questionnaires until they had confirmed they had read the PIS and endorsed the ICF. Data was downloaded from the site once the administration period was ended.

Data Analysis

Data was uploaded to SPSS V26 and subject to analysis.

Chapter 4 Results

The results of the analysis of data obtained in this research are contained in this chapter. Data was obtained through the distribution of the SJT-EDM, MFQ30, H/H scale from HEXACO and the VIA-IS-R. The questionnaires and SJT-EDM were presented via SoSciSurvey a General Data Protection Regulation (GDPR) compliant server based in Germany.

Data analysis was conducted using IBM SPSS Statistics version 26.

Descriptive Data

Data were obtained from 325 participants however five data sets were incomplete and not used in the analysis. Participants were initially recruited through personal and professional contacts of the researcher. Further participants were recruited through Prolific, an on-line research platform (www.prolific.co). Of the 320 participants whose data were included in the analysis, 192 identified as female (60%), 126 identified as male (39.4%) and 2 did not identify as either male or female.

The average age of participants was 36 and the ages ranged from 24 to 75

Table 3

Industry or Sector of Participants' Employment

Industry/sector	<i>n</i>	%
Agriculture, forestry and fishing	7	2.2
Manufacturing, mining and quarrying and other industry	21	6.6
Construction	7	2.2
Wholesale and retail trade	14	4.4
Transportation and storage	13	4.1
Accommodation and food service activities	12	3.8
Information and communication	36	11.3
Financial and insurance activities	33	10.3
Real estate activities	3	.9
Professional, scientific, technical, administration and support service activities	45	14.1
Public administration, defence, education, human health and social work activities	77	24.1
Other services	43	13.4
Prefer not to say	3	.9
None of the above	6	1.9

Table 4

Participants' Job Type

Job type	<i>n</i>	%
Professional	79	24.7
Managerial	39	12.2
Top management	11	3.4
Supervisory-level management	22	6.9
Technical or specialist	46	14.4
Administrative	40	12.5
Skilled or semi-skilled role	35	10.9
Service occupation	19	5.9
Other	29	9.1

Note. The average job tenure of participants was 5.7 years. 83% of the sample reported as full-time employees and 17% part-time.

Study measures – variable means, standard deviations and correlations

These are included in Appendix 3

Study 1b -SJT-EDM Factor Analysis and Internal Consistency

H1 – SJT can be developed to measure target constructs

In order to test H1, the internal consistency of the individual response options included in the SJT-EDM (measuring constructs) was calculated (Table 6). Factor analysis was conducted and internal consistency was considered for the resulting factor solution (Table 12).

Reliability – SJT-EDM

Campion et al (2014) reviewed the calculation and treatment of SJT reliability in published studies and found that some researchers concluded that reliability, as calculated by Cronbach Alpha, was not a suitable approach to SJT as SJTs are multi-dimensional. Following recommendations concerning the appropriateness of Cronbach's Alpha for determining the reliability of SJT, Spearman-Brown Split half coefficient was also calculated for the SJT-EDM used in this study.

Table 5*Internal Consistency SJT-EDM***SJT-EDM Internal Consistency (Cronbach's Alpha and Spearman Brown Coefficient)**

SJT scale	Cronbach's α	Spearman-Brown coefficient
Care	.47	.46
Fairness	.57	.63
Authority	.51	.58
Loyalty	.23	.24
Avoidance	.73	.67
Unethical	.81	.77
SJT (all scales)	.70	.68

SJT-EDM (Factor Analysis)

The applicability of factor analytical techniques to SJT is fully discussed in the wider literature and in this thesis.

Factor analysis is a data reduction technique used to explore the interrelationships between a set of variables (Pallant, 2020). The debate concerning the relative merits of exploratory factor analysis (EFA) and principal components analysis (PCA) is complex and controversial (Coolican, 2019). According to Coolican, PCA is a method for data reduction which identifies correlations between items but does not expect the correlations to be explained by an underlying (latent) factor. EFA does identify underlying (latent) factors and is more often used to make sense of the data conceptually. For this reason PCA was used in this study. PCA has also been used in other similar studies e.g. Sharma et al (2013). Oblimin rotation is a form of oblique rotation which allows for the factors (components) to be correlated and in most areas of social science research variables are correlated with each other and forcing factors to be orthogonal would result in loss of potentially important data (Coolican). Costello & Osborne (2019) suggest that orthogonal rotation methods, e.g. Varimax, are most commonly used but that this is a mistaken approach. They support Coolican (2019) in this respect, arguing:

'In the social sciences we generally expect some correlation among factors, since behavior is rarely partitioned into neatly packaged units that function independently of one another. Therefore using orthogonal rotation results in a loss of valuable information if the factors are correlated, and oblique rotation should theoretically render a more accurate, and perhaps more reproducible, solution.' (p.3)

Both Varimax and Oblimin rotation were applied to the data but only Oblimin rotation results are reported. According to Pallant, similar solutions are obtained from Varimax and Oblimin

rotation when the correlation between components is low and this was the case in this study (2020).

PCA was applied to the results to explore the issues raised in the literature. Principal Component Analysis and Oblimin rotation with Kaiser normalisation was applied to the SJT-EDM data at both item and variable level. Kaiser (1958) suggested normalizing factor loadings before rotating them, and then denormalizing them after rotation. Three tests were inspected to determine whether the data were suitable for PCA; Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO), Bartlett’s test of sphericity, and inspection of the correlation matrix (Beavers et al, 2013).

At item level, KMO was .8 and Bartlett’s Test of Sphericity was $p = .000$, indicating that factor analysis was appropriate (Pallant, 2023). KMO of above .6 is considered ‘mediocre’ (Adams et al (2014, p223), but acceptable (Pallant, 2023). Bartlett’s test indicates whether the correlations differ significantly for the specified identity matrix and needs to be significant (Bartlett, 1951). However few correlations were above .3 and therefore the data was not suitable for factor analysis since uncorrelated items cannot have a common cause (Coolican, 2019). At variable (scale) level the results were suitable for FA. KMO = .6, again just acceptable, and Bartlett’s Test of Sphericity $p = .000$. The amount of common variance explained by a factor is termed the eigenvalue and the Kaiser Criterion recommends retaining factors with eigenvalues greater than 1 (Pallant, 2023). Applying the Kaiser criterion, 2 components had an Eigenvalue above 1 and explain 63.3% of the variance. The Kaiser criterion frequently produces too many factors so inspection of the scree plot is also advised (Cattell, 1966) and, in this data, indicated a 2-factor solution. Parallel analysis was also conducted for final confirmation of the factors to retain. The parallel analysis also favoured the 2-factor solution.

Table 6

Factor Analysis SJT-EDM – factor loading

	Factor loading		Communality
	1	2	
Situations – unethical	.85		.84
Situations – avoidance	.80		.67
Situations – loyalty	.75	.31	.62
Situations – fairness		.82	.75
Situations – authority		.67	.48
Situations – care		.65	.44

Note. $N = 320$. The extraction method was principal component analysis with an Oblimin rotation with Kaiser normalisation.

Table 7*Factor Analysis SJT-EDM – total variance explained*

Factor	Eigenvalue	% of variance	Cumulative %
1	2.28	38.06	38.06
2	1.51	25.20	63.26

Table 8*Factor Analysis SJT-EDM – correlations*

Factor	1	2
1	–	
2	-.09	–

From the initial analysis the two factors extracted were

Factor 1 – Unethical, Avoidance and Loyalty.

Factor 2 – Fairness, Authority and Care.

The two component solution explained 38.06% and 25.2% of the variance respectively

(Total variance explained + 63.26%)

Loyalty and Authority, both of which had shown low reliability see Table (4) were removed and a further PCA with Oblimin rotation was conducted. KMO was .6, again, acceptable, and Bartlett's Test of Sphericity $p=.000$. Applying the Kaiser criterion, both components had eigenvalues above 1 and explained 52.63% and 27.7% of the variance respectively (total variance explained = 80.34%). The results (refer to Tables (9,10,11), indicated that there was a divide between those responses that were hypothesised to represent unethical responses to the SJT-EDM, which included unethical and avoidance responses, and those ethical response options hypothesised to represent the moral foundation of care (avoiding harm to others) and the moral foundation of fairness and reciprocity.

Table 9*SJT-EDM Results of Factor analysis (PCA) removed Loyalty and Authority – factor loading*

	Factor loading		Communality
	1	2	
Situations – avoidance	.95		.85
Situations – unethical	.86		.85
Situations – care		.92	.79
Situations – fairness		.76	.72

Note. N = 320 The extraction method was principal component analysis with Oblimin rotation with Kaiser normalisation.

Table 10*SJT-EDM Results of Factor analysis (PCA) removed Loyalty and Authority – total variance explained*

Factor	Eigenvalue	% of variance	Cumulative %
1	2.11	52.63	52.63
2	1.11	27.70	80.34

Note. N = 320 The extraction method was principal component analysis with Oblimin rotation with Kaiser normalisation.

Table 11*SJT-EDM Results of Factor analysis (PCA) removed Loyalty and Authority – correlations*

Factor	1	2
1	–	
2	–.25	–

Note. N = 320 The extraction method was principal component analysis with Oblimin rotation with Kaiser normalisation.

Internal Consistency was then calculated for the 2 factors (Factor 1 – UnAv and Factor 2 – CareFair)

Reliability – SJT-EDM (Two Factors)

Table 12

SJT–EDM Internal Consistency (Cronbach’s Alpha and Spearman Brown Coefficient)

SJT scale	Cronbach’s α	Spearman-Brown coefficient
SJT (Factor 2) - unethical plus avoidance choices)	.86	.87
CareFair (SJT composite Care + Fairness)	.67	.63

As internal consistency of both factors was acceptable, two factors were taken forward for further analysis:

Reliability (internal consistency) MFQ30, Honesty/Humility (HEXACO), VIA-IS-M

Cronbach’s α was calculated for the other measures used in the study and these are detailed in Appendix 3.

Factor Analysis – MFQ30, Honesty/Humility (HEXACO), VIA-IS-M

Previous studies of MFT using the MFQ30 have shown mixed results and are discussed in more detail in the literature review and discussion chapters. Zakhari & Bates (2021) determined a seven as opposed to five factor model, the fairness/reciprocity and harm/care foundations were preserved intact and these sit within the individualising superfactor. The binding foundations increased to separate purity and sanctity and also separate two separate components of loyalty, one being loyalty to country and the other loyalty to clan. They did find support for the two super-factors ‘binding’ and ‘individualising’ within the moral foundations framework. Iurino and Saucier (2020) did not find support for the five factor model, although they used the shorter version of the MFQ with only 20 items, but they did confirm that there was support for two factors which can be interpreted as akin to individualising and binding. According to Harper & Rhodes (2021) the lack of clarity concerning the validity of the foundations as factors has led to many researchers to focus on the two broad factors, individualising and binding rather than the lower level factors. It was therefore important for this thesis to analyse the data obtained in this study to identify any structure.

At foundation level a two factor solution did emerge (Shown in Appendix 2) and was used in the multiple regression analysis described below. It was also important for this thesis to consider the four individual foundations used to construct the SJT-EDM response options and they were used in the multiple regression analysis described below.

Factor Analysis – VIA-IS-M

As originally conceptualised by Peterson & Seligman (2004) 24 character strengths were grouped into a six virtue structure and as discussed in the previous chapter, the authors expected that empirical studies could alter the theoretical structure. Some studies have confirmed the six factor structure (Ng, 2017) however a further refinement of the model to a

three virtue structure was proposed by McGrath (2018). The VIA-IS-M data obtained in this study was subject to PCA with Oblimin rotation. The results of PCA with Oblimin rotation of the VIA-IS-M data in this study did not identify a clear factor structure within the 24 strengths. Neither the six (virtue) factor structure nor three (virtue) factor structure were replicated in this study. However, since both the 6 and 3 virtue structures have been confirmed in other studies, they were used in the multiple regression analysis described below.

Factor Analysis – H/H

The evidence related to the structure of the HEXACO model and the psychometric properties of the HEXACO personality measure are discussed in the literature review. The model resulted from factor analysis and has been widely replicated in many languages (Lee & Ashton, 2020). Only one domain (factor), Honesty/Humility, was used from the HEXACO model therefore no factor analysis was conducted.

Study 1 and 2 results (H2 and H3)

- H2 That an SJT-EDM will discriminate between individuals who endorse ethical response options and those who choose unethical response options.
- H3 That morally relevant character and personality traits will predict individuals' choices between ethical and unethical responses to workplace ethical dilemmas

This research sought to explore and identify relationships between character strengths, virtues, honesty/humility, moral foundations, and participants responses to a SJT-EDM.

It sort to determine whether possession of morally relevant traits of character and personality were predictive of ethical or unethical choices made by participants when presented with workplace ethical dilemmas.

It was therefore necessary to apply statistical techniques applicable to explore and identify interrelationships between the study variables. The two factors that emerged from the PCA of the SJT-EDM (Care/Fair and UnAv) were used as DVs. The following section reports the results of bivariate correlations where significant correlations and significant relationships were found. Additionally, multiple regression was used as it allowed analysis of the relationship between the DV and a set of IVs, thus allowing a more complex consideration of the relationships between the study variables (Pallant, 2022). The study was focused on the specific, individual responses chosen by participants so standard multiple regression was chosen as it allows one DV to be studied in relation to several IVs. According to Pallant (2022), standard multiple regression is used when there is a set of variables (e.g. personality scales), and the goal is to determine the amount of variance explained in the DV by the IVs. Coolican (2019) confirms that simple regression and multiple regression are used to test the strength of prediction of one correlated variable (simple) or several correlated variables (multiple) with another variable. The analysis for this thesis considered the results from each of the measures (IVs) initially, separately and then in combinations.

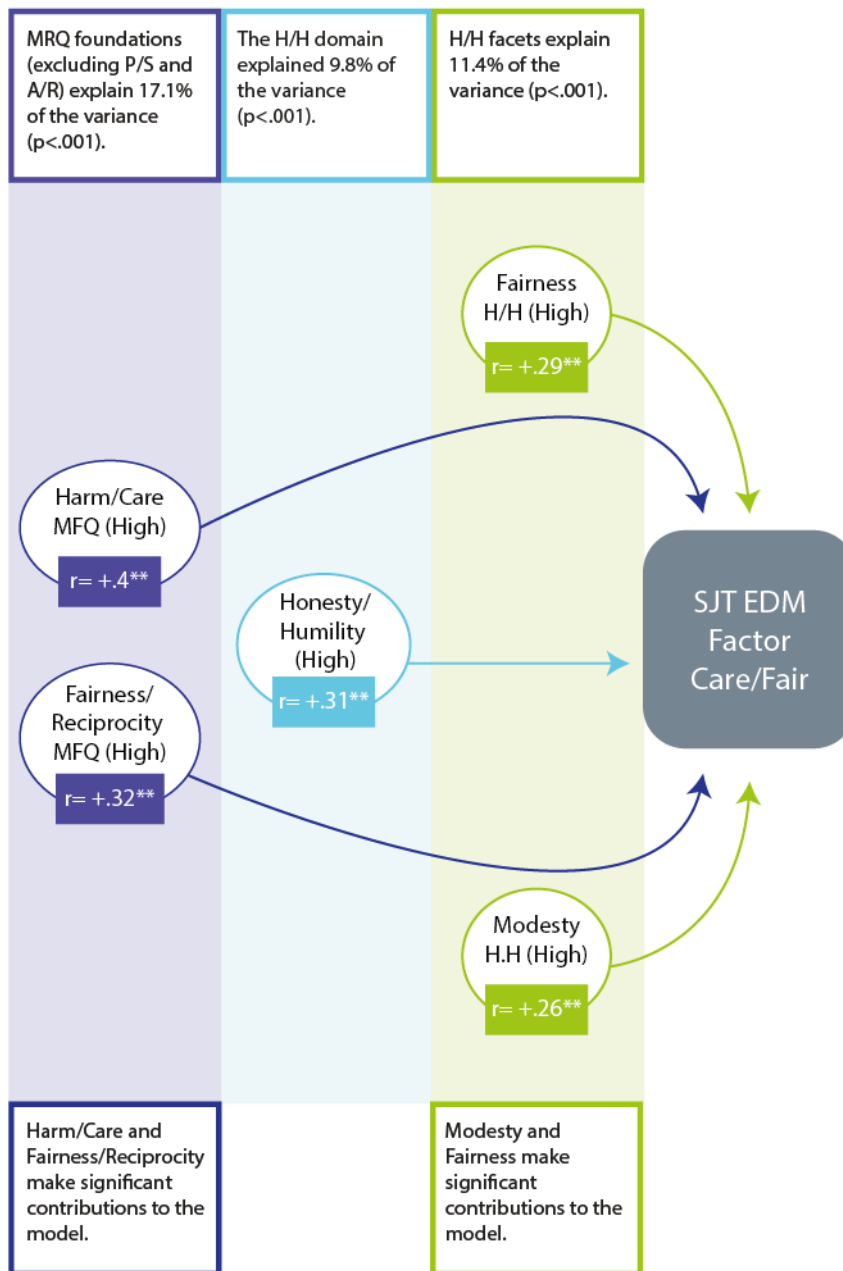
Assumptions for using standard multiple regression need to be met (Pallant, 2022); Coolican, 2019). These assumptions are that there is one DV (continuous) and more than one IV (continuous or categorical), that there is a linear relationship between the DV and the IV(s), that there are no issues with multi-collinearity (tolerance and variance inflation factor VIF are checked), that residuals are normally distributed (SPSS generated data is inspected), and that there are no outliers that influence the result. (Cook's distance < 1) is required. These assumptions were met for every analysis included in this result section.

The purpose of multiple regression in this context, is to determine which of the variables from the measures used are able to predict the participants endorsement or not, of the SJT-EDM responses. The process of model building allows for the inclusion of only variables that are of 'statistical value' (Richardson, 2015 p.104).

The results section below reports the results for the analyses where the SJT-EDM factors (Care/Fair and UnAv) were the DVs. The two factor structure demonstrated good levels of internal consistency which were reported above.

Figure 15

Significant Predictors of participants' choice of SJT-EDM Factor CareFair SJT-EDM responses



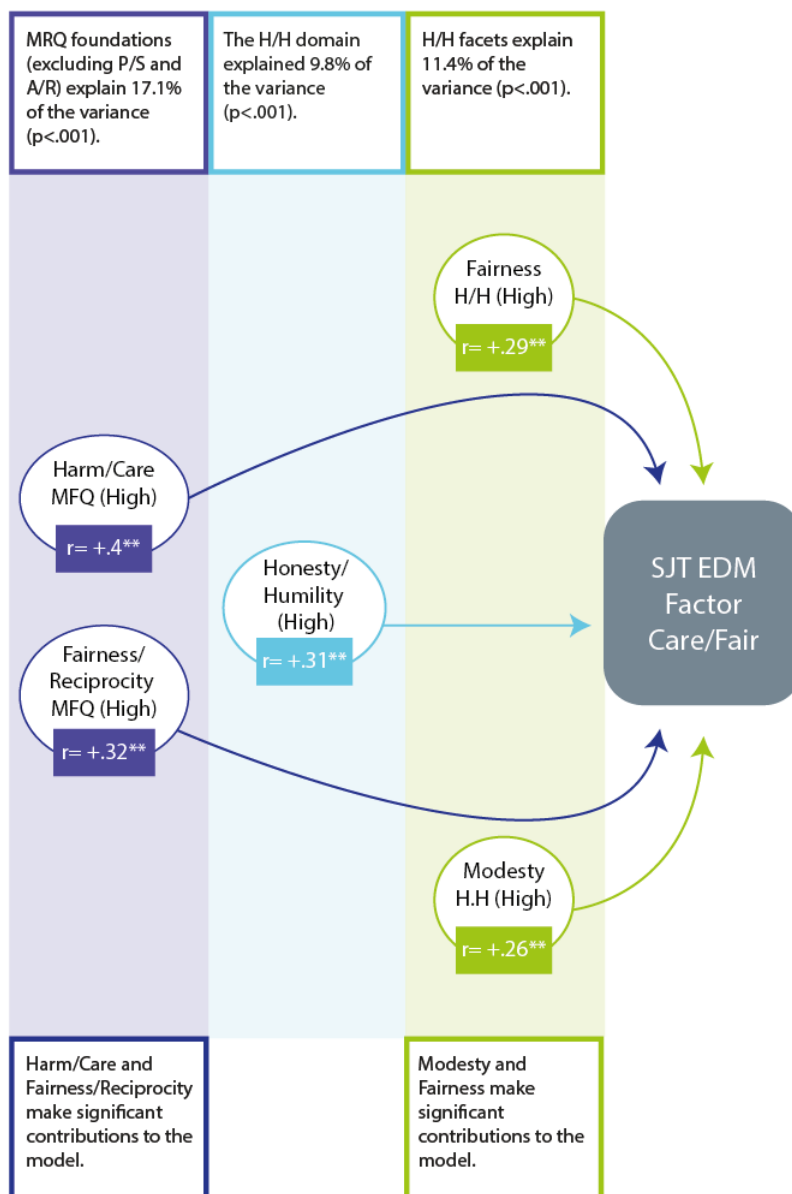
Note: Graphic shows bivariate correlations (Pearson's r) and amount of variance explained from simple and multiple regression analyses.

No character strengths or virtues made significant contributions. Tables of results supporting the graphic are included below following a summary graphic.

SJT-EDM CareFair Factor

The results of PCA applied to the SJT-EDM demonstrated that a factor which encompassed the response options of Harm/Care and Fairness/Reciprocity. The simplest method of obtaining factor scores is the sum scored method and is generally acceptable for most exploratory research situations (Tabachnick and Fidell 2001). A new variable was created from the data by the sum score method and used to inspect whether the variables (IVs) used in this study predicted the DV (Factor Care/Fair). The factor showed more acceptable internal consistency than when the two variables were considered independently. The possible reasons for this are discussed further in the next chapter, along with any implications for the findings.

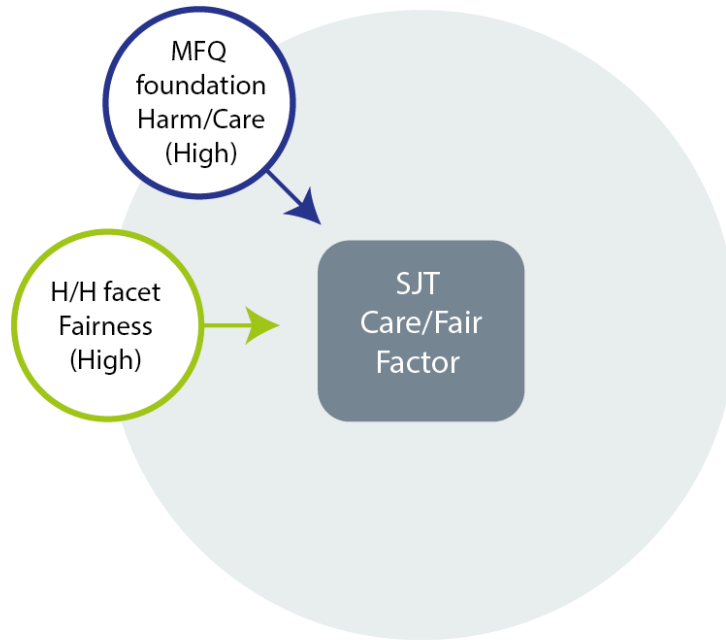
Figure 16
Antecedents of SJT-EDM Factor CareFair



Note: Model shows bivariate correlations (Pearson's r) and amount of variance explained from simple and multiple regression analyses.

Figure 17

Significant Predictors of SJT-EDM Factor CareFair



SJT-EDM Factor Care/Fair and H/H Domain

A simple regression analysis was conducted with the SJT-EDM Care/Fair factor score (DV) and H/H domain (IV).

Table 13

Regression SJT-EDM Factor CareFair and H/H Domain

Variable	B	SE	95% CI		β	<i>t</i>	<i>p</i>
			LL	UL			
Honesty-humility	5.52	1.02	3.51	7.52	.313	5.42	<.001

Note. $R^2_{adj} = .10$ ($N = 273$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

The model explained 9.8% of the variance ($p < .001$). $F(1,27) = 29.35$, $p < .001$. The predictive model was $84.05 + (5.52)$. The H/H domain significantly predicted the SJT-EDM Care/Fair factor score ($R = .31$).

SJT-EDM Factor Care/Fair and H/H Facets

A multiple regression (enter method) was conducted with the SJT-EDM Care/Fair factor (DV) and H/H facets (IVs).

Table 14

Regression SJT-EDM Factor CareFair and H/H Facets

Variable	B	SE	95% CI		β	<i>t</i>	<i>p</i>
			LL	UL			
Honesty-humility							
Sincerity	1.46	.99	-.49	3.40	.10	1.48	.14
Fairness	2.29	.97	.39	4.20	.18	2.38	.02
Greed-avoidance	-.39	.74	-1.85	1.06	-.03	-.53	.60
Modesty	2.27	.97	.37	4.18	.16	2.35	.02

Note. $R^2_{adj} = .10$ ($N = 273$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

The facets of Modesty and Fairness made significant contributions to the model. The result indicated that H/H facets were significant predictors of the SJT-EDM Care/Fair factor explaining 11.4% of the variance ($p < .001$). $F(4,268) = 8.65$, $p < .001$. It was found that the model significantly predicted the SJT-EDM factor score ($R = .34$). The final predictive model was $82.46 + (2.3) + (2.28)$.

SJT-EDM Factor Care/Fair and MFQ Foundations

A multiple regression (enter method) was conducted with the SJT-EDM Care/Fair factor (DV) and moral foundations (IVs). Purity/Sanctity and Authority/Respect were excluded as before due to multicollinearity.

Table 15*Regression SJT-EDM Factor CareFair and MFQ30 Foundations (3)*

Variable	B	SE	95% CI		β	t	p
			LL	UL			
MFQ							
Harm/care	4.42	.96	2.54	6.30	.31	4.62	<.001
Fairness/reciprocity	2.07	.96	.18	3.97	.14	2.16	.03
Ingroup/loyalty	.07	.60	-1.11	1.25	.01	.11	.91

Note. $R^2_{adj} = .16$ ($N = 273$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

The foundations of Harm/Care and Fairness/Reciprocity made significant contributions to the model. The result indicated that the moral foundations were significant predictors of the SJT-EDM Care/Fair factor explaining 17.1% of the variance ($p < .001$). , $F(5,267) = 11.57$, $p < .001$. It was found that the model significantly predicted the SJT-EDM avoidance score ($R = .41$). The final predictive model was $71.16 + (4.25) + (2.1)$.

SJT-EDM Factor Care/Fair and VIA 24 Strengths

A multiple regression (enter method) was conducted with The SJT-EDM factor Care/Fair response option (DV) and VIA 24 strengths (IVs). The model explained 14.6% of the variance ($p < .001$), $F(24,248) = 1.77$, $p < .05$.

Table 16*Regression SJT-EDM Factor CareFair and VIA-IS-M 24 Strengths*

Variable	B	SE	95% CI		β	t	p
			LL	UL			
VIA							
Appreciation of Beauty and Excellence	1.08	.89	-.67	2.83	.08	1.22	.22
Bravery	-.20	1.10	-2.37	1.96	-.02	-.18	.85
Creativity	-.20	1.02	-2.21	1.82	-.02	-.19	.85
Curiosity	-.33	1.07	-2.43	1.77	-.02	-.31	.76
Fairness	1.89	1.00	-.08	3.86	.14	1.89	.06
Forgiveness	-.34	.88	-2.07	1.39	-.03	-.39	.70
Gratitude	1.40	1.26	-1.08	3.87	.10	1.11	.27
Honesty	1.27	1.17	-1.03	3.57	.09	1.09	.28
Hope	-2.92	1.21	-5.30	-.53	-.22	-2.41	.02

Humility	1.71	1.00	-.25	3.68	.13	1.72	.09
Humour	-.04	.92	-1.86	1.77	.00	-.05	.96
Judgement	.60	1.20	-1.76	2.96	.04	.50	.62
Kindness	-.02	1.01	-2.00	1.96	.00	-.02	.98
Leadership	2.27	1.06	.19	4.35	.17	2.15	.03
Love	.39	.81	-1.21	1.99	.04	.48	.63
Love of learning	.66	1.21	-1.72	3.04	.04	.54	.59
Perseverance	-.81	1.03	-2.84	1.22	-.07	-.79	.43
Perspective	.10	1.18	-2.23	2.44	.01	.09	.93
Prudence	-.87	1.17	-3.18	1.45	-.07	-.74	.46
Self-regulation	.87	1.31	-1.70	3.45	.07	.67	.50
Social intelligence	-1.75	.87	-3.47	-.03	-.15	-2.00	.05
Spirituality	.08	.67	-1.24	1.41	.01	.12	.90
Teamwork	1.39	.87	-.32	3.10	.11	1.60	.11
Zest	.20	1.02	-1.80	2.20	.02	.20	.84

Note. $R^2_{adj} = .06$ ($N = 273$, $p = .02$). CI = confidence interval; LL = lower limit; UL = upper limit.

Only three strengths made significant contributions to the model, Hope, Leadership and Social Intelligence. The predictive model was $4.33 + (-.81) + (-.17) + (-.13) + (-.12) + (-.11) + (.08)$. It was found that the model significantly predicted the SJT-EDM Factor CareFair score ($R=.38$). However, it should be noted that the data from this study did not show acceptable internal consistency (above $\alpha = .7$) for the three strengths. So the three strengths were not included in the descriptive graphic above.

SJT-EDM Factor CareFair and VIA Three Virtues

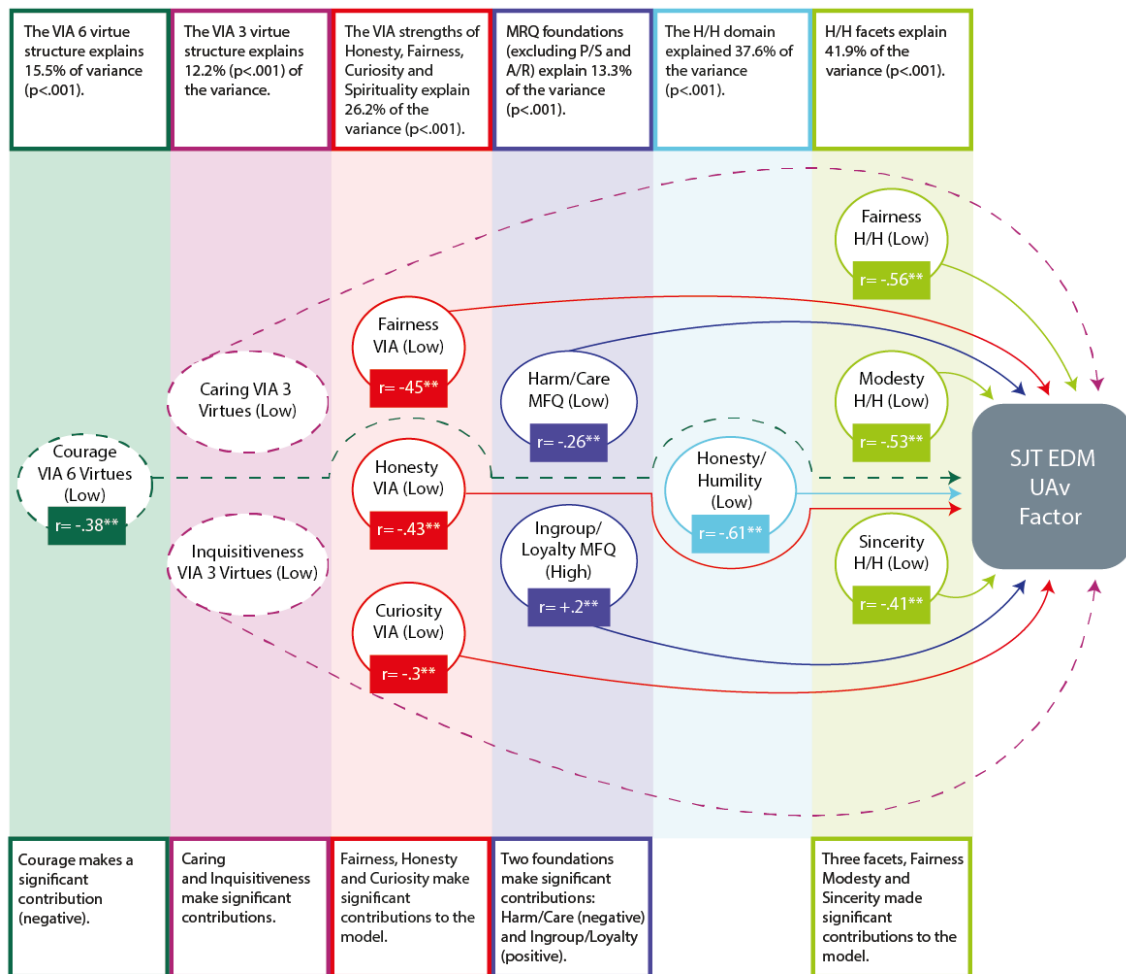
A multiple regression analysis (enter method) was conducted with The SJT-EDM factor Care/Fair (DV) and VIA 3 virtues (IVs). No significant model resulted.

SJT-EDM Factor Care/Fair and VIA Six Virtues

A multiple regression (enter method) was conducted with The SJT-EDM CareFair (DV) and VIA 6 virtues (IVs). No significant model resulted

Figure 18

Significant Predictors of participants' choice of SJT-EDM Factor UAV

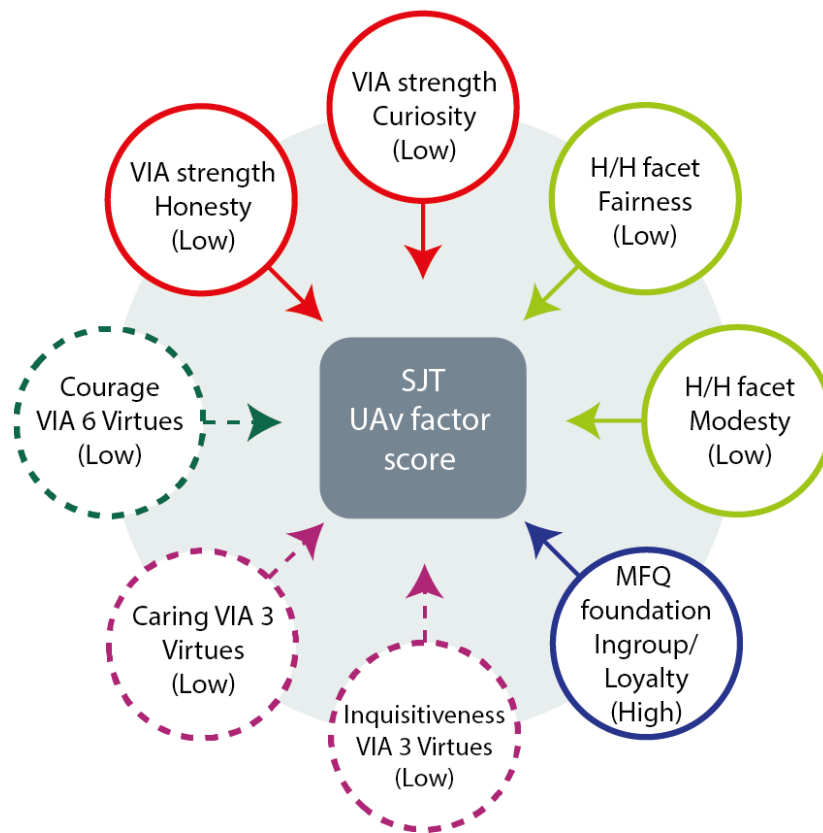


Note: Model shows bivariate correlations (Pearson's r) and amount of variance explained from simple and multiple regression analyses.

Tables of results supporting the graphic are included below (Tables 17 – 24).

Figure 19

Significant Predictors of SJT Factor UAv



SJT-EDM Factor UAv

The results of the PCA of the SJT-EDM demonstrated that the unethical response option and the avoidance option could be combined into one factor. According to Howitt (2011) factors allow complex data to be simplified and the result of factor analysis is a new variable. The implications, advantages and disadvantages of this for analysis and interpretation are debated in more depth in the discussion chapter, in particular to the seemingly problematic issue of what SJTs measure: few show any meaningful structure. The use of PCA for the data in this analysis allowed exploration of the structure of the SJT-EDM in order to contribute to the debate and evaluate whether analysing the relationships at factor level add value to the discussion.

The simplest method of obtaining factor scores is the sum scored method and is generally acceptable for most exploratory research situations (Tabachnick and Fidell 2001). A new variable was created from the data by the sum score method and used to identify whether the IVs used in the study were predictive of the two factors obtained from the PCA conducted.

Multiple regression was conducted with the factor, labelled UAv (DV) and the IVs relevant to this study.

SJT-EDM Factor UAv and H/H domain.

A simple regression analysis was conducted with the SJT-EDM UAv factor scores (DV) and H/H domain (IV). The model explained 37.6% of the variance ($p < .001$). $F(1,277) = 167.03$, $p < .001$. The predictive model was $114.86 + (-15.33)$. The H/H domain significantly predicted the SJT-EDM UAv factor score ($R = .61$).

Table 17

Regression SJT-EDM Factor UAv and H/H Domain

Variable	B	SE	95% CI		β	t	p
			LL	UL			
Honesty-humility	-15.33	1.19	-17.67	-13.00	-.61	-12.92	<.001

Note. $R^2_{adj} = .37$ ($N = 279$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

SJT-EDM Factor UAv and H/H Facets

A multiple regression (enter method) was conducted with SJT-EDM UAv factor scores (DV) and H/H subscales (IVs).

Table 18*Regression SJT-EDM Factor UAv and H/H Facets*

Variable	B	SE	95% CI		β	<i>t</i>	<i>p</i>
			LL	UL			
Honesty-humility							
Sincerity	-2.58	1.12	-4.79	-.38	-.13	-2.30	.02
Fairness	-6.32	1.09	-8.48	-4.17	-.34	-5.78	<.001
Greed-avoidance	.47	.84	-1.18	2.12	.03	.56	.58
Modesty	-6.80	1.10	-8.96	-4.64	-.34	-6.19	<.001

Note. $R^2_{adj} = .41$ ($N = 279$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

The model explained 41.9% of the variance ($p < .001$). Fairness ($p < .001$), Sincerity ($p < .05$) and Modesty ($p < .001$) but not Greed Avoidance, made significant contributions to the model. $F(4,274) = .49.48$, $p < .001$. The predictive model was $117.84 + (-6.8) + (-6.33) + (-2.6)$. The model significantly predicted Factor UAv scores ($R = .65$).

To summarise, the H/H domain score significantly predicted whether participants endorsed either the unethical option or chose to avoid the decision completely. At facet level, Greed Avoidance did not make a significant contribution to the model. The remaining three facets did, with the largest contribution made by H/H Modesty followed in order by Fairness, and Sincerity.

SJT-EDM Factor UAv and MFQ Foundations

Inspection of the data determined that MFQ Authority/Respect and Purity/Sanctity were highly correlated ($r = .714^{**}$). Both variables were excluded from the regression analysis. Harm/Care ($p < .001$) and Ingroup/Loyalty ($p < .001$) made significant contributions to the model which explained 13.3% of the variance. $F(3,275) = 14.01$, $p < .001$. The predictive model was $78.13 + (-5.36) + (3.85)$. The model was a significant predictor of the Factor UAv ($R = .36$).

Table 19*Regression SJT-EDM Factor UAv and MFQ30 Foundations*

Variable	B	SE	95% CI		β	<i>t</i>	<i>p</i>
			LL	UL			
MFQ							
Harm/care	-5.36	1.37	-8.06	-2.67	-.27	-3.92	<.001
Fairness/reciprocity	-1.42	1.38	-4.14	1.29	-.07	-1.03	.30
Ingroup/loyalty	3.85	.86	2.16	5.54	.26	4.48	<.001

Note. $R^2_{adj} = .12$ ($N = 279$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

In summary, participants who scored more highly on Harm/Care and lower on Ingroup/Loyalty were less likely to endorse either the unethical or the avoidance option. Participants who showed higher levels of Ingroup/Loyalty and lower levels of Harm/Care were more likely to choose either to avoid making a decision or proactively choosing the unethical option.

SJT-EDM Factor UAv and MFQ Super-Factors

A multiple regression (enter method) was conducted with the SJT-EDM Factor UAv (DV) and the two MFQ super-factors, Individualising and Binding. No useable regression model emerged from the results.

SJT-EDM Factor UAv and VIA Strengths

A multiple regression (enter method) was conducted with the SJT-EDM Factor UAv (DV) and the VIA 24 strengths. The model explained 37% of the variance ($p < .001$).

Table 20

Regression SJT-EDM Factor UAv and VIA 24 Strengths

Variable	B	SE	95% CI		β	<i>t</i>	<i>p</i>
			LL	UL			
VIA							
Appreciation of Beauty and Excellence	-2.10	1.07	-4.20	.002	-.11	-1.97	.05
Bravery	.98	1.32	-1.63	3.58	.05	.74	.46
Creativity	1.72	1.23	-.71	4.14	.10	1.39	.16
Curiosity	-3.06	1.28	-5.59	-.54	-.16	-2.39	.02
Fairness	-5.33	1.20	-7.70	-2.97	-.29	-4.44	<.001
Forgiveness	1.49	1.06	-.60	3.57	.09	1.40	.16
Gratitude	-1.38	1.51	-4.35	1.60	-.07	-.91	.36
Honesty	-4.18	1.40	-6.95	-1.42	-.21	-2.98	.003
Hope	-2.43	1.46	-5.30	.43	-.13	-1.67	.10
Humility	-2.53	1.20	-4.90	-.17	-.14	-2.11	.04
Humour	-.73	1.11	-2.92	1.45	-.04	-.66	.51
Judgement	.16	1.44	-2.68	3.01	.01	.11	.91
Kindness	.97	1.21	-1.41	3.35	.05	.80	.42
Leadership	-4.17	1.27	-6.67	-1.66	-.22	-3.28	.001
Love	-.05	.98	-1.97	1.87	.00	-.05	.96

Love of learning	-.60	1.45	-3.47	2.26	-.03	-.42	.68
Perseverance	-.78	1.24	-3.22	1.66	-.05	-.63	.53
Perspective	-.37	1.42	-3.18	2.43	-.02	-.26	.79
Prudence	-.15	1.41	-2.93	2.64	-.01	-.10	.92
Self-regulation	1.94	1.57	-1.16	5.04	.11	1.23	.22
Social intelligence	.31	1.05	-1.76	2.38	.02	.29	.77
Spirituality	2.21	.81	.62	3.80	.18	2.73	.007
Teamwork	1.06	1.05	-1.00	3.12	.06	1.02	.31
Zest	1.32	1.22	-1.08	3.73	.08	1.08	.28

Note. $R^2_{adj} = .31$ ($N = 279$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

Seven strengths made significant contributions to the model. Three of the strengths, Appreciation of Beauty and Excellence, Humility, and Leadership, demonstrated low internal consistency from the results of this study so were excluded, and multiple regression (enter method) was conducted with the four remaining strengths that had both acceptable internal consistency and had showed a significant relationship in the full multiple regression. The strengths were Curiosity, Fairness, Honesty and Spirituality.

Table 21

Regression SJT-EDM Factor UAv and VIA Significant Strengths

Variable	B	SE	95% CI		β	t	p
			LL	UL			
VIA							
Curiosity	-3.32	1.01	-5.30	-1.34	-.18	-3.30	.001
Fairness	-6.07	1.07	-8.19	-3.96	-.33	-5.65	<.001
Honesty	-4.79	1.19	-7.13	-2.45	-.24	-4.03	<.001
Spirituality	.99	.65	-.28	2.27	.08	1.53	.13

Note. $R^2_{adj} = .29$ ($N = 279$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

The model explained 29.6% of the variance with Fairness ($p < .001$), Honesty ($p < .001$) and Curiosity ($p = .001$) making a significant contribution to the model.

$F(4,274) = 28.81$, $p < .001$. The predictive model was $112.06 + (-6.07) + (-4.79) + (-3.32)$. The model was a significant predictor of the Factor UAv ($R = .54$).

SJT-EDM Factor UAv and VIA 6 Virtue Structure

A multiple regression (Enter) was conducted with The SJT UAv Factor scores (DV) and VIA 6 virtues (IVs).

Table 22*Regression SJT-EDM Factor UAv and VIA-IS-M 6 Virtues*

Variable	B	SE	95% CI		β	t	p
			LL	UL			
VIA							
Wisdom	-1.85	1.58	-4.96	1.25	-.08	-1.18	.24
Courage	-6.14	1.62	-9.33	-2.94	-.30	-3.78	<.000
Humanity	-1.41	1.38	-4.12	1.30	-.07	-1.02	.31
Justice	-.85	1.31	-3.44	1.74	-.04	-.65	.52
Temperance	-.79	1.51	-3.76	2.18	-.04	-.52	.60
Transcendence	1.15	1.35	-1.51	3.82	.06	.85	.39

Note. $R^2_{adj} = .14$ ($N = 279$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

The model explained 15.5% of the variance ($p < .001$). Of the virtues (6 virtue structure) only Courage made a significant contribution to the model ($p < .001$).

$F(6,272) = 8.34$, $p < .001$. The predictive model was $95.51 + (-6.14)$. The model was a significant predictor of the Factor UAv ($R = .39$).

SJT-EDM Factor UAv and VIA 3 Virtue Structure

A multiple regression (enter method) was conducted with The SJT-EDM UAv Factor scores (DV) and VIA 3 virtues (IVs).

Table 23*Regression SJT-EDM Factor UAv and VIA-IS-M 3 Virtues*

Variable	B	SE	95% CI		β	t	p
			LL	UL			
VIA							
Caring	-4.28	1.32	-6.87	-1.68	-.20	-3.25	.001
Inquisitiveness	-3.53	1.34	-6.18	-.88	-.16	-2.62	.009
Self-control	-1.33	1.02	-3.34	.67	-.08	-1.31	.19

Note. $R^2_{adj} = .11$ ($N = 279$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

The model explained 12.2% of the variance ($p < .001$). Of the virtues (3 virtue structure), Caring ($p = .001$) and Inquisitiveness ($p < .01$) made significant contributions to the model ($p < .001$). $F(3,275) = 12.73$, $p < .001$. The predictive model was $94.23 + (-4.28) + (-3.53)$. The model was a significant predictor of the Factor UAv ($R = .35$).

SJT-EDM Factor UAv – Significant Predictor Variables

The significant predictor variables from each measure determined by multiple regression, were used in multiple regression (enter method) with the SJT UAv Factor. HH Domain, VIA (six) virtues Caring and Inquisitiveness, and VIA (three virtue) Courage were excluded as the other constructs were subsumed within them. There were no significant issues with multicollinearity.

Table 24

Regression SJT-EDM-EDM Factor UAv and Significant Variables

Variable	B	SE	95% CI		β	t	p
			LL	UL			
Honesty-humility	-						
Sincerity	-1.48	1.07	-3.58	.63	-.07	-1.38	.17
Fairness	-4.46	1.06	-6.55	-2.38	-.24	-4.21	<.001
Modesty	-5.15	1.02	-7.15	-3.15	-.26	-5.07	<.001
MFQ							
Harm/care	-1.75	.94	-3.60	.10	-.09	-1.86	.06
Ingroup/loyalty	2.09	.69	.73	3.45	.14	3.03	.003
VIA							
Fairness	-1.88	.99	-3.82	.06	-.10	-1.91	.06
Honesty	-2.56	1.05	-4.64	-.49	-.13	-2.43	.02
Curiosity	-3.28	.85	-4.94	-1.61	-.17	-3.86	<.001

Note. $R^2_{adj} = .49$ ($N = 279$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

The model explained 50.6% of the variance. H/H Fairness ($p < .001$), H/H Modesty ($p < .001$), VIA Curiosity ($p < .001$), MFQ Ingroup/Loyalty ($p < .005$), and VIA Honesty ($p < .05$) made significant contributions to the model. $F(8,270) = 34.52$, $p < .001$. The predictive model was $133.58 + (- 5.15) + (- 4.46) + (- 3.28) + (- 2.56) + (2.09)$. The model was a significant predictor of the Factor UAv, ($R = .71$).

Removing non-significant variables and conducting multiple regression resulted in a model which explained 48.4% of the variance with all variables making a significant contribution. No significant issues with multicollinearity. $F(5,273) = 51.23$, $p < .001$. The predictive model was $125.78 + (- 5.98) + (- 5.74) + (- 3.48) + (- 3.34) + (1.77)$. The model was a significant predictor of the Factor UAv, ($R = .7$).

The results indicate that,

Participants who scored lower on VIA Honesty, VIA Curiosity, H/H Fairness, H/H Modesty, and higher on MFQ Ingroup/Loyalty were more likely to endorse the SJT-EDM UAv Factor. Participants who scored higher on VIA Honesty, VIA Curiosity, H/H Fairness, H/H Modesty, and lower on MFQ Ingroup/Loyalty were less likely to endorse the SJT-EDM UAv Factor.

Multiple regression was conducted to establish whether the significant variables predicted the scores on the SJT-EDM UAv factor (Courage, Caring and Inquisitiveness were excluded as the Virtues are combinations of specific strengths). The H/H domain was also excluded as the individual facets were included.

The model explained 50.6% of the variance ($p < .001$). $F(8,270) = 34.517$, $p < .001$ $R^2 = .506$, R^2 adjusted = .491

$R = .71$ indicating that the predictor variables significantly correlate with the SJT-EDM UAv factor total score response option. H/H Fairness ($p < .001$), H/H Modesty ($p < .001$), VIA Curiosity ($p < .001$), MFQ Ingroup/Loyalty ($p < .01$), and VIA Honesty ($p < .01$) made significant contributions to the model.

An increase of one unit in H/H Modesty results in a decrease of -5.147 in the SJT-EDM UAv factor score

(H/H Modesty = -5.147, $t = -5.067$, $p < .001$).

An increase of one unit in H/H Fairness results in a decrease of -4.462 in the SJT-EDM UAv factor score

(H/H Fairness = -4.462, $t = -4.213$, $p < .001$).

An increase of one unit in VIA Curiosity results in a decrease of -3.276 in the SJT-EDM UAv factor score

(VIA Curiosity = -3.276, $t = -3.865$, $p < .001$).

An increase of one unit in VIA Honesty results in a decrease of -2.562 in the SJT-EDM UAv factor score

(VIA Honesty = -2.562, $t = -2.433$, $p < .05$).

An increase of one unit in MFQ Ingroup/Loyalty results in an increase of 2.089 in the SJT-EDM UAv factor score

(MFQ Ingroup/Loyalty = +2.089, $t = +3.031$, $p < .05$).

The final predictive model was, SJT-EDM UAv Factor Score = $133.583 - 5.147 - 4.462 - 3.276 - 2.562 + 2.089$

From the data analysis reported above the following conclusions were drawn,

H3 That morally relevant character and personality traits will predict individuals' choices between ethical and unethical responses to workplace ethical dilemmas

H3 was partially supported

The analysis determined that some character and personality traits did predict individuals' choices between ethical and unethical responses to workplace ethical dilemmas. This would indicate that further hypotheses could be developed for research in this area (Howitt & Cramer, 2020).

Unethical and Avoidance Response Options

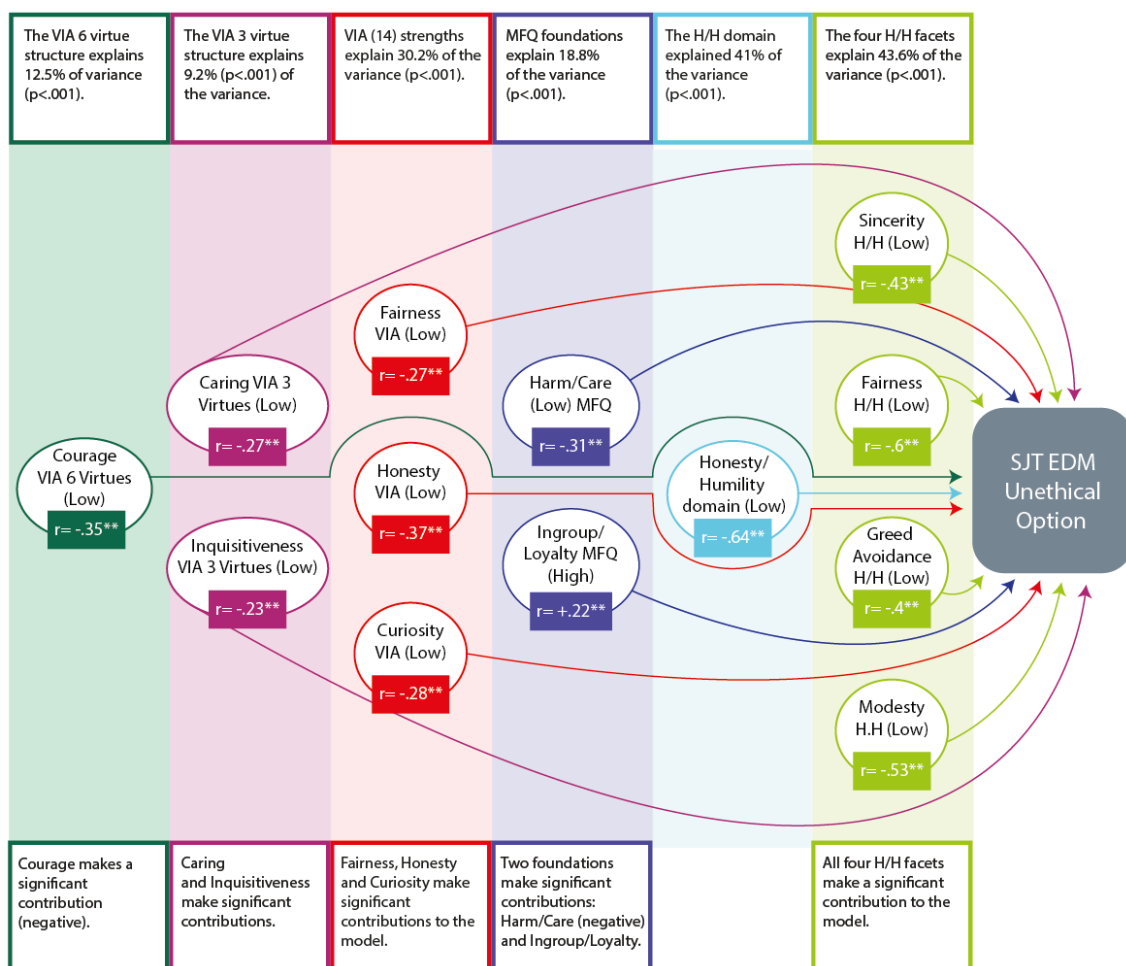
Although PCA results suggested that the Unethical and Avoidance responses could be combined, there are also strong arguments for retaining the Avoidance scale as separate as there may be distinct differences between the individuals in terms of morally relevant traits related to individual difference and also different motivating factors that drive individuals to take the avoidance option.

Further analysis was conducted to examine whether different morally relevant traits were predictive of the individual DVs (Unethical response option and Avoidance response option). The figures below illustrate the results and are supported by tables reporting the results.

SJT-EDM Unethical Response Option

Figure 20

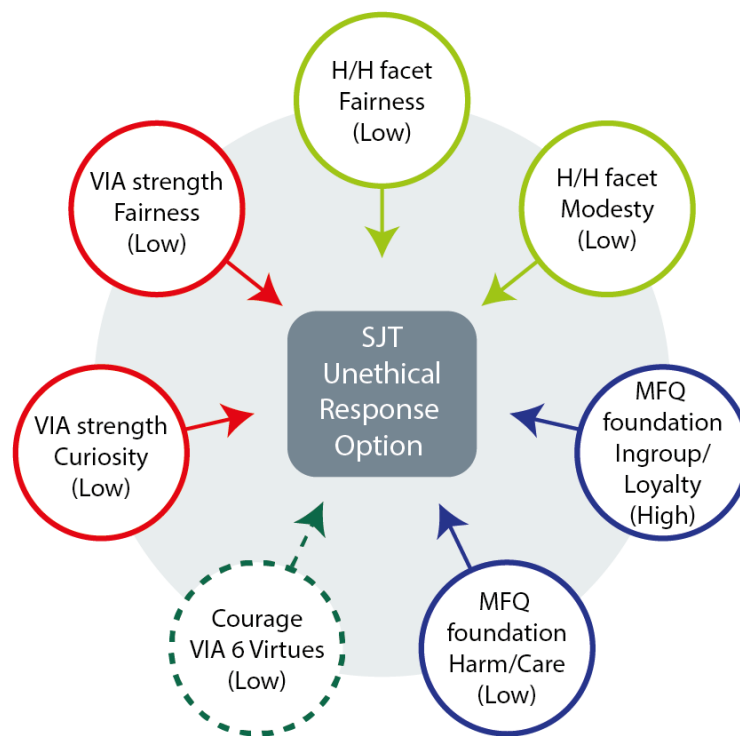
Antecedents of the SJT-EDM Unethical Response Option



Note: Graphic showing bivariate correlations (Pearson's r) and amount of variance explained from simple and multiple regression analyses.

Figure 21

Significant Predictors of SJT-EDM Unethical Response Option



SJT-EDM Unethical Option and H/H Domain and Subscales

Bivariate Pearson’s correlation was calculated to identify the relationship between the H/H domain score and the SJT-EDM unethical response option (Table 20). Simple linear regression was calculated to analyse the relationship between the Unethical response score (DV) and the H/H domain score (IV). Multiple regression was conducted to examine the relationship between the four H/H facet scores as independent variables in order to determine any predictors of the SJT-EDM unethical response option (DV).

Table 25

Pearson’s Correlations Honesty/Humility (Domain and Facet scores) with SJT-EDM Unethical Response Option (N=320)

Scale	<i>r</i>
Honesty/Humility (domain)	-.64**
H/H Sincerity (facet)	-.43**
H/H Fairness (facet)	-.60**
H/H Greed Avoidance (facet)	-.40**
H/H Modesty (facet)	-.53**

** *p* < .01.

Simple linear regression was conducted to predict the SJT-EDM unethical response score (DV) from the H/H domain score (IV). The result indicated that the H/H domain score was a significant predictor of the SJT-EDM unethical score explaining 41% of the variance, $F(1,318) = 221.15, p < .001$. It was found that H/H significantly predicted the SJT-EDM unethical score ($R=.64$). The final predictive model was $4.49 + (-.68)$.

Table 26

Regression SJT-EDM Unethical Response Option and H/H Domain

Variable	95% CI				β	t	p
	B	SE	LL	UL			
Honesty-humility	-.68	.05	-.76	-.59	-.64	-14.87	<.001

Note. $R^2_{adj} = .41$ ($N = 320, p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

A multiple regression analysis using the 'enter' method was conducted with the SJT-EDM Unethical option as the DV and the H/H facets (IVs). The correlation between the IVs was acceptable and there were no issues with collinearity. Inspection of the Normal Probability Plot and Scatterplot indicated that the data was normally distributed.

The model summary indicated that the model explained 43.6% of the variance (Table). The result was highly significant ($p<.001$).

$F(4,315) = 60.9, p < .001, R^2 = .44, R^2_{adjusted} = .43$

$R = .66$ indicating that the predictor variables significantly correlate with the SJT-EDM unethical response option.

Table 27

Regression SJT-EDM Unethical Response Option and H/H Facets

Variable	B	SE	95% CI		β	t	p
			LL	UL			
Honesty-humility	-						
Sincerity	-.11	.04	-.20	-.03	-.13	-2.60	.01
Fairness	-.26	.04	-.35	-.18	-.34	-6.22	<.001
Greed-avoidance	-.07	.03	-.13	.00	-.10	-2.06	.04
Modesty	-.23	.04	-.32	-.15	-.28	-5.48	<.001

Note. $R^2_{adj} = .43$ ($N = 320, p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

All subscales of the H/H scale made a significant contribution to the model: Fairness ($p<.001$), Modesty ($p<.001$), Sincerity ($p=.01$) and Greed Avoidance ($p<.05$)

For the Fairness facet an increase of one unit results in a decrease of -.26 in the SJT-EDM unethical score (B = -.26, t= -6.22, p<.001).

For the Modesty facet an increase in one unit results in a decrease of -.23 in the SJT-EDM unethical score (B= -.23, t= -5.48, p<.001).

For the Sincerity facet an increase in one unit results in a decrease of -.11 in the SJT-EDM unethical score (B= -.11, t= -2.6, p=.01).

For the Greed Avoidance facet an increase in one unit results in a decrease of -.07 in the SJT-EDM unethical score (B= -.07, t= -2.06, p< .05).

The final predictive model was $4.58 + (-.260 + (-.233) + (-.11) + (-.07)$

SJT-EDM Unethical Response Option and MFQ30 Moral Foundations

A multiple regression analysis using the Enter method was conducted with the SJT-EDM Unethical option as the DV. The correlation between the IVs showed that there was a high correlation (.714) between Authority/Respect and Purity/Sanctity however the VIF were 2.42 and 2.18 respectively, indicating that corrective action might not be required. The condition index for Purity/Sanctity was 29.3 and for Authority/Respect was 27.6 but there were no figures above .9 in the condition index table. Inspection of the Normal Probability Plot and Scatterplot indicated that the data was normally distributed.

Table 28

Regression SJT-EDM Unethical Option and MFQ30 foundations

Variable	95% CI				β	t	p
	B	SE	LL	UL			
MFQ							
Harm/care	-.30	.05	-.40	-.19	-.35	-5.59	<.001
Fairness/reciprocity	-.04	.05	-.14	.07	-.04	-.70	.48
Ingroup/loyalty	.19	.04	.11	.27	.30	4.63	<.001
Authority/respect	-.08	.05	-.18	.02	-.13	-1.61	.11
Purity/sanctity	.07	.04	-.01	.15	.13	1.74	.08

Note. $R^2_{adj} = .18$ ($N = 320$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

The model summary (including five moral foundations) indicated that the model explained 18.8% of the variance (Table). The result was highly significant ($p < .001$).

$F(5,314) = 14.53$, $p < .001$ $R^2 = .188$, $R^2_{adjusted} = .175$

$R = .43$ indicating that the predictor variables significantly correlate with the SJT-EDM unethical response option.

The foundations of Harm/Care made significant contributions to the model: Harm/Care ($p < .001$), Ingroup/Loyalty ($p < .001$).

For Harm/Care an increase of one unit results in a decrease of -.298 in the SJT-EDM unethical score (B = -.298, t= -5.59, p<.001).

For Ingroup/Loyalty an increase in one unit results in an increase of +.192 in the SJT-EDM unethical score (B= +.192, t= + 4.625, p<.001).

The final predictive model was 3.039 + (-.298) + (+.192)

Although the collinearity statistics were overall acceptable the decision was made to drop Purity/Sanctity and run a second multiple regression which is also reported. Omitting the Purity/Sanctity foundation did not make any important difference to the results. The foundations of Harm/Care and Ingroup/Loyalty remained significant predictors of the SJT-EDM unethical choice. Higher scores on Harm/Care were negatively correlated with the unethical response option and higher scores on Ingroup/Loyalty were positively correlated with the unethical response option.

SJT-EDM Unethical Response and MFQ Super-Factors

Table 29

Pearson's Correlations MFQ (Foundations and Superfactors) with SJT-EDM Unethical Response Option (N=320)

Scale	<i>r</i>
MFQ foundation – Harm/Care	-.31**
MFQ foundation – Fairness/Reciprocity	-.20**
MFQ foundation – Ingroup/Loyalty	+.22**
MFQ foundation – Authority/Respect	Not significant
MFQ foundation – Purity/Sanctity	Not significant
MFQ Superfactor – Individualising	Not significant
MFQ Superfactor – Binding	Not significant

** *p* < .01.

Previous studies had determined two super-factors, 'binding' and 'individualising', within the moral foundations framework although the factor structure was not confirmed through PCA in this study, the two super-factor structure were used to explore the relationship between the super-factors and the SJT-EDM unethical response option. No useable regression model emerged from the results.

SJT-EDM Unethical Option and VIA Strengths

Bivariate correlations were calculated between the VIA 24 strengths.

Of the 24 individual strengths measured by the VIA 15 showed low but highly significant correlations with the SJT-EDM Unethical option (Table X). A further seven showed low but significant correlation. The strengths of Spirituality and Teamwork showed no significant correlation

Table 30*Pearson's Correlations – SJT-EDM Unethical Response Option and VIA Strengths*

VIA strength	<i>r</i>
Fairness	-.45**
Honesty	-.37**
Curiosity	-.28**
Leadership	-.28**
Gratitude	-.27**
Love of Learning	-.26**
Hope	-.26**
Perspective	-.21**
Humility	-.20**
Zest	-.19**
Love	-.19**
Humour	-.16**
Self-regulation	-.15**
Appreciation of Beauty	-.15**
Forgiveness	-.15**
Kindness	-.14*
Creativity	-.14*
Prudence	-.13*
Bravery	-.13*
Judgement	-.13*
Perseverance	-.12*
Social Intelligence	-.12*
Spirituality	N/A
Teamwork	N/A

* $p < .05$. ** $p < .01$.

A multiple regression analysis was conducted with the SJT-EDM Unethical option (DV) and 24 individual strengths. The results show that the model explained 34.8% of the variance ($p < .001$). Curiosity ($p < .01$), Fairness ($p < .001$), Forgiveness ($p < .05$), Honesty, ($p < .005$) Kindness ($p < .05$), and Leadership ($p < .001$) made significant contributions to the model.

Table 31*Regression SJT-EDM Unethical Response Option and VIA-IS-M 24 Strengths*

Variable	B	SE	95% CI		β	<i>t</i>	<i>p</i>
			LL	UL			
VIA	–						
Appreciation of beauty and excellence	–.07	.04	–.16	.01	–.09	–1.71	.09
Bravery	.06	.05	–.04	.17	.08	1.23	.22
Creativity	.06	.05	–.03	.16	.08	1.27	.21
Curiosity	–.13	.05	–.23	–.03	–.17	–2.63	.009
Fairness	–.28	.05	–.37	–.18	–.36	–5.82	<.001
Forgiveness	.09	.04	.00	.17	.12	2.06	.04
Gratitude	–.05	.06	–.17	.07	–.06	–.88	.38
Honesty	–.17	.06	–.28	–.06	–.20	–3.00	.003
Hope	–.07	.06	–.18	.04	–.09	–1.20	.23
Humility	–.09	.05	–.18	.00	–.11	–1.90	.06
Humour	–.04	.04	–.12	.05	–.05	–.83	.41
Judgement	–.01	.06	–.12	.10	–.01	–.15	.88
Kindness	.10	.05	.00	.19	.12	2.01	.05
Leadership	–.18	.05	–.28	–.08	–.23	–3.61	<.001
Love	–.03	.04	–.10	.05	–.04	–.65	.52
Love of learning	–.02	.06	–.13	.10	–.02	–.27	.79
Perseverance	.03	.05	–.07	.13	.05	.63	.53
Perspective	.02	.06	–.09	.13	.02	.30	.76
Prudence	.04	.06	–.07	.16	.06	.79	.43
Self-regulation	.04	.06	–.08	.16	.05	.61	.54
Social intelligence	.00	.04	–.08	.08	.00	.03	.97
Spirituality	.06	.03	.00	.13	.12	1.93	.06
Teamwork	.07	.04	–.01	.15	.09	1.68	.09
Zest	.01	.05	–.08	.11	.02	.26	.79

Note. $R^2_{adj} = .30$ ($N = 320$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

The reliability (internal consistency) of the 24 strength scales calculated in this research was acceptable for most of the strength scales. A few strength scales revealed internal consistency figures that were low in this study. Table 13 compares the reliability of the individual strength scale found in this study with those reported in the literature.

Multiple regression using enter method was conducted including only those strengths with acceptable internal consistency scores obtained in this study (14 strengths). The model explained 30.2% of the variance. Curiosity ($p < .005$), Fairness ($p < .001$), and Honesty ($p < .001$) made significant contributions to the model.

Table 32

Regression SJT-EDM Unethical Response Option and VIA-IS-M 14 Strengths ($\alpha > .7$)

Variable	B	SE	95% CI		β	<i>t</i>	<i>p</i>
			LL	UL			
VIA							
Creativity	.06	.05	-.03	.15	.08	1.38	.17
Curiosity	-.16	.05	-.26	-.06	-.20	-3.10	.002
Fairness	-.33	.05	-.42	-.23	-.42	-7.02	<.001
Forgiveness	.08	.04	.00	.16	.12	1.94	.05
Honesty	-.20	.05	-.31	-.09	-.23	-3.71	<.001
Kindness	.08	.05	-.02	.17	.09	1.59	.11
Love	-.04	.04	-.11	.03	-.06	-1.12	.26
Love of learning	.01	.06	-.10	.12	.01	.21	.84
Perseverance	.03	.04	-.05	.11	.05	.82	.41
Perspective	-.05	.05	-.15	.06	-.05	-.87	.38
Prudence	.04	.05	-.05	.13	.06	.93	.36
Spirituality	.01	.03	-.04	.07	.03	.55	.58
Teamwork	.07	.04	-.02	.15	.08	1.56	.12
Zest	-.04	.04	-.12	.05	-.06	-.88	.38

Note. $R^2_{adj} = .27$ ($N = 320$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

Multiple regression using the Enter method was conducted to establish whether the VIA strengths, Fairness, Honesty, Curiosity, were predictive of the SJT-EDM unethical response option. The model explained 26.2% of the variance ($p < .001$), with all three IVs demonstrating a significant contribution, ($p < .001$), ($p < .005$), ($p = .001$) respectively. Refer to Table 33 on next page.

Table 33*Regression SJT-EDM Unethical Response Option and VIA-IS-M Fairness, Honesty, Curiosity*

Variable	B	SE	95% CI		β	t	p
			LL	UL			
VIA							
Honesty	-.14	.05	-.24	-.05	-.17	-2.97	.003
Fairness	-.27	.04	-.35	-.18	-.34	-6.28	<.001
Curiosity	-.13	.04	-.21	-.05	-.17	-3.29	.001

Note. $R^2_{adj} = .17$ ($N = 320$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

SJT-EDM Unethical Option and VIA Three Virtue Structure (Caring, Inquisitiveness, Self-Control)

A multiple regression analysis was conducted with the SJT-EDM unethical option as the DV and the VIA three virtue structure. The correlation between the IVs was acceptable and there were no issues with collinearity. Inspection of the Normal Probability Plot and Scatterplot indicated that the data was normally distributed.

The model summary indicated that the model explained for 9.2% of variance. The result was highly significant ($p < .001$). Two factors made significant contributions to the model, Caring ($p < .001$) and Inquisitiveness ($p < .05$)

Table 34*Regression SJT-EDM Unethical Response Option and VIA-IS-M 3 Virtue*

Variable	B	SE	95% CI		β	t	p
			LL	UL			
VIA							
Caring	-.20	.05	-.30	-.09	-.22	-3.73	.00
Inquisitiveness	-.14	.05	-.24	-.03	-.15	-2.56	.01
Self-control	.02	.04	-.07	.10	.02	.37	.71

Note. $R^2_{adj} = .08$ ($N = 320$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

Bivariate (Pearson's) correlation with the SJT-EDM Unethical option was Caring $r = -.27^{**}$ and Inquisitiveness $r = -.23^{**}$

When considered in relation to the results of the internal consistency analysis for this study all three factors demonstrated acceptable levels of reliability (Caring $\alpha = .75$, Inquisitiveness $\alpha = .72$ and Self-Control $\alpha = .72$).

SJT-EDM Unethical Option and VIA Six Virtue Structure (Wisdom, Courage, Humanity, Justice, Temperance, Transcendence)

Table 35

Pearson's Correlations VIA Six Virtues with SJT-EDM Unethical Response Option

VIA virtue	<i>r</i>
Wisdom	-.21**
Courage	-.35**
Humanity	-.19**
Justice	-.18**
Temperance	-.15**
Transcendence	-.21**

** $p < .01$.

A multiple regression analysis was conducted with the SJT-EDM unethical response as the DV and the VIA six-factor structure. The correlation between the IVs was acceptable and there were no issues with collinearity. Inspection of the Normal Probability Plot and Scatterplot indicated that the data was normally distributed.

The model summary indicated that a small amount of variance was explained (12.5%) (Table). The result was highly significant ($p < .001$). Only Courage made significant contributions to the model ($p < .001$).

Table 36

Regression SJT-EDM Unethical Response Option and VIA-IS-M 6 Virtue

Variable	B	SE	95% CI		β	<i>t</i>	<i>p</i>
			LL	UL			
VIA							
Wisdom	-.05	.06	-.17	.08	-.05	-.74	.46
Courage	-.28	.06	-.41	-.15	-.33	-4.33	<.001
Humanity	-.02	.06	-.13	.09	-.02	-.39	.70
Justice	-.02	.05	-.12	.08	-.03	-.41	.69
Temperance	.06	.06	-.06	.18	.06	.98	.33
Transcendence	-.01	.05	-.11	.10	-.01	-.12	.90

Note. $R^2_{adj} = .11$ ($N = 320$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

When considered in relation to the results of the internal consistency analysis for this study (Table X), Courage and Transcendence showed acceptable levels of reliability ($r = .7$ and $r =$

.79 respectively). Wisdom and Temperance approached an acceptable level (.66 and .68 respectively). Humanity and Justice were below an acceptable level (.52 and .61 respectively)

SJT-EDM Unethical Response Option – Significant Predictors

A multiple regression was conducted using the significant predictors determined from the previous analyses. The IVs included were,

VIA strengths – Fairness, Honesty, Curiosity

MFQ foundations – Harm/Care, Ingroup/Loyalty

H/H facets – Sincerity, Fairness, Greed Avoidance, Modesty

The correlation between the IVs was acceptable and there were no issues with collinearity. Inspection of the Normal Probability Plot and Scatterplot indicated that the data was normally distributed. The model explained 52.3% of the variance ($p < .001$). VIA strengths – Fairness, Curiosity, MFQ foundations – Harm/Care, Ingroup/Loyalty, H/H facets – Fairness, Modesty made significant contributions to the model.

Multiple regression using the 'enter' method was conducted, removing the non-significant IVs. The resulting model explained 50.9% of the variance ($p < .001$). All IVs made a significant contribution to the model.

Table 37

Regression table Unethical Response Option and Significant Study Variables

Variable	B	SE	95% CI		β	t	p
			LL	UL			
VIA							
Fairness	-.09	.04	-.17	-.02	-.12	-2.38	.02
Honesty	-.05	.04	-.13	.03	-.05	-1.11	.27
Curiosity	-.14	.03	-.20	-.07	-.17	-4.13	<.001
MFQ							
Harm/care	-.12	.04	-.19	-.05	-.15	-3.37	.001
Ingroup/loyalty	.10	.03	.04	.15	.16	3.59	<.001
Honesty/humility							
Sincerity	-.07	.04	-.15	.01	-.08	-1.74	.08
Fairness	-.20	.04	-.28	-.12	-.26	-4.80	<.001
Greed-avoidance	-.06	.03	-.12	.00	-.09	-1.91	.06
Modesty	-.17	.04	-.25	-.09	-.20	-4.06	<.001

Note. $R^2_{adj} = .51$ ($N = 320$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

The significant variables identified from the results of the multiple regression analyses as antecedents of the SJT-EDM unethical response option are shown in Figure 13 in the next section and summarised in Figure 14.

The results indicate that;

Participants who scored lower on VIA Fairness, VIA Curiosity, H/H Fairness, H/H Modesty, MFQ Harm/Care and higher on MFQ Ingroup/Loyalty were more likely to endorse the SJT-EDM unethical response option as one they would take.

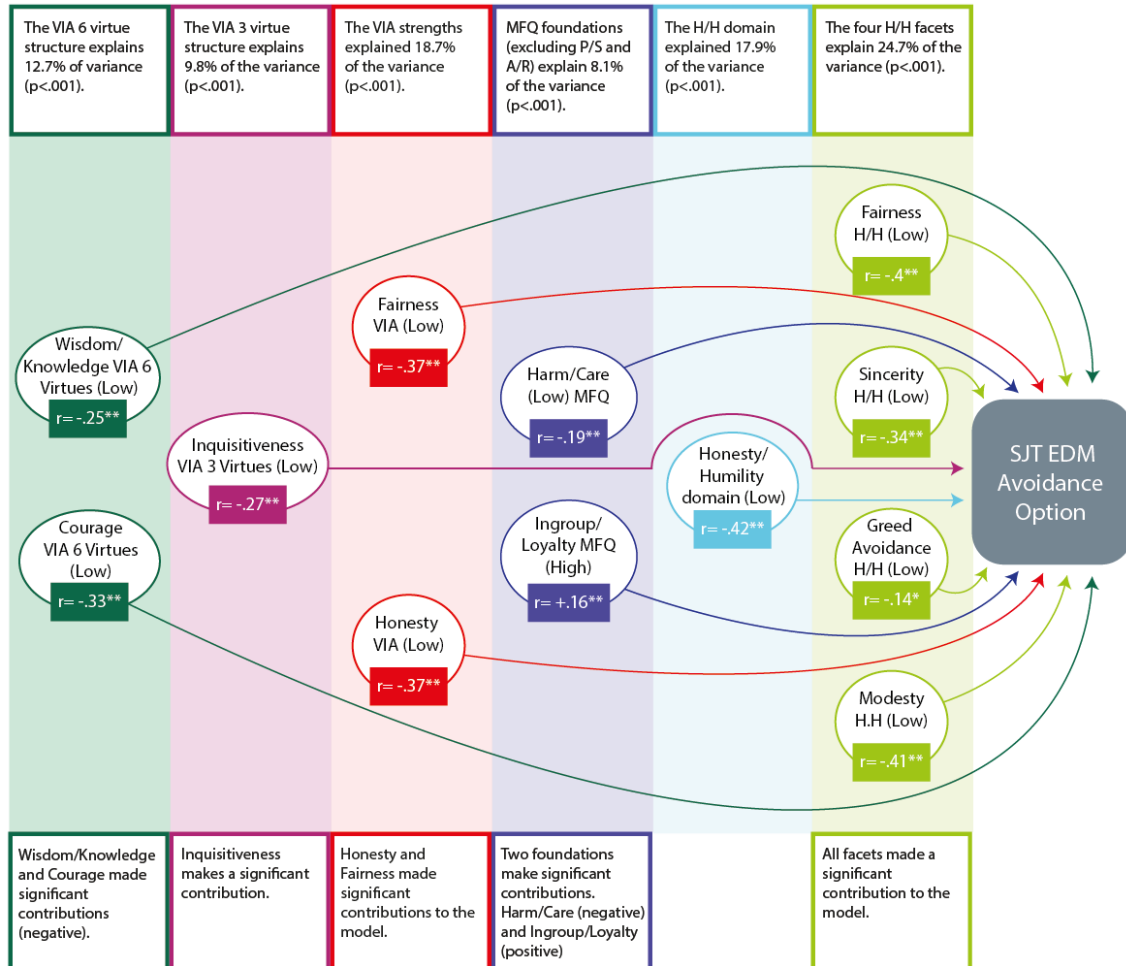
Participants who scored higher on VIA Fairness, VIA Curiosity, H/H Fairness, H/H Modesty, MFQ Harm/Care and lower on MFQ Ingroup/Loyalty were less likely to endorse the SJT-EDM unethical response option.

Participants who scored higher on the VIA virtue of Courage were less likely to endorse the SJT-EDM unethical response option and low scorers more likely to endorse the unethical option.

SJT-EDM Avoidance Response Option

Figure 22

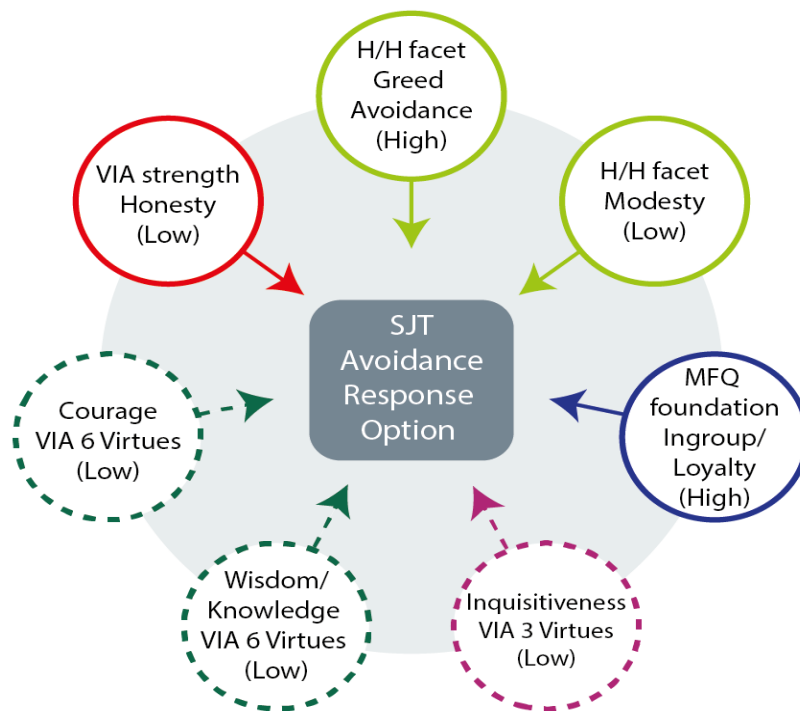
Antecedents of SJT-EDM Avoidance Response Option



Note: Graphic showing bivariate correlations (Pearson's r) and amount of variance explained from simple and multiple regression analyses.

Figure 23

Significant Predictors of SJT-EDM Avoidance Response Option



SJT-EDM Avoidance Option and H/H Domain and Subscales

Bivariate Pearson’s correlation was calculated to identify the relationship between the H/H domain score and the SJT-EDM avoidance response option. Simple linear regression was applied to analyse the relationship between the avoidance response option (DV) and the H/H domain score (IV). Multiple regression using ‘enter’ method was conducted to examine the relationship between the four H/H facet scores as independent variables in order to determine any predictors of the SJT-EDM avoidance response option (DV).

Table 38
Pearson’s Correlations Honesty/Humility (Domain and Facet Scores) with SJT-EDM Avoidance Response Option

Scale ^a	<i>r</i>
Honesty/humility (domain)	-.42**
Sincerity (facet)	-.34**
Fairness (facet)	-.40**
Greed avoidance (facet)	-.14*
Modesty (facet)	-.41**

** *p* < .01.

Simple linear regression was conducted to predict the SJT-EDM avoidance response (DV) from the H/H domain score (IV). The result indicated that the H/H domain score was a significant predictor of the SJT-EDM avoidance score explaining 17.9% of the variance, $F(1,318) = 69.21, p < .001$. It was found that H/H significantly predicted the SJT-EDM avoidance score ($R=.42$). The final predictive model was $3.66 + (-.4)$. (Table)

Table 39

Regression SJT-EDM Avoidance Response Option and H/H Domain

Variable	B	SE	95% CI		β	<i>t</i>	<i>p</i>
			LL	UL			
Honesty-humility	-.40	.05	-.49	-.30	-.42	-8.32	<.001

Note. $R^2_{adj} = .18$ ($N = 320, p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

SJT-EDM Avoidance Option and H/H Facets

A multiple regression (enter method) was conducted with the SJT-EDM avoidance response option (DV) and H/H facets (IVs). The model explained 24.7% of the variance ($p<.001$). All IVs made a significant contribution to the model.

Table 40

Regression SJT-EDM Avoidance Response Option and H/H Facets

Variable	B	SE	95% CI		β	<i>t</i>	<i>p</i>
			LL	UL			
Honesty-humility							
Sincerity	-.11	.04	-.20	-.03	-.15	-2.55	.01
Fairness	-.15	.04	-.23	-.06	-.21	-3.34	.001
Greed-avoidance	.07	.03	.00	.13	.11	1.98	.05
Modesty	-.23	.04	-.32	-.15	-.31	-5.31	<.001

Note. $R^2_{adj} = .24$ ($N = 320, p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

The result indicated that the H/H facets were significant predictors of the SJT-EDM avoidance score explaining 24.7% of the variance, $F(4,315) = 25.8, p < .001$. It was found that H/H significantly predicted the SJT-EDM avoidance score ($R=.5$). The final predictive model was $3.88 + (-.23) + (-.15) + (-.11) + (.07)$.

To summarise, the H/H domain score significantly predicted whether participants chose to avoid making a decision related to the ethical dilemma in the SJT-EDM. Participants who scored higher on H/H were less likely to choose to avoid making a decision and lower scorers were more likely to endorse the avoidance option as more like them. At facet level, all facets made a significant contribution to the model with the largest contribution made by H/H modesty followed in order by fairness, sincerity and greed avoidance.

SJT-EDM Avoidance Option and MFQ Foundations

Inspection of the data determined that MFQ Authority/Respect and Purity/Sanctity were highly correlated ($r=.714^{**}$). Both variables were excluded from the multiple regression analysis as highly correlated variables mean that multiple regression may not be able to separate unique variance and will report non-significant results (Pallant). Harm/Care ($p<.05$) and Ingroup/Loyalty ($p<.001$) made significant contributions to the model with explained 8.1% of the variance, $F(3,316) = 9.28$, $p < .001$. The predictive model was $2.8 + (-.12) + (.11)$. It was found that the model significantly predicted the SJT-EDM avoidance score ($R=.29$).

Table 41

Regression SJT-EDM Avoidance Response Option and H/H Domain

Variable	B	SE	95% CI		β	<i>t</i>	<i>p</i>
			LL	UL			
MFQ							
Harm/care	-.12	.05	-.22	-.02	-.16	-2.41	.02
Fairness/reciprocity	-.09	.05	-.19	.01	-.12	-1.78	.08
Ingroup/loyalty	.11	.03	.05	.17	.20	3.67	<.001

Note. $R^2_{adj} = .07$ ($N = 320$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

In summary, participants who scored lower on the MFQ30 Harm/Care foundation and higher on the Ingroup/Loyalty foundation were more likely to endorse the SJT-EDM response option that meant they were likely to avoid making a decision in the ethical dilemma faced.

SJT-EDM Avoidance Response Option and VIA Strengths

A multiple regression (enter method) was conducted with the SJT-EDM avoidance response option (DV) and VIA 24 strengths (IVs). The model explained 28.4% of the variance ($p<.001$), $F(24,295) = 4.86$, $p < .001$.

Table 42

Regression SJT-EDM Avoidance Response Option and VIA-IS-M 24 Strengths

Variable	B	SE	95% CI		β	<i>t</i>	<i>p</i>
			LL	UL			
VIA							
Appreciation of beauty and excellence	-.08	.04	-.16	.00	-.11	-2.05	.04
Bravery	-.01	.05	-.10	.09	-.01	-.14	.89
Creativity	.06	.05	-.03	.15	.08	1.21	.23

Curiosity	-.08	.05	-.17	.02	-.11	-1.65	.10
Fairness	-.17	.04	-.26	-.08	-.24	-3.78	<.001
Forgiveness	.07	.04	-.01	.14	.11	1.70	.09
Gratitude	-.01	.06	-.12	.10	-.01	-.19	.85
Honesty	-.13	.05	-.23	-.02	-.17	-2.41	.02
Hope	-.12	.05	-.23	-.01	-.17	-2.23	.03
Humility	-.06	.04	-.14	.03	-.08	-1.26	.21
Humour	-.05	.04	-.13	.03	-.07	-1.12	.26
Judgement	.05	.05	-.06	.15	.07	.91	.36
Kindness	-.02	.04	-.11	.07	-.03	-.46	.65
Leadership	-.11	.05	-.20	-.02	-.16	-2.29	.02
Love	.04	.04	-.03	.11	.07	1.16	.25
Love of learning	-.06	.05	-.16	.05	-.07	-1.07	.29
Perseverance	.00	.05	-.09	.09	-.01	-.09	.93
Perspective	-.01	.05	-.12	.09	-.02	-.27	.79
Prudence	-.05	.05	-.15	.06	-.07	-.88	.38
Self-regulation	.01	.06	-.11	.12	.01	.15	.88
Social intelligence	-.01	.04	-.08	.07	-.01	-.15	.88
Spirituality	.08	.03	.02	.14	.18	2.74	.006
Teamwork	.04	.04	-.03	.12	.06	1.10	.27
Zest	.09	.05	.00	.18	.15	1.92	.06

Note. $R^2_{adj} = .23$ ($N = 320$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

Six strengths made significant contributions to the model, Fairness, Spirituality, Honesty, Leadership, Hope, and Appreciation of Beauty and Excellence. The predictive model was $4.33 + (-.81) + (-.17) + (-.13) + (-.12) + (-.11) + (.08)$. It was found that the model significantly predicted the SJT-EDM avoidance score ($R = .53$).

Of the six strengths only Fairness, Spirituality and Honesty showed an acceptable level of internal consistency. Multiple regression (enter method) was used with the three strengths (IVs) and the SJT-EDM avoidance option (DV).

Table 43*SJT-EDM Avoidance Response Option and VIA-IS-M 3 Strengths*

Variable	B	SE	95% CI		β	t	p
			LL	UL			
VIA							
Fairness	-.18	.04	-.26	-.10	-.26	-4.55	<.001
Honesty	-.19	.04	-.28	-.11	-.26	-4.49	<.001
Spirituality	.02	.02	-.02	.07	.05	.99	.32

Note. $R^2_{adj} = .18$ ($N = 320$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

The model explained 18.9% of the variance ($p < .001$), $F(3,316) = 24.61$, $p < .001$. Fairness, and Honesty made significant contributions to the model. The predictive model was $3.63 + (-.18) + (-.2)$ It was found that the model significantly predicted the SJT-EDM avoidance score ($R = .44$).

SJT-EDM Avoidance Response Option and VIA Three Virtue Structure

A multiple regression analysis (enter method) was conducted with The SJT-EDM avoidance response option (DV) and VIA 3 virtues (IVs). The model explained 9.8% of the variance ($p < .001$), $F(3,316) = 11.47$, $p < .001$. The predictive model was $3.42 + (-.12)$ Only Inquisitiveness made a significant contribution to the model ($p < .001$). The model significantly predicted the SJT-EDM avoidance score ($R = .3$).

Table 44*SJT-EDM Avoidance Response Option and VIA-IS-M 3 Virtues*

Variable	B	SE	95% CI		β	t	p
			LL	UL			
VIA							
Caring	-.09	.05	-.18	.004	-.11	-1.87	.06
Inquisitiveness	-.16	.05	-.25	-.06	-.20	-3.31	.001
Self-control	-.06	.04	-.13	.01	-.10	-1.67	.10

Note. $R^2_{adj} = .09$ ($N = 320$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

SJT-EDM Avoidance Response Option and VIA Six Virtue Structure

A multiple regression (enter method) was conducted with The SJT-EDM avoidance response option (DV) and VIA 6 virtues (IVs). The model explained 12.7% of the variance ($p < .001$) $F(6,313) = 7.6$, $p < .001$. Wisdom ($p < .05$), and Courage ($p < .001$) made significant

contributions to the model. The predictive model was $3.48 + (-.11) + (-.2)$. The model significantly predicted the SJT-EDM avoidance score ($R=.36$).

Table 45

SJT-EDM Avoidance Response Option and VIA-IS-M 6 Virtues

Variable	B	SE	95% CI		β	<i>t</i>	<i>p</i>
			LL	UL			
VIA							
Wisdom	-.11	.06	-.22	.00	-.12	-1.97	.05
Courage	-.20	.06	-.31	-.08	-.26	-3.42	.001
Humanity	-.06	.05	-.16	.03	-.08	-1.27	.20
Justice	-.01	.05	-.10	.08	-.02	-.27	.79
Temperance	-.03	.05	-.14	.07	-.04	-.62	.54
Transcendence	.08	.05	-.02	.17	.11	1.57	.12

Note. $R^2_{adj} = .11$ ($N = 320$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

In summary, when considering the VIA individual strengths, and excluding those which did not meet the accepted level of internal consistency, the strengths of Fairness and Honesty predicted whether participants rated themselves more likely to avoid a decision when faced with an ethical dilemma. Those scoring higher on the two strengths were less likely to take the avoidance option. When considered at the level of the virtues, the six virtue structure explained the larger variance than the three virtue model. In the six virtue model participants who scored higher on the two virtues, Wisdom and Courage, were less likely to endorse the avoidance response option. From the three virtue structure participants who scored more highly on the virtue of Inquisitiveness were less likely to avoid making a decision in response to the ethical dilemma.

A multiple regression was then conducted which used the variables identified as significant contributors from each of the measures as IVs to determine whether they predicted the participants' endorsement of the avoidance response option. The H/H domain was excluded from the analysis as individual facets were used. The VIA virtues were excluded as they are combinations of the individual strengths.

Table 46

Regression SJT-EDM-Avoidance Response Option and Significant Variables

Variable	B	SE	95% CI		β	<i>t</i>	<i>p</i>
			LL	UL			
H/H facets							
Sincerity	-.07	.04	-.16	.02	-.09	-1.54	.12
Fairness	-.09	.04	-.18	.00	-.13	-1.94	.05

Greed-avoidance	.07	.03	.01	.14	.12	2.17	.03
Modesty	-.18	.04	-.27	-.09	-.24	-4.07	<.001
MFQ Harm/care	-.05	.04	-.13	.02	-.07	-1.37	.17
MFQ Ingroup/loyalty	.08	.03	.02	.14	.14	2.71	.007
VIA Fairness	-.07	.04	-.15	.01	-.10	-1.64	.10
VIA Honesty	-.14	.04	-.23	-.06	-.19	-3.39	.001

Note. $R^2_{adj} = .11$ ($N = 320$, $p < .001$). CI = confidence interval; LL = lower limit; UL = upper limit.

The results indicate that,

Participants who scored lower on VIA Fairness, H/H Fairness, H/H Greed Avoidance, H/H Modesty, and higher on MFQ Ingroup/Loyalty were more likely to endorse the SJT Avoidance response option. Participants who scored higher on VIA Fairness, H/H Fairness, H/H Modesty, and lower on MFQ Ingroup/Loyalty and H/H Greed Avoidance were less likely to endorse the SJT-EDM Avoidance response option.

Participants who scored higher on the VIA (six) virtues of Courage and Wisdom were less likely to choose the avoidance response option and lower scorers on these two virtues were more likely to avoid making a decision in the face of the ethical dilemma.

Participants who scored more highly on the VIA (three) virtue Inquisitiveness were less likely to endorse the avoidance option and lower scorers were more likely to endorse the avoidance option when faced with the ethical dilemma. The interpretation of these results and any implications are discussed in the next chapter. The results are summarised and illustrated in Figures 15 and 16 in the next section.

Additional Results of Interest

There is debate within the discipline of psychology concerning whether gender should be treated as a categorical or continuous variable (Reilly 2019). However, since papers concerning (un)ethical behaviour in organisations often included gender as a variable, information is included here on gender. Since gender differences were not the focus of this thesis information is provided for interest only. Other demographic variables were also inspected through a multiple regression analysis.

Gender – Bivariate Correlations with Study Variables

Table 47

Gender – Significant Bivariate Correlations from Study Data

Variable	<i>r</i>
SJT-EDM	
Fairness	-.12*
Loyalty	.17**
Avoidance	.13*

Unethical	.19**
MFQ30	
Harm/care	-.20**
Ingroup/loyalty	.14*
Honesty-humility	
HEXACO	-.20**
Fairness subscale	-.17**
Modesty subscale	-.29**
VIA virtue (6)	
Transcendence	-.19**
VIA individual strengths	
Appreciation of beauty and excellence	-.18**
Bravery	.12*
Creativity	.16**
Fairness	-.15**
Humility	-.19**
Judgement	.11*
Kindness	-.13*
Social intelligence	-.13**
Spirituality	-.19**
Transcendence	-.19**
Inquisitiveness	.12*
VIA virtue (3)	
Inquisitiveness	.13*

* $p < .05$. ** $p < .01$.

Results indicate that where the correlation is negative participants identifying as female gender scored higher on the study variable. If the correlation is positive males scored higher on the variable.

Chapter 5 Discussion

Introduction

The overall aim of this thesis was to explore the role of morally relevant dispositional traits, character, virtue, and moral foundations in individual approaches to ethical dilemmas or decisions faced in work and organisational settings.

Specific research questions are;

Is there a relationship between character strengths, virtues, moral foundations and morally relevant dispositional traits and the courses of action chosen by an individual when faced by a workplace ethical dilemma?

Can a situational judgment test of ethical decision-making in the workplace measure differences between individuals in terms of moral character and individual differences in EDM?

The specific objectives of this research were,

To develop a situational judgement test of ethical decision-making in the workplace.

To identify relationships between specific individual character strengths and courses of action chosen by an individual when faced by a workplace ethical dilemma.

To investigate the validity of moral foundation theory and honesty/humility domain when applied to workplace ethical decision-making.

To develop an explanatory model outlining the contribution of morally relevant traits in ethical decision-making in the workplace.

The study was intended to add to the body of knowledge concerning individual differences in EDM. The existing framework for exploring individual differences has focused on some aspects of personality and some demographic variables and studies were reviewed in the previous chapter. To date there has been little exploration of the role of morally relevant dispositional traits in EDM.

In order to obtain data to inform the study it was necessary to develop a research tool capable of assessing individuals responses to ethical dilemmas. This thesis sought to contribute to knowledge in this area by developing and using a SJT-EDM as the research tool. Although SJTs have been developed to measure some individual differences none have been designed, to the best of this authors knowledge, as measures of EDM. Lievens (2017b; 2020) has argued for SJT development to be construct focused. Additionally he proposed that SJTs could be developed not just for use in selection settings but also for use in wider contexts, including research.

This chapter firstly reviews the results of this study in relation to the debate concerning what SJTs measure. Although designed to focus on constructs, as advocated by many scholars, the results do not clearly indicate that the strategy worked. However the SJT-EDM developed for this research did demonstrate acceptable reliability and validity.

These areas include more clearly targeted response options with less ambiguity and are discussed in the section suggesting areas for further research later in this chapter, however it is also noted that SJTs may be best regarded as multidimensional measurement methods.

The SJT-EDM was able to differentiate between ethical and unethical responses made by participants and so offers scope for use in further research and applied settings following further revision.

The purpose of developing the SJT-EDM was to use as a tool in the second stage of the research and identify whether individual differences related to moral traits, dispositions and foundations were related to choices of action made by individuals when they are faced with ethical dilemmas. This research did succeed in identifying some aspects of individual difference that were significant and contribute to understanding to the discussion of individual factors in interactionist EDM models. Many of these individual differences have not been considered in EDM research. Models were presented in this Chapter that describe the individual differences that were found to be relevant and that can contribute to the discussion concerning explanatory EDM models, thereby filling a gap in current models. The individual differences of particular significance, as illustrated in the models, include, fairness (reciprocity), avoidance of harm, practical wisdom, wisdom and knowledge, practical intelligence, curiosity, inquisitiveness and courage. All of these appear to have an influence on whether an individual chooses an ethical or unethical course of action and are discussed in turn in this chapter. Also of significance is that some participants chose to avoid making a decision and the significance of this is also discussed in this chapter.

These results are now discussed and explored in relation to the extant literature

Hypotheses were proposed for this thesis and this chapter considers the results in relation to the hypotheses.

Study 1 Hypotheses

To address the question concerning whether SJT are measurement methods, such as an interview, or whether they can sit alongside psychometric tests and questionnaires and be designed to measure target constructs, the following hypothesis was posed.

- H1 SJT can be developed to measure target constructs.
- H2 That an SJT-EDM will discriminate between individuals who endorse ethical response options and those who choose unethical response options.

Study 2 Hypothesis

- H3 That morally relevant character and personality traits will predict individuals' choices between ethical and unethical responses to workplace ethical dilemmas.

Multidimensional Measurement Method or Construct Focused Measure?

H1 SJT can be developed to measure target constructs

This hypothesis was not confirmed. Possible explanations and implications are discussed below.

The Development of a SJT of Ethical Decision-Making in the Workplace

Situational Judgement Tests are low fidelity measures, primarily used by organisations to assist in the selection process and their use has significantly grown over the last few decades. This growth has been fuelled partly by evidence that they demonstrate good predictive and criterion validity in relation to workplace outcomes, as well as the pragmatic issues of cost effectiveness and ease of use (Olaru et al, 2019). SJT have been the subject of scrutiny in the literature, particularly literature relating to the psychology of assessment and selection in various fields. Studies have shown a population validity of .34 across a wide range of measures and samples with evidence of generalisability (McDaniel et al, 2001). The history of their initial development and growth is covered in the literature review chapter. Some significant issues that have emerged since their introduction and the research findings for this study are relevant to this discussion. These include the important question of what SJT are, in reality, measuring, with scholars debating whether SJT should be considered at the method level, or the construct level.

Stemming from work in the discipline of applied psychology and the measurement of people, there has been much emphasis on the psychometric properties of SJT, particularly in relation to psychometric measures of individual difference such as aspects of personality. Originally conceived as, and perceived as, measures of tacit or job-related knowledge, studies have shown that SJT correlate significantly with cognitive ability (McDaniel et al, 2001). SJTs have been developed as measures of specific aspects of individual differences related to personality characteristics, competencies, and other attributes, see literature review for more detail. Nevertheless, a construct level evaluation of studies found that the specific constructs measured were rarely reported with only composite scores generally being reported (Christian et al, 2010). Many, including the authors of the previously mentioned study, have argued that a construct focused approach is the key to understanding how and why SJT predict performance. Lievens (2017b) proposed that construct driven SJT should demonstrate

'cleaner measurement of the constructs targeted, as evidenced by an interpretable factor structure, increased unidimensionality at the level of the constructs measured (e.g., higher internal consistency reliabilities at the scale level), and better convergent and discriminant validity with the same constructs assessed by other measures.'
p271)

In order to ensure that the data gathered from the SJT-EDM in this study could address H1, several steps were taken. It was important to take steps to maximise the reliability and validity of the SJT-EDM developed for this research. The SJT-EDM response items (STEMs) developed were partially derived from the input of SME participants using an inductive approach. This was to ensure that the situations described realistic workplace dilemmas and maximise content validity. Four response options were written to target specific constructs. Of the remaining two response options one represented a clearly unethical response, determined from the data gathered from SMEs during the first stage of the research. The sixth response option represented an 'avoidance' option which allowed respondents to 'opt out' of making a decision about what action they would take.

SJTs, as discussed in the methodology section, are often designed where respondents rank their choices of actions or choose between different options and these formats of response options create challenges to the researcher when considering reliability and validity. Response options were formulated as Likert scales which also allowed for the traditional analytical approaches to psychometric properties to be applied.

The concepts of reliability and validity are inextricably linked to debates concerning what SJTs should seek to measure and what existing SJTs are measuring. If they are considered

to be multidimensional measurement methods then the application of traditional approaches to measuring reliability and validity may not be appropriate as they assume unidimensionality, with the latter linked to latent trait or construct driven approaches. Christian (2010), in a meta-analytical review of studies concerning SJTs, observed that approximately a third of studies did not identify the constructs measured.

This research intended to explore whether SJTs could be written to target specific constructs or whether they should be accepted as multidimensional measurement methods.

Despite this, and despite achieving acceptable levels of reliability and validity, this thesis proposes that there may be some merit in the view that SJTs are best considered as multidimensional measurement methods. This is discussed later, after the results which led to this conclusion are reviewed to establish the implications.

What Do SJTs Measure? Conclusions From This Study

Applying Factor Analysis to SJT – Issues and Practice

Typically, as was the case in the development of the SJT-EDM used in this research, the situations used to build STEMs are gathered from critical incident interviews and focus groups with participants perceived to have sufficient knowledge of the context in which the SJT will be applied. It is therefore highly likely that the situations described by the subject matter experts (SMEs) that form the basis of the situations used in the SJT-EDM, draw on a combination of skills, knowledge, and attributes. The real work contexts that the SMEs draw on, and on which the SJT stems are based are often complex and this is a likely explanation for the apparent multidimensionality that emerges from studies. Little evidence has been found to indicate the presence of substructures within SJTs that resemble discrete sets of meaningful and interpretable dimensions (McDaniel & Whetzel, 2005; Schmitt & Chan, 2006). Despite this, SJT are often designed and used to measure constructs, for example, integrity (Becker, 2005).

Discussing the generally weak evidence coming from studies applying factor analysis to SJT data some have concluded that a general 'judgement' factor accounts for response variance in most SJT items, possibly akin to the construct of practical intelligence (Schmitt & Chan, 2006). Jackson et al (2017) point out that this should not be confused with general intelligence. Lievens & Motowidlo (2017) propose that SJTs might be reconceptualised as measures of general domain knowledge about trait expression. In part, this suggestion is made as many studies, as discussed earlier in this thesis, have demonstrated that the level of detail provided in the SJT stem can be very sparse but nevertheless the SJT results in good levels of prediction concerning job performance (Krumm et al, 2017). The notion that participants understand when and how to apply particular traits in response to the situation they are given has resonance with the results of this study. In the context of this study concerning situations giving ethical/unethical courses of action, it is proposed that this links to the virtue of practical wisdom. Lievens & Motowidlo (2017), offer an interactionist model and the implications of this are discussed further later in this chapter.

Christian et al (2011) state that construct based SJTs would have both theoretical and practical advantages as they would allow for a greater understanding of what is being measured to be achieved. They also posit that construct based SJT would make it possible to determine how specifically this links to observed criterion validity, and that this would help determine whether SJTs can be written to target specific constructs or whether they are measures which tap into a number of different constructs. Lievens & Motowidlo proposed that SJT should be designed to specifically target the constructs that have been identified as necessary for effective job performance. Again, Lievens (2017b) argued for a construct driven approach to the development and analysis of SJTs. A construct driven approach

would mean that factor analytical approaches would be suitable methods of analysis but if SJTs are multi-dimensional, then the applicability of factor-analytical approaches to SJT must, and has been, questioned. McDaniel et al (2016) called for further research to explore construct validity of SJT's but state that evidence for the construct validity of SJTs is not likely to come from EFA or CFA due to the heterogeneous nature of SJT items.

Numerous studies report that it is difficult to obtain any interpretable, multidimensional factor solution in factor analytic studies of SJT (McDaniel et al, 2001). Jackson et al, (2017) compared the difficulty of identifying structures in SJT as measurement methods, and SJT focused on dimensions, as similar to the dilemmas that have been found in explaining the results of assessment centre studies. The authors cite a paper by Putka & Hoffman, (2013), which estimated that only 2.1% of variance was explained by dimensions, whereas general performance accounted for 33.7% and AC exercise effect accounted for 22.9%. Jackson et al, (2017) posit that variance arising from the situation effects and dependencies between situations and dimensions must also be considered and, therefore, EFA techniques are not likely to be suitable for SJT analysis.

The reasons underlying the lack of factor structure that have been reported in the wider literature were discussed in the literature review chapter although, at this point, it is important to stress that this lack of structure occurs **whether or not** items were designed based on prior constructs (Weekley et al, 2014). However, for this research, PCA conducted on the complete SJT-EDM data set did indicate a usable factor structure when considered at the scale level but not at item level.

In this study, as detailed in Study 1, steps were taken to write construct focused response options. Response options in this study were written to target foundations (MFT). Response options were also written to include 'cues' to trigger responses relevant to the target constructs. This approach was taken as TAT posits that traits are activated in response to situational cues (Tett & Burnett, 2003). Additionally this approach was supported by WTT which posits that situation-specific trait-appropriate responses are produced when certain "social-cognitive" mechanisms (cognitive/affective/motivational processes and dispositions) are triggered by the perception of trait-relevant stimuli in a person's external and/or internal environment (Jayawickreme, et al, 2019). ITP are also relevant here. ITP are defined as beliefs, held by the individual, about the effectiveness of traits in situations and therefore, assumed to mediate the link between traits and behaviour (Motowidlo et al, 2006; Lievens & Motowidlo, 2016; Lievens, 2017b).

Some of the scales developed specifically to measure narrow, pre-determined constructs demonstrated low levels of internal consistency (Table 5). The reason for the low internal consistency results for the construct driven scales might be to do with the validity of the construct itself, for example, there is much debate concerning the construct validity of MFT facets at the individual level and debate concerning the factor structure. A second cause of low reliability might be that the response option linked to the construct was not sufficiently tapping into the targeted construct. There were some scales that approached acceptable levels of reliability e.g. which indicate that further refinement of the SJT-EDM might improve the ability of the SJT-EDM to measure target constructs.

Nevertheless, the debate concerning the applicability of factor analytical approaches to SJT meant that it was necessary, in this study, to consider the results of factor analysis of the data gathered. For the issue of uni-dimensionality versus multidimensionality to be explored further, Principal Component Analysis (PCA) was conducted on the data.

The results of the analysis for this study are mixed. The results of this research and the PCA analysis at item level might appear to support the findings of McDaniel and Whetzel (2005) and the assertion made by McDaniel et al (2016) that items will be heterogeneous i.e.

feed into several unrelated constructs. Although PCA results suggested that the Unethical and Avoidance responses could be combined, there are also strong arguments for retaining the Avoidance scale as separate as there may be distinct differences between the individuals in terms of morally relevant traits related to individual difference and also different motivating factors that drive individuals to take the avoidance option. Equally, although PCA revealed that Fairness/Reciprocity and Harm/Care might also be combined into one component, it is proposed that they should also be considered as separate variables; reductionist approaches, using PCA, may be hiding significant differences between individuals, and their differing motivation. However further refinement of the SJT-EDM would be needed in order to facilitate this as considered individually the two scales had poorer internal consistency than when combined into one component.

Discussed by Ones et al (1996), the issue referred to as the *band width or bandwidth-fidelity dilemma* is relevant here. It is suggested that the level of specificity or level of abstraction required when considering individual differences, might be best determined by the context i.e. the nature of the research, researcher or application. Narrow traits might have higher predictive validity than broader traits because they *specifically* tap into *specific* constructs. However, they also concluded that broader traits, for example, the Big 5, had shown higher predictive validity and greater explanatory power in personnel selection settings.

To explore the data from this research and to consider the questions regarding whether SJTs can be written to target constructs, whether they can measure latent traits and whether a factor structure could be determined from this data PCA was conducted. The PCA results were presented in the previous chapter and were used to create explanatory models for the responses to the SJT- EDM.

H1 was not confirmed. The two factor structure was used for further analysis and did identify that the SJT-EDM did discriminate between participants who chose an ethical response (Factor CareFair) and those who chose an unethical response or avoidance one (Factor UAv) providing confirmation for H2. This meant that the SJT-EDM could be considered in relation to the argument that SJTs are measuring a general judgment factor or practical intelligence (Sternberg, 1997, 1999).

A General Judgement Factor?

The predictive validity of SJTs when used in selection is often shown to be higher than ability tests and personality measures. Schmidt & Chan, 2006, speculated that a 'general judgement factor' that explains this. Others have suggested that they may be measuring 'practical intelligence' (Sternberg, 1997, 1999). Sternberg offered a triarchic theory of intelligence including analytic, creative, and practical intelligence. He refers to 'successful intelligence', explained practical intelligence as the ability to adapt to, shape and select real world environments and proposed two components of practical intelligence, firstly a cognitive component and secondly a behavioural component. Work on practical intelligence has encompassed the notions of explicit/tacit knowledge and social intelligence Stemler et al (2005) propose that practical intelligence has three components, dealing with self, dealing with others, and dealing with tasks.

In virtue ethics, the concept of practical wisdom (phronesis) is the knowledge and understanding to do what is right; to put into action the recognition of what is good. It is posited that practical wisdom develops through life experiences and, according to Hursthouse & Pettigrove (2022), the virtuous are more able to see the consequences of their actions and recognise salient and important details of situations which then inform their actions. It is not unreasonable to suggest that at this construct is relevant to the discussion about what it is that SJTs measure. Indeed, Steyl (2020) asserts that phronesis has been considered in some of the literature related to business ethics but that some specific aspects

described by Aristotle had received little attention. These, Steyl describes as *sunesis* ('judgement'), a capacity to perceptively evaluate testimony, and *gnomē* ('discernment'), a capacity to rightly discern exceptions to 'universal' moral rules.

There appear to be some similarities between Aristotle's practical wisdom and Sternberg's practical intelligence. According to Tigner & Tigner, they appear to have similarities, but Sternberg did not draw directly from Aristotle (2000). However, Aristotle refers to understanding or "knowing," action or "doing," and production or "making," which Tigner & Tigner (2000) explain as theoretical, practical, and productive intelligence or, in the triarchy's Latinized form, science, prudence, and art (Nicomachean Ethics VI.3-5, 1139b14 ff). Sternberg's notion of practical intelligence relates to situations faced in everyday experiences of individuals. Practical wisdom specifically relates to virtues and therefore specifically concerns situations which have an ethical or moral component. Both Kohlberg and Rest refer to moral reasoning ability, and studies have shown that higher levels of cognitive moral development correlate negatively with unethical choices (Kish-Gephart et al, 2010).

Motowidlo et al (2006) proposed that the correlation often observed between personality traits and performance on SJTs could be explained by procedural knowledge possessed by the individual. This knowledge, termed as implicit trait policy (ITP), would consist of

'(a) general knowledge about the benefits and costs of expressing various personality traits in situational contexts like those in the job and (b) fine-grained knowledge about how to behave effectively in specific situations that make up a particular job.'

Motowidlo et al (2010 p322.)

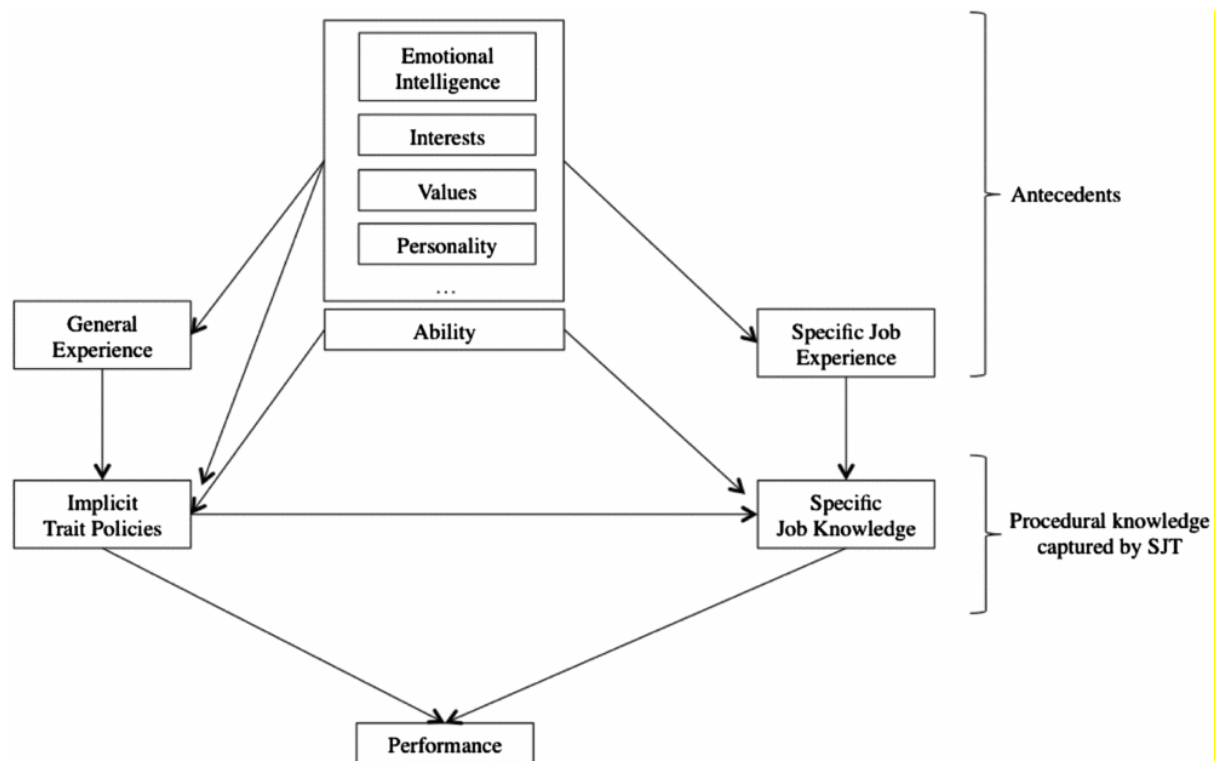
This strongly resonates with the concepts of practical wisdom, originating in Aristotle's work and as described by Hursthouse. It also strongly resonates with Sternberg's (1997, 1999) concept of successful intelligence which incorporates practical intelligence and has been used to explain the predictive power of SJT (Stemler & Sternberg, 2006).

If the SJT-EDM developed for this study is, in fact, measuring practical wisdom, practical judgment or a general judgment factor then analysing the results by considering two the categories of the ethical and unethical choice would seem appropriate. However, it would be important to retain the various response options as choices as a method of reducing social desirability bias. If there are several response options that are all socially desirable, then this makes the measure less transparent to the participant.

As repeatedly stated, determining any meaningful factor structure of SJTs has met with little success in previous studies, leading to continued debate. Lievens and Motowidlo (2016) suggested that SJT are best considered as measures of general domain knowledge. Lievens & Montowidlo (2016) consider both personality traits and cognitive ability to be antecedents of domain knowledge and suggest the model below.

Figure 24

Situational Judgement Tests Model



Lievens, F. and Motowidlo, S. J. (2016) 'Situational Judgment Tests: From Measures of Situational Judgment to Measures of General Domain Knowledge', *INDUSTRIAL AND ORGANIZATIONAL PSYCHOLOGY-PERSPECTIVES ON SCIENCE AND PRACTICE*, 9(1), pp. 3–22. doi: 10.1017/iop.2015.71. Reprinted with permission

Considering the results from this research and given that the SJT-EDM developed for this thesis was focused on EDM and not specific jobs it is suggested that it would be best placed on the left side of model where those character strengths, virtues, moral foundations and H/H facets (that were found to have a significant impact the response options) combine with procedural knowledge and implicit trait policies, to impact on individuals' choices when faced with an ethical dilemma. From a virtue ethics perspective, this 'procedural knowledge' could be regarded as 'practical wisdom' in the context of EDM.

It might be concluded from the research for this thesis that SJT are measuring a general overarching construct practical intelligence or practical wisdom and that the application of this to situations by individuals will be determined by both the situation and the possession of dispositional traits. This sits with the suggestion by Lievens & Montowidlo (2016) which is that the particular knowledge assessed by SJTs is that of the utility of expressing certain traits. This is also resonant of Sternbergs (1997, 1999) practical intelligence and the virtue ethics perspective on practical wisdom 'phronesis'. Nevertheless, there were some scales that approached acceptable levels of reliability which might indicate that further refinement of the SJT-EDM could improve the ability of the SJT-EDM to measure target constructs.

Can an SJT-EDM discriminate between individuals who endorse ethical response options and those who choose unethical response options?

H2 That an SJT-EDM will discriminate between individuals who endorse ethical response options and those who choose unethical response options.

This hypothesis was confirmed.

There is evidence from this study that there are differences between individuals responses to the SJT-EDM and that these different responses are correlated with character and personality traits. The implications from this are that SJT can be developed, based on best practice (Tiffin et al, 2020), that measure important differences between people. This confirms that SJT-EDM could be used in further research studies exploring workplace ethical decision-making and, potentially, in training and development contexts in organisations.

Do character and personality traits predict individuals' choices between ethical and unethical responses to workplace ethical dilemmas?

H3 That morally relevant character and personality traits will predict individuals' choices between ethical and unethical responses to workplace ethical dilemmas

H3 was partially supported

Results and implications are discussed below.

Some assertions have been made in this thesis. Firstly that morally relevant character and personality traits can be measured and, secondly, that they should be added to EDM models. Several models were reviewed in the literature review and it was determined that many are vague concerning the role of individual differences. Three of the most relevant are discussed here in relation to the findings of this research.

Morally Relevant Dispositional Traits, Strengths, Virtues, Moral Foundations and EDM Models. Conclusions from this Study

The morally relevant traits considered in this study were those that measured aspects of character and virtue, as measured by the VIA-IS-M, the personality trait Honesty/Humility from the HEXACO six factor model of personality, and the moral foundations from MFT as measured by the MFQ30. Whether the results from the SJT-EDM are considered at construct level, component level or overall, they demonstrate that morally relevant traits should be incorporated into models of workplace EDM.

Scholars also have added to the literature concerning the role of personality traits in EDM, and many have included FFM traits such as conscientiousness, agreeableness and neuroticism, into the search to find antecedents of unethical behaviour, e.g. CWB and workplace deviance (Ones & Sackett, 2007; Chang & Smithikri, 2010). The formulation of the HEXACO model and particularly the inclusion of the H/H scale allowed examination of specific, morally relevant personality traits to be used in studies and resulted in significant gains in understanding aspects of individual characteristics that impacted on a broad spectrum of workplace ethical behaviour, as reviewed in previous chapters. Both the moral foundations, measured by the MFQ and the character strengths and virtues have been used in some studies within business ethics. This study is, as far as the researcher is aware, the first to consider all of these measures of morally relevant traits in one study and collect empirical data concerning their relationship to individuals responses to ethical dilemmas.

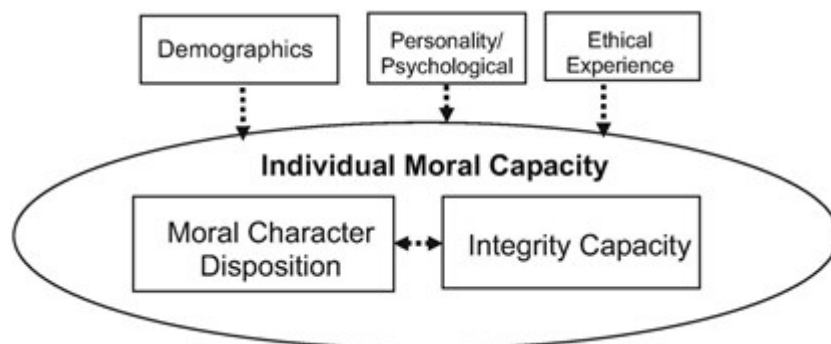
This research has attempted to draw these strands together to create a more nuanced view of which morally relevant traits, dispositions and foundations should sit within organisationally focused EDM models.

Schwarz (2016) I-EDM Model

Schwarz (2016) proposed an integrated (I-EDM), drawing together the work of Rest (1984,1986), Jones (1991), Trevino (1986), Tenbrunsel and Smith-Crowe (2008), Hannah (2011), and Haidt (2001). In this interactionalist model Schwarz repeats the assertion that ethical behaviour in the face of a dilemma will be determined by both factors relevant to the situation and factors related to the individual. Schwarz goes on to propose that the individual factors be grouped under the heading of ‘moral capacity’, illustrated in the following model.

Figure 25

Individual Moral Capacity



Schwartz, M.S. (2016) ‘Ethical Decision-Making Theory: An Integrated Approach’, *Journal of Business Ethics*, 139(4), p763.

As can be seen in this element of the I-EDM proposed by Schwartz, variables relating to psychological characteristics and personality are hypothesised as determining an individual’s moral capacity and would, according to Schwarz (p 762), include ‘*personality or psychological variables (e.g., cognitive moral development/CMD, locus of control, ego strength, etc.)*’.

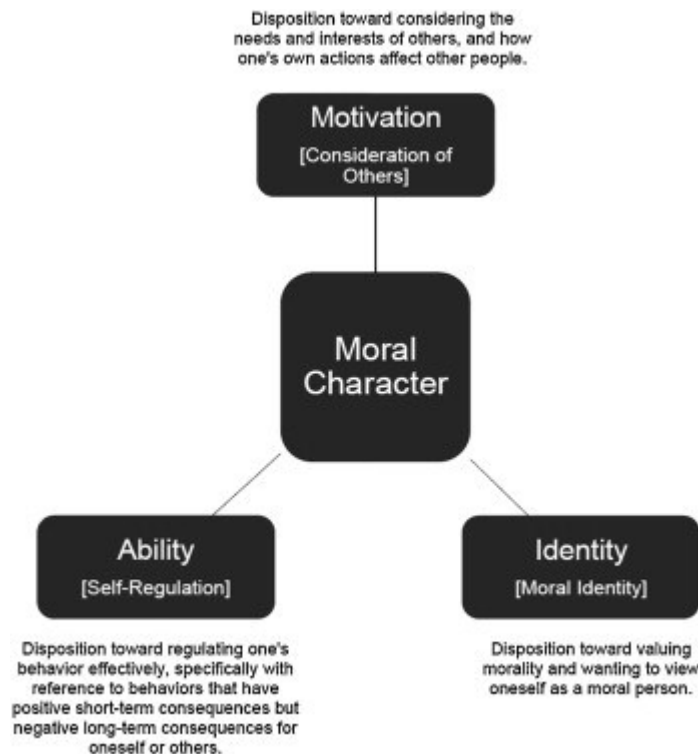
The results of the research for this thesis add to the understanding of the individual’s moral capacity by determining specific morally relevant individual differences, drawn from the psychological literature, and possessing greater reliability and validity than some previously theorised individual differences, that contribute to an individual’s moral capacity. The traits found to be significant in the analysis of data from this thesis should be located in the Personality/Psychological category and all contribute to the individual’s moral capacity. These are illustrated in the proposed model stemming from the research findings (p.166, Figure 30).

Cohen & Morse (2014) Tripartite Theoretical Framework

Cohen & Morse (2014) offered a theoretical framework for moral character, illustrated below in Figure 27.

Figure 26

Tripartite Theoretical Framework of Ethical Behaviour



(Cohen & Morse 2014) Tripartite theoretical framework of moral character.

Despite acknowledging the evidence from studies that concludes that cognitive moral development has been found to be predictive of unethical decision-making, Cohen & Morse (2014) exclude cognitive moral reasoning ability from the model stating that it is not part of moral character. They base this conclusion on the findings that the level of moral development does not appear to have more than a negligible impact on CWB or OCB, behaviours which, they maintain, do not require sophisticated reasoning processes.

This thesis asserts that practical wisdom should sit within the 'ability' component and is related to cognitive ability, in particular Sternberg's practical intelligence (1999). Wisdom and Knowledge (six virtue) was found to negatively correlate with the avoidance choice in the SJT-EDM used in this study. As discussed earlier, avoiding making a choice when confronted with an ethical dilemma might indicate that the individual does not know the right course of action (lack of wisdom). Participants who did not choose to avoid making a decision (scoring slightly higher on Wisdom and Knowledge) might recognise that the choice must be made (possessing wisdom). Avoidance might also indicate that the individual was not motivated to make a choice (morally disengaged). The first two reasons can be hypothesised to link with practical wisdom. Practical wisdom (phronesis) has a long and well acknowledged place within virtue ethics and is included in Peterson & Seligman (2004) VIA classification. Referring to the three virtue structure, Inquisitiveness, which encompasses the strengths of curiosity, and is an aspect of practical wisdom, also shows a clear relationship with the unethical, avoidance and UAv factor responses. Again, this might be taken as further evidence of the role of practical wisdom and this would place it in the Ability category of the Cohen & Morse tripartite framework.

This thesis proposes that fairness and care would be situated in the category of motivation in Cohen & Morse’s model having shown consistent evidence from this study data that they have a significant role to play in individuals responses to the ethical dilemmas. Individuals possessing these traits are more likely to choose the ethical response options and less likely to endorse the unethical options and less likely to avoid making a decision.

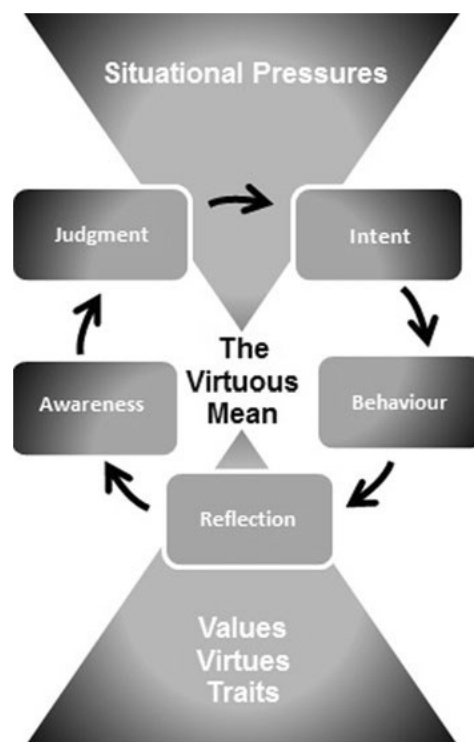
Finally, relevant to the Cohen & Morse (2014) model is that this study indicates an important role for the virtue of Courage which should be situated within Identity. Individuals in possession of Courage (VIA six virtue) were less likely to endorse the unethical, avoidance response options and achieved lower UAV factor scores.

Crossan et al (2013) and Ngyuen & Crossan (2022)

There have been calls to develop a greater understanding of the character might play in workplace EDM (Crossan et al, 2013; Ngyuen & Crossan, 2022). This is the specific focus of this thesis.

Figure 27

Integrating Character with Rest’s Model



In Search of Virtue: The Role of Virtues, Values and Character Strengths in Ethical Decision Making. Source: Journal of Business Ethics, Apr2013, Vol. 113 Issue 4, p567-581, 15p, 1 Diagram, 1 Chart Diagram; found on p568.

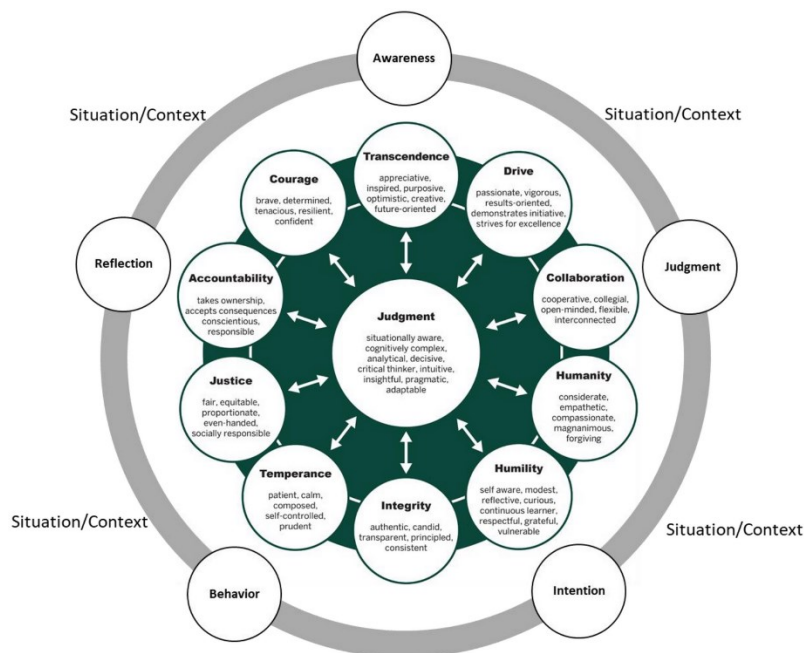
Rest’s model of EDM has been highly influential in research and Crossan et al (2013) and Nguyen & Crossan (2022) called for more research to integrate character into EDM research and theorised the possible connections between character and the stages in Rest’s model. In view of the results from the analysis of data collected for this thesis, several observations can be made. It is an interactionalist model which recognises the interaction between

situational pressures and individual differences related to virtues, values and traits. The findings from this study would indicate that the traits of fairness, concern to avoid harm to others (care), practical wisdom and courage are key elements to place in the model.

Nguyen & Crossan (2022) paper contains a much more detailed and expansive model of character and EDM and is shown below in Figure 15.

Figure 28

Character and EDM



Character and EDM. The figure is a combination of Rest's (1984) EDM model and Crossan et al.'s (2017) character model. Source: Nguyen, B. and Crossan, M., (2022). Character-Infused Ethical Decision Making: JBE. Source: *Journal of Business Ethics*, 2022 found on p173.

The model is conceptually derived and offers a theoretical framework. The results of this thesis provide empirical support for the role played by courage, justice (fairness) and judgement. Judgement in Nguyen & Crossan's paper is defined as follows ,

'Makes sound decisions in a timely manner based on relevant information and critical analysis of facts. Appreciates the broader context when reaching decisions. Shows flexibility when confronted with new information or situations. Has an implicit sense of the best way to proceed. Sees into the heart of challenging issues. Reasons effectively in uncertain or ambiguous situations' (2022, p.177)

And is 'akin to Aristotle's practical wisdom' (2022, p179).

This thesis draws conclusions based on the results from an empirical study to develop a more detailed understanding of the role specific character traits, morally relevant personality traits (H/H) and moral foundations predict individual choices in a SJT of workplace ethical dilemmas. This places the emphasis on the role of the moral agent, their character disposition whilst also acknowledging the context or situation. This also draws in the importance of WTT in explaining contextual variation in individual approaches to EDM.

Ethical Decision-Making – Individual Differences of Character Strengths, Virtues, Moral Foundations and Honesty/Humility (HEXACO)

The second, third and fourth objectives of this thesis were to identify whether morally relevant dispositional traits were predictive of individual choices made in the face of ethical workplace dilemmas. These morally relevant traits were measured by established scales; the H/H domain and facet scales taken from the HEXACO questionnaire and the VIA-IS-M, a measure of character strengths and virtues. The constructs measured by these scales and their theoretical foundations are discussed in the literature review and the scales are described in the methodology chapter. The role that individual differences play in workplace EDM was also discussed in the literature review chapter and it was established that, whilst aspects of individual difference have been included in empirical studies, there was a lack of studies that explored the specific individual differences related to morally relevant characteristics of individuals.

It was important to include the H/H scale as this was purposely designed to reinstate a morally relevant trait into trait-based models of personality. Empirical studies, since its development, have consistently supported the re-instatement by providing evidence of its construct, criterion, and incremental validity. The inclusion of a virtue ethics perspective, as reflected in the VIA model and measure, was also central to this thesis and it was important to examine whether the strengths and virtues as theorised in the classification of strengths and virtues and measured by the VIA questionnaire, could add to any explanatory model of workplace EDM.

Finally, the inclusion of moral foundations theory in this research, measured by the MFQ, offered an opportunity to explore whether MFT could contribute to understanding ethical workplace behaviour. Developed in social psychology, this represented a cross-disciplinary approach as whilst there exist a few studies that have explored MFQ in relation to business behaviour, further exploration of the foundations' relevance and validity was necessary. The combination of these various constructs, drawn from different disciplines are now discussed in relation to the findings from this research. According to Shmueli (2010) statistical models can be used to predict an outcome from a set of predictors, explain differences in outcome values by differences in explanatory variables and finally produce descriptive models that demonstrate the association between DVs and IVs. The individual and cumulative relationships of the IVs and the DV are summarised in the Results chapter. Graphics are included to clarify the role and relationships between those that were found to be significant in the relationships. Significant constructs are then discussed individually in relation to the findings of this study and the extant literature.

Morally Relevant Constructs in Workplace EDM

There have been many calls to reinstate morally relevant dispositional traits into the discussion of unethical behaviour in organisations. This study provides evidence that incorporating such traits into models explaining the role of individual differences in EDM is a legitimate approach by providing empirical data to demonstrate that certain morally relevant traits and moral foundations discriminate between individuals who endorse the unethical course of action and those who do not and, instead, endorse an ethical response option. Additionally, and of note, are the findings that some participants opt to avoid any decision and this is posited as an important aspect of workplace EDM. Avoidance choices are made despite the inclusion of clearly ethical and clearly unethical response options. The findings from this research indicate that certain traits and dispositions play an important role in determining individuals responses when faced with an ethical dilemma. These are now discussed in relation to the literature.

Fairness and EDM

Fairness, as measured by both the VIA-IS-M and the H/H facet Fairness were both significant contributors to the model predicting the SJT-EDM unethical response option, with bivariate correlations of 0.27** and 0.6** respectively. The correlation between the two variables in the multiple regression model was $r = 0.47$ below 0.7 suggested maximum so no multicollinearity issues emerged. Both variables made significant contributions to the model. The simple bivariate correlation between the two variables was 0.19**. Importantly, the variables of VIA fairness and H/H fairness also played a significant role in predicting participants endorsement of the ethical response options. Refer to Appendix 4 for tables of results.

As indicated earlier, the SJT-EDM response options intended to capture participants' choices motivated by fairness did not demonstrate acceptable internal consistency reliability. Whilst the specific boundaries for acceptable internal consistency levels are debated, as discussed previously, the decision was made to use the factor that emerged from the PCA analysis. This determined that the SJT-EDM response options related to fairness and those related to Care/Harm could be subsumed as one broad factor. This factor labelled 'CareFair' demonstrated an internal consistency of $\alpha = 0.67$. The construct of Care (avoidance of harm), as measured by the MFQ30, also proved to be a significant predictor of ethical/unethical response options. The bivariate correlation between the SJT-EDM unethical response option and the SJT-EDM CareFair Factor was $r = -0.44$ ** significant at $p < 0.01$ (2 tailed).

Fairness as measured by the MFQ30 was also predictive of individual choices but did not explain unique variance in the final model. The moral foundation of fairness/reciprocity is one of the five moral foundations from MFT (Haidt & Joseph 2004) and is measured by the MFQ30. It has its roots in anthropology, cultural and evolutionary psychology and MFT was intended to provide a theoretical framework covering the whole domain of human responses to moral situations. Fairness/reciprocity is associated with a sensitivity for inequality and the motivation to maintain justice within the group. The website set up by the originators of MFT defines the foundations as,

Fairness/cheating: *This foundation is related to the evolutionary process of reciprocal altruism. It generates ideas of justice, rights, and autonomy.*

(<https://moralfoundations.org/> Accessed 16th July 2022)

Although it has been examined in studies of workplace behaviour, discussed elsewhere in this thesis, its predominant application has been in attitudes and behaviour relating to politics and wider aspects of society. It does not stem from a consideration of individual difference from a trait based, dispositional perspective and was not developed with the same processes normally applied to psychological measures.

The facet of fairness, a subscale of Honesty/Humility, was hypothesised by Ashton et al (2004) in the HEXACO personality model. It was posited as a distinct dispositional trait and was developed using accepted psychometric traditions for scale development. It has been subjected to many empirical studies since which have confirmed its psychometric credibility. The facet of fairness assesses a tendency to avoid fraud and corruption. Low scorers are willing to gain by cheating or stealing, whereas high scorers are unwilling to take advantage of other individuals or of society at large.

The constructs of *fairness, reciprocity and justice* have been the focus of discussion and research in many subject areas including, but not limited to, behavioural ethics, moral

psychology, economics, world trade, law, moral philosophy, EDM studies and organisational justice. As previously indicated four of the six response options in the SJT were written to target foundations from the MFT. This follows TAT, which posits that traits may be activated in response to situational cues and that both context and personality are important in determining individual behaviour in organisations (Tett, 2003; (Tett & Guterman, 2000).Tett et al, 2013). The MFT foundation of Fairness/Reciprocity was reflected in one response option. Examples include,

'You think the customer deserves to be treated fairly so you tell the customer the room in their preferred hotel is not available.'

'You do not think it would be fair to influence the Andrew's decision, so you do not recommend Jane.'

The concepts of fairness, reciprocity and justice might be conceptually linked with the concept of prosocial behaviour. Hu & Mai (2020) posit that individual differences exist in terms of their other-focused preference in social decision-making. They considered the role of social value orientation (SVO) which is defined as the dispositional weights that individuals assign to outcomes for themselves and others in interdependent situations (McClintock, 1972). The SJT-EDM scenarios created for this research gave participants the choice of courses of action that would represent prosocial and proself behaviours. Proself individuals would include those who are either *competitors*, who seek to gain more than the other person, or *individualists*, who seek to maximise their own advantage regardless of others. On the other hand, prosocial individuals are more likely to be willing to put aside their own interests and look to achieve equal allocations or to seek favourable joint outcomes. Studies have demonstrated that individuals classed as prosocial behave more cooperatively in the face of social dilemmas (Balliet et al., 2009) and are more likely to demonstrate organisational citizenship behaviour in organisations (Nauta, De Dreu, & Van Der Vaart, 2002).

Thielmann & Balliet (2020) conducted a comprehensive meta-analysis of published research on prosocial behaviour and 8 broad and 43 narrow personality traits. They found that both broad and narrow traits could affect prosocial behaviour. Their research was focused on studies that had used economic games to gather data. They also determined that there were certain situational affordances that might activate certain traits. Thielmann & Balliet's focus on determining situational affordances that activate certain traits is clearly linked to TAT (Tett & Burnett, 2003), where traits are exhibited in response to situational cues and Kenrick and Funder's assertion that 'traits influence behavior only in relevant situations...' (1988, p. 29).

Hilbig et al (2014) found that the H/H domain predicted prosocial behaviour, ($r = .34$, 95% CI [.02, .69]) as opposed to selfish behaviour. Simple bivariate correlations demonstrated that the facets of Fairness and Greed Avoidance were correlated with prosocial behaviour ($r = .03^*$, $p < .05$) in both cases but that in the regression model only Fairness explained unique variance. Analysis of the data obtained for this thesis showed that the bivariate correlations demonstrated that H/H domain predicted the SJT-EDM Fairness option at a similar level to the Hilbig study, ($r = .33^{**}$, $n=320$, $p < 0.01$). All subscales showed significant correlations with the SJT-EDM Fairness option Fairness $r = .361^{**}$, Modesty $r = .267^{**}$, Sincerity $r = .247^{**}$ and Greed Avoidance $r = .12^*$. When regression results were considered only Fairness and Modesty explained unique variance.

Hilbig et al (2014) study demonstrates that Fairness (H/H) predicts prosocial behaviour. The results from this thesis support this. Fairness (H/H) predicted that some participants will

make an ethical choice from the SJT-EDM options. Fairness as a moral foundation (MFQ) also predicted the SLT-EDM ethical response option. Kroneisen & Heck (2020) found that there was a positive association between H/H with individuals level of sensitivity to moral norms and that sincere, honest, faithful, and fair-minded individuals were more likely to consistently adhere to moral norms.

Ruch et al (2019) found that the H/H domain was a significant predictor of behaviour and actions related to fairness and altruism in economic games. They also concluded that character strengths and virtues, as measured by the VIA survey, contributed to explaining the variance in participants' decisions when playing economic games. Important to note from their study was that they used the VIA factor scores of 'strengths of mind' and 'strengths of heart' as classified and measured by the Brief Strengths Test (Peterson, 2007). Their finding that 'strengths of the heart' but not 'strengths of the mind' explained and contributed to the explanation of the variance is of some relevance to the results examined for this thesis.

More recently functional magnetic resonance imaging (fMRI) has demonstrated connections between brain activity and moral judgements. Hu & Mai (2021) studied prosocial and proself orientations in a game task (Ultimate Game). They concluded,

Behaviorally, prosocials were more willing to reject unfair offers and had stronger negative emotional experiences than proselfs; prosocials were more satisfied with fair offers. Electrophysiologically, relative to proselfs, prosocials exhibited automatic intuitive processing of fairness at an early stage represented by the P2, suggesting that SVO reflects stable individual differences in an inherent sense of outcome fairness. (Hu & Mai 2021, p.678).

Such findings would appear to endorse that decision-making which guides individuals to make a decision based on fairness can be considered as happening partially at an intuitive level and is likely to be a function of stable individual differences between people.

As stated previously, the notion of fairness has a long history within the study of ethics and moral philosophy. Alongside 'doing no harm', fairness, as opposed to self-interest dominated thinking in this area. Haidt, Graham and Joseph sought to expand thinking concerning the 'moral domain'. They developed MFT with the aim of creating a more cross culturally relevant, and more complete theoretical framework to explain ethical behaviour. It resulted in Haidt & Graham (2007) defining the five moral foundations (evolved psychological mechanisms), Harm/Care, Fairness/Reciprocity, Ingroup/Loyalty, Authority/Respect, and Purity/Sanctity and in the development of the MFQ measurement tool. According to Graham (2013), when developing MFT, Haidt sought to construct a theory specifically designed to bridge evolutionary and anthropological approaches to moral judgment. Monist approaches, illustrated by, for example, Kohlberg's initial considerations of morality, by definition, focused on one construct to explain moral behaviour.

"Virtue is ultimately one, not many, and it is always the same ideal form regardless of climate or culture... The name of this ideal form is justice" (Kohlberg, 1971, p. 232; see also Baumard, Andre', & Sperber, 2013).

Consistently, the results of this study demonstrated that fairness (justice) was a significant variable in predicting participants choice of response options with participants possessing the personality trait of fairness (H/H fairness) and the strength (VIA fairness) more likely to endorse the ethical option, less likely to choose the unethical option and less likely to avoid making a decision by opting out. It has been established as a stable aspect of individual difference in personality. The importance of this finding might lend support to monist approaches to moral behaviour but this would need further exploration. The research for this

thesis has established the importance of the personality and dispositional trait of fairness as an antecedent in EDM models.

Avoidance of Harm (Care) and EDM

As indicated earlier, the notion of concern for human welfare and 'doing no harm' have been the subject of consideration by moral philosophers as motivators of moral behaviour. John Stuart Mills for example stated,

"a person may possibly not need the benefit of others but he always needs that they do him no harm." (Utilitarianism, 1861)

Haidt & Graham placed the foundation of Harm/Care first on the list of moral foundations and separate from the foundation of Fairness/Reciprocity (2007). Gilligan (1982) proposed that the 'ethic of care' was separate to a concern for justice (fairness). The ethic of care is distinguished because it reflects a concern with how to fulfil conflicting responsibilities to different people not how to resolve claims of conflicting rights between people (Simola, 2003).

The results from this research indicated that participants' choice of ethical or unethical response options was significantly related to endorsement of items representing a concern for *fairness* and also items endorsing *care and avoiding harm*. These two constructs were measured separately in the SJT-EDM with one response option including the word *fair* as the reason for choosing an ethical response and another response option including the word *care* as a reason for choosing the ethical response. Although reliabilities for the two separate scales in the SJT-EDM were below 0.7, EFA indicated that the combined scales formed one factor and showed an acceptable Cronbach Alpha (0.67).

Four of the six response options in the SJT-EDM were written to target facets from the MFQ. The MFQ facet of Care/harm was reflected in one response option. Examples include,

'You worry about any harm that might be done to people if this is not dealt with so decide to try to resolve the quality issue before you leave.'

'Refuse to dismiss the person because you care for their welfare and dismissing them might cause them harm.'

There was less evidence to support this the importance of Harm/Care as a separate construct in the results of this study in relation to workplace EDM. The strongest relationships with the SJT-EDM ethical response option were with the constructs measuring fairness. PCA of the SJT-EDM revealed that the variables of SJT-EDM Harm/Care and SJT-EDM Fairness/reciprocity might be considered as one factor. As individual scales they did not reach acceptable reliability but as a combined factor they demonstrated acceptable internal consistency (.67). Refer to Appendix 5 for results table.

In only one case was the correlation between the SJT-EDM response option for Harm/care greater than that for the SJT-EDM response option of Fairness/reciprocity and that was for the MFQ Harm/Care variable. This does provide some evidence of criterion validity.

In Haidt & Graham's MFT, the foundation of Harm/care represented concerns about violence and the suffering of others, including compassion and care (2007). The foundation of Harm/Care in MFT is defined as the caring behaviour toward other group members who are in need of protection.

Care/harm: *This foundation is related to our long evolution as mammals with attachment systems and an ability to feel (and dislike) the pain of others. It underlies virtues of kindness, gentleness, and nurturance.* (<https://moralfoundations.org/> Accessed 16th July 2022)

Individuals who scored higher on a measures of nondiagnostic psychopathic trait showed less concern about both care and fairness (Glenn et al, 2009). Djeriouat & Trémolière (2014) found that individuals presenting with subclinical psychopathic tendencies showed a greater tendency to utilitarian responses, as opposed to deontological responses, and that this was driven partially by a lower concern for the moral foundation of Harm/Care.

The reasons for the less significant results for the SJT-EDM response option for Harm/Care than for the SJT-EDM response option of Fairness/Reciprocity might be due to the content of the SJT-EDM items and response options. Harm/Care is a more complex construct than Fairness/Reciprocity. It is perhaps easier to settle on what is fair in an ethical dilemma than to make complex decisions about Harm/Care. In most ethical dilemmas the judgement first needs to be made about who should be the recipient of the 'care' and most business ethical dilemmas involve multiple stakeholders. It might be hypothesised that fairness/reciprocity is a more relevant construct than care/avoidance of harm is in business settings. This would merit further research. It is proposed that future refinement of the SJT-EDM items and response options should include a closer link with the notion Harm/Care. It is also proposed that a study using ipsative scoring approach to the SJT-EDM would allow a closer examination of the relative importance of Harm/Care versus Fairness/Reciprocity in workplace EDM.

This research demonstrated that individuals scoring more highly on MFQ Harm/Care were less likely to endorse the SJT-EDM unethical course of action as one they were likely to take and more likely to endorse the SJT-EDM ethical response option. The MFQ Harm Care and MFQ Fairness/Reciprocity results in this study showed a bivariate correlation of $r = .56$. It is also important to note that they are included in the hypothesised MFT super-factor 'Individualising'. The multiple regression analysis however demonstrated that they both made unique contributions to the variance explained in the predictive models for SJT-EDM unethical response option and the SJT-EDM CareFair factor.

Some scholars continue to propose that Harm/Care is, and should be, considered separately in the study of business ethics. Baumann, for example, analysed handling of corporate crises and concluded that a response strategy that emphasises the ethic of care results in more favourable outcomes than that of the ethic of justice (2011). Bedi et al (2019) meta-analytical review summarised and synthesised evidence of the outcomes and moderators of ethical leadership and pointed to the importance of key behaviours, including showing genuine concern for others (Brown and Trevino, 2006).

Sosik et al (2019) focused on the role that character plays in ethical leadership within organisations. Using self-report measures the assessed participants' level of Honesty/Humility (HEXACO-60, Ashton and Lee 2009), empathy (Hogan (1969), moral courage (Sekerka, 2009) and self-control (Tangney et al., 2004), alongside subordinates' perception of the leaders (Brown et al. 2005) and concluded that only moral courage and empathy had direct effects on ethical leadership behaviours which, they suggest added to Brown & Trevino's (2006) model of ethical leadership. It is likely that being able to show genuine care and concern for others requires individuals who are capable of feeling empathy which Hogan defined as

"the intellectual or imaginative apprehension of another's condition or state of mind without actually experiencing that person's feelings" (p. 308).

As Graham (2013) indicates, monist approaches have also focused on sensitivity to harm and human welfare as key to explaining moral behaviour but that pluralists view moral behaviour as derived from or driven by more than one value or virtue. Graham (2011) states that the research consistently established that concerns about Avoidance of Harm as well as Fairness/Reciprocity are widespread across cultures. Economic theory has tended to maintain that human behaviour is determined by self-interest however empirical studies in many other disciplines have provided evidence to the contrary. Findings from studies using economic games and social dilemmas, whilst showing variability in behaviour, do reveal a distinction between individuals who pursue self-interest and those who demonstrate other regarding behaviour.

Whilst fairness is assessed in all three of the measures used in this study, Avoidance of Harm (Harm/Care) is only assessed specifically in the MFQ30. The variable MFQ Harm/Care demonstrated weak to moderate but significant ($p < .01$) bivariate correlations with many of the other variables in the study. Of note is that it was correlated with participants' choices on the SJT-EDM and that in the regression model it demonstrated that it explained unique variance suggesting that the foundation of Harm/Care does have a separate role to play when considering workplace EDM, and to repeat, it is not measured by the other measures used in this study.

Avoidance of Harm, as a notion, is well documented in some disciplines particularly all branches of medicine. It is also documented in some professional body guidance on ethical conduct but there appears to be little coverage of the notion in business ethics.

Inquisitiveness (Virtue), Wisdom and Knowledge (Virtue) and Curiosity (Strength) and EDM

There is some evidence from this study to indicate that the strength of curiosity is a significant predictor of the likelihood that an individual will endorse an unethical response option in the SJT of workplace ethical dilemmas, i.e., absence of curiosity means an individual is more likely to choose an SJT-EDM unethical option. Curiosity (lack of) is also a significant predictor of individuals who endorse the SJT-EDM Avoidance response option, discussed later. Curiosity is one of the strengths included in the Virtue of Inquisitiveness (VIA 3 virtue structure) and also the virtue of Wisdom and Knowledge (VIA 6 virtue structure). The simple bivariate correlation (Pearson's) between the VIA strength of curiosity the SJT-EDM unethical response option is $r = .28^{**}$ and the SJT-EDM avoidance option ($-.25^{**}$). The virtue of curiosity made a significant contribution to the model which explained 27% of the variance in relation to the SJT-EDM unethical response option and also to the SJT-EDM factor UAv, explaining 37% of the variance although curiosity did not make a significant contribution to the model when the SJT-EDM avoidance option was considered.

In the VIA framework, individuals who possess this strength are described as interested, novelty-seeking, open to experience, and capable of making judgments, are open-minded (critical thinking). In the revised 3 virtue structure, Curiosity sits within the Virtue of Inquisitiveness. McGrath et al., (2018) found that the two strengths most strongly related to inquisitiveness were curiosity and creativity. Han et al (2022) studied the relationship between character strengths and moral functioning and employed the Global Assessment of Character Strengths (McGrath, 2017) with the Behavioural Issues Defining Test (dBIT), Interpersonal Reactivity (IRI), and the Moral Identity Scale (MIS). Their results indicated that curiosity, wisdom, and kindness predicted postconventional moral reasoning.

The bivariate correlation from this study data, between the VIA virtue of Inquisitiveness and the unethical option was $-.23^{**}$. Within the original VIA six virtue framework Curiosity was theorised to sit within the virtue of Wisdom and Knowledge which included cognitive

strengths that entail the acquisition and use of knowledge, including creativity, curiosity, open-mindedness, love of learning, perspective. Possession of curiosity as a strength did not in this study increase the likelihood of the individual endorsing an ethical response option.

It is proposed from this study that these results can be explained in relation to the concept of practical wisdom (virtue ethics), and that this is linked also to the 'judgment' factor that has been used to explain the high predictive validity of SJTs and, furthermore, that it is also linked to the Sternberg's (1999) concept of practical intelligence. This would also provide a link between virtue ethics and the psychology of individual differences, which, as explained next, is considered important in order to move the study of virtues within the social sciences, and psychology in particular (Kristjansson, 2021).

Aristotle believed that good judgement was key to an individual developing virtuous character and meant that the individual would give careful consideration to how to act in the face of an ethical dilemma (Nyberg, 2007). Aristotle referred to this over-arching meta-virtue as phronesis (practical wisdom), which enabled individuals to critically deliberate and evaluate the appropriateness of competing virtues e.g., being considerate as opposed to being honest. (Aristotle 2009, pp. 106–107 [1140a24–1140b35]). As discussed in the review of the literature, key to Aristotle's thinking is that of the virtuous mean and phronesis serves to prevent distinct virtues being employed in excess or deficiency which transforms them into vices when operationalised (Schwartz and Sharpe 2010). There are differences in how virtues are considered but the view of MacIntyre has tended to prevail in business ethics. Kristjansson (2021) confirms the view that the consideration of phronesis in workplace settings tends to conform more to MacIntyre's conception.

Darnells et al (2019) state that there have been numerous calls to bring the notion of phronesis into psychological enquiry. They also assert that a phronesis, virtues-based approach is rapidly gaining a foothold in the study of professions and ethical behaviour. Arnold et al (2021) propose that judgements informed by good character should be considered as essential in the practice of regulated professions but that the notion of character does not receive enough attention. They cite MacIntyre (1981) as viewing technical competence of professions as being important but also observing that qualities of character should not be ignored.

Aristotle viewed the ability to reason as what made humans distinct from animals and that both moral and intellectual (phronesis or practical wisdom) virtues were involved in reasoning (Cavanagh & Williams, 2022). Breier & Ralphs (2009) point to the question of whether phronesis should be considered a disposition, personal quality, an element of reasoning or intellect and conclude that it is a form of reasoning and knowledge that is ethical in nature and acquired by experience. An early influential psychologist Thorndike considered that intellect and character were linked and important areas for behavioural psychology to study (Beatty 1998).

'intelligence in general is correlated with virtue and goodwill toward men; both are correlated with skill in control of hand, eye, voice, etc.; all these are correlated with health, poise, sanity, and sensitiveness to beauty. Some of these intercorrelations are low, but they are rarely zero or negative.' (Thorndike 1949, pp. 273–274)

Although, as noted by Ackerman (2018), Thorndike did not present empirical data to support the assertion.

Sternberg's view of practical intelligence considers that some individuals are more likely to perceive the important cues in situations and to know what the appropriate response is, also being able to draw on their previous experience (1984). This is likely to apply generally to

SJTs in all contexts and should be explored further in other studies. In situations that require consideration of ethical dilemmas it is proposed that the form of practical intelligence proposed by Sternberg sits within phronesis as a form of knowledge and reasoning specifically relevant to moral thinking which individuals can apply to such ethical scenarios. This also bridges the individual versus the situationist in that, as Briers & Ralph (2009) discuss, phronesis

'involves a flexible relationship between general, universal knowledge and particular facts or circumstances of daily life' (p490)

Darnell et al (2019), propose that phronesis may have an important role to play in further exploration of the well documented issue of explaining the gap between knowing what to do and doing it, in particular in relation to moral judgment and actual behaviour. In the literature review chapter this 'problematic gap' was discussed and the relevant aspect of the situationalist versus the globalist perspectives were also explored. To summarise, McGrath & Brown (2020) referred to practical wisdom as,

'It is one of Aristotle's intellectual virtues but helps mold how the highly virtuous person pursues the moral virtues (p.7)'

Kristjansson (2021, p1304) considers that the renewed interest in practical wisdom shown in the psychological literature is a 'watershed moment social scientific study of practical wisdom'. He refers specifically to the model proffered by Grossmann et al (2020). Grossmann et al (2020) drew together the existing conceptualisations of practical wisdom, current ways of measuring wisdom, considerations of individual differences in wisdom, thinking concerning how wisdom develops, cultural issues and answered or unresearched remaining questions. Their work was specifically shaped by behavioural, cognitive and social sciences and involved an extensive review of current perspectives, knowledge and research in the area. One of the conclusions they reach is that,

'the common view position on wisdom among the Wisdom Task Force members is that people differ in central aspects of wisdom on a continuum that reflects more or less ability to manifest wisdom. In other words, the common wisdom model we outline here suggests that wisdom is a dimensional construct rather than an all-or-none quality. (p114)'

They continue by stating that wisdom can be viewed as a trait with measures achieving acceptable levels of reliability but that it may also have state like tendencies. However, importantly, they assert that as a trait, it demonstrates as much stability across situations as other accepted personality traits.

It is not new to suggest that personality traits are linked to and interact with cognitive traits. Costa & McCrae (1991) indicated the trait Openness, had a link to intellectual element and empirical studies have confirmed this link. Ziegler et al, (2012) evidenced that Openness indirectly influenced the development of crystallised intelligence (Gc) through the positive influence on the development of fluid intelligence (Gf).

This study suggests some support for the importance of practical wisdom as a determinant of workplace ethical decision-making. This evidence comes from the analysis of the VIA-IS-30 results which demonstrate that relevant virtues and strengths help to predict whether a participant endorses an unethical response or chooses an avoidance response when faced with an ethical dilemma. Results tables are included in Appendix 6. Appendix 7 includes the table of results showing the bivariate correlations between the SJT-EDM response options the 6 virtue structure and the 3 virtue structure.

In studies examining the factor structure of the VIA-IS, an intellectual or cognitive strengths factor was frequently noted, with Love of Learning, Curiosity, and Creativity emerging as consistent markers (McGrath, 2014). Of particular importance to this research, it emerged that when the Virtue of Inquisitiveness (3 virtue model) is considered with Caring (3 virtue model) they explain 9.2% of the variance in the SJT-EDM unethical response option, small but highly significant ($p < .001$). In this study, Curiosity as a VIA strength, remained a significant predictor of the SJT-EDM unethical response option in the regression model and combined with VIA Honesty and VIA Fairness accounted for 26.2% of the variance. The bivariate correlation between VIA Curiosity and the SJT-EDM unethical response option was $r = -.28^{**}$.

That individuals who score higher on these variables show less of a tendency to endorse the SJT-EDM unethical response option is a significant finding from this research and provides some supporting evidence for the inclusion of practical wisdom as a virtue linked to morally relevant behaviour. Further evidence, presented later, comes from a similar finding with the SJT-EDM avoidance option.

Courage and EDM

Aristotle viewed courage as a virtue which moderated action between cowardice and recklessness with the virtuous mean being the desirable aim. The relevance of this virtue to EDM is evident, it can be hypothesised that, in addition to being driven to do the right thing and knowing what the right thing to do is, having the courage to do so may also shape the individual's response. Moral courage within business behavioural ethics has been defined as "the fortitude to convert moral intentions into actions despite pressures from either inside or outside of the organization to do otherwise" (May et al. 2003, p. 255).

A pertinent example of this may be 'whistleblowing'. Whistleblowing has been defined as

"the disclosure by organization members (former or current) of illegal, immoral, or illegitimate practices under the control of their employers, to persons or organizations that may be able to effect action" (Near and Miceli 1985, p. 4).

The motivation that drives some individuals to bring such practices to the notice of others has been considered by scholars and diverse conclusions have been drawn. Whilst some have viewed whistleblowers as driven by diverse situational and organisational factors, of relevance to this thesis is the research that has considered that in some cases whistleblowers are motivated by a moral concern for others (Dungan et al, 2019). As discussed in the review of the literature concerning decision-making models, the rationalist/intuitivist debate is also pertinent here. Watts & Buckley (2017) suggest model of moral whistleblowing which seeks to illustrate the complex network of individual and organisational factors that act as antecedents or determinants of whistleblowing behaviour. Moral courage is identified as one of the important individual differences specified in the model. The concept of moral courage describes when an individual overcomes any fear of personal harm and does so in order to uphold a moral principle or value. Moral courage was identified as a predictor of whistleblowing behaviour (Dungan et al, 2019).

Moral courage was found to mediate the relationship between virtuous leadership and moral voice (Alshehri & Elsaied, 2021), confirming previous studies that had demonstrated a role to play in facilitating ethical and other prosocial behaviours (Hannah et al, 2011). Sosik et al (2019) focused on the role that character plays in ethical leadership within organisations. They concluded that only moral courage and empathy had direct effects on ethical leadership behaviours.

It is evident from this study that moral courage has a role to play in individual's endorsement or not of the unethical SJT-EDM response option. It is also clear that it has a role to play in individual responses to the SJT-EDM avoidance response option. Avoidance behaviour is discussed later in this chapter when motivations for individuals endorsing the SJT-EDM Avoidance option are explored. Moral courage is also considered an aspect of prosocial behaviour discussed earlier as pertinent to ethical decisions motivated by a sense of fairness and justice. Sasse et al (2022) consider moral courage to be related to other pro-social behaviours but distinct from them as it is shown in response to the moral violations of others, and this often involves some level of confrontation. They further argue that moral courage may not always result in prosocial behaviour because the competing influences of loyalty and fairness may lead to within individual conflicts but also conflicts between individuals. Once again, this thesis would consider that, in such situations, practical wisdom would facilitate individuals' reasoning about the correct course of action.

The results of this study indicate that Courage (VIA 6 virtues) as measured by the VIA-IS-30, has a role to play in workplace EDM. Individuals with higher scores on Courage were much less likely to endorse the unethical option or the avoidance option. Refer to table in Appendix 9.

The results of the regression analyses examining the SJT-EDM unethical responses, avoidance response, and the component (factor) UAv, all show that the virtue of Courage plays an important role with those participants with higher scores on Courage slightly less likely to endorse unethical or avoidance responses.

Higher scores on the virtue of Courage meant that participants were less likely to choose the Avoidance option. Intuitively this would have some appeal but can also be considered in relation to extant literature. Harris (2001) analysed secondary data from company and media records looking at managers' accounts of choices that were made in the face of ethical dilemmas. They found that "courage" was used to describe actions, to describe personal dispositions and regarded as a virtue. The findings of the research for this thesis confirm that when faced with an ethical dilemma it is important to know what to do, be motivated to do it, and then have the courage to make the right choice.

Avoidance and EDM

The results of this study indicate that avoidance behaviour is of significance in workplace EDM. The SJT-EDM included a response option that allowed participants to endorse an avoidance option. Examples of the response options included,

Avoid meeting or talking to your family member and ignore their telephone calls.

Deliberately end the telephone call. There is a strong chance that when the customer calls back they will speak to a different person.

Ignore the problem and do not discuss it with anyone as it might not be discovered until after you have left the company.

Go off sick from work with stress until you leave the company and then start your new job.

The response options above allowed the respondent to opt out of dealing with a difficult situation that clearly needed to be dealt with in order to resolve an ethical issue.

This results for this thesis concerning the SJT-EDM avoidance option also show that the H/H scale has a significant relationship with participants' choice to endorse the avoidance option as like them. The bivariate correlation between the H/H scale was $r = -.42$. The results of simple multiple regression using the H/H subscales explained 24.7% of the variance (significant at $p < .0005$) of the SJT-EDM Avoidance response option, with all four subscales making a significant contribution to the model. The results of simple multiple regression with the SJT-EDM avoidance option demonstrated that four of the MFQ facets, Care, Loyalty, Authority, Purity, also predicted the participants' endorsement of the avoidance option, explaining 10.4% of the variance.

Two concepts, Fairness and Honesty appear as significant contributors to the response options of Avoidance and the unethical response option measured by both the H/H measure and the VIA . In both cases the possession of the strength or trait means that individuals were significantly less likely to choose the SJT-EDM avoidance option. It is pertinent at this point to consider the similarities and differences between the concepts in the two measures.

The H/H trait describes individuals who score lower on the trait as more likely to manipulate others, more likely to break rules for personal profit, more motivated by personal gain, and possessing a higher sense of self-importance. The VIA strength, is described as,

'This strength involves accurately representing your internal states, intentions, and commitments, both publicly and privately. The strength of honesty is often linked to self-concordance- the extent to which your goals accurately represent your implicit interests and values. Honesty allows people to take responsibility for their feelings and behaviors, owning them, and reaping benefits by doing so.'

<https://www.viacharacter.org/character-strengths/honesty#>

The summary descriptions do not show much similarity. There are some significant correlations demonstrating that there is overlap between the measures however the results of the regression analysis did not show issues of multicollinearity.

The bivariate correlations between the H/H domain, the individual facets and the VIA strength of Honesty are summarised on the table included in Appendix 8. The bivariate correlations between the H/H domain and facets with the SJT-EDM Avoidance option were presented previously (Table 38).

It is proposed that avoidance responses can, in some circumstances, also be considered as an unethical choice and some of the response options for the SJT-EDM reflect this. Further revision of the SJT-EDM response options would enable this to be more targeted. The response options, unethical and avoidance have been combined into one component for some analysis, however, this thesis proposes that the distinct motivations behind individuals who endorse the avoidance option, as opposed to the unethical option, require individual consideration. In this instance, the use of the individual variable in the analysis might be more useful than associating it with another variable as a (component) factor. From an organisational behaviour perspective, the resulting impact of an employee deciding to behave in an unethical way or an employee who avoids making a decision which indirectly has an unethical consequence, might be equally negative. But there is likely to be value in identifying the differences between these two categories of individuals for selection, development, many other organisational level interventions, and for research purposes.

In considering the results of this study concerning avoidance responses, there are several concepts that appear to be relevant and may have a role in explaining such avoidance preferences. These concepts include moral disengagement (Bandura, 1999), approach/avoidance (Elliot, 1999), act/omission, commission/omission, omission bias. The

sufficiency of information provided in the SJT-EDM may also contribute to participants endorsing the avoidance response.

Moral Disengagement

Moral disengagement theory (MDT) refers to an individuals' propensity to cognitively disengage with an act which has a moral component and to rationalise engaging in it without feeling any negative emotions (Bandura, 1999). Studies have considered moral disengagement and its role in various aspects of unethical behaviour in organisations including unethical decision-making. (Baron et al. 2015; Ogunfowora et al. 2013; Detert et al. 2008). The individual differences that have been explored as antecedents of moral disengagement include some aspects of personality and they are often the same or similar to those individual differences that have been explored as antecedents of EDM. These include , honesty-humility (Ogunfowora & Bourdage, 2014), moral identity (Kennedy et al. empathy and locus of control (Detert et al, 2008). Considering the FFM, Agreeableness (politeness) was found to be related to moral disengagement along with aspect of extraversion and neuroticism (assertiveness and volatility) (Rengifo & Lham (2022). One of the areas suggest for future research is to consider moral disengagement not just from a perspective of individuals behaving unethically but that it should be considered from the perspective of individuals choosing not to behave ethically (Newman et al 2019). In this context this thesis would suggest that moral disengagement could also be studied as a mechanism that allows individuals to avoid any action, ignore unethical situations and avoid making a decision in the face of a moral dilemma. Newman et al also suggest that moral disengagement may be triggered by situational cues and link to TAT.

Ego depletion theory (Baumeister et al. 1998) may offer another explanation for individuals endorsement of the unethical and/or the avoidance options in the SJT-EDM. The SJT-EDM 14 scenarios each with six response options. Ego depletion theory posits that if an individual is overloaded with activities requiring self-control it impedes their moral awareness and they are more likely to engage in unethical behaviour.

Approach/Avoidance and EDM

Initially conceptualised by Elliot (1999), approach motivation orientation is described as an orientation which leads people to act in a way that achieves a positive outcome. On the other hand, avoidance motivation orientation leads individuals to act in a way that avoids undesirable consequences (Elliot & Church, 1997; Elliot & Thrash, 2002). Approach and avoidance motivation have been studied in relation to many aspects of organisational behaviour. However Howard's (2021) study suggested that the H/H scale from HEXACO had significant negative correlation with avoidance orientation but not a significant positive correlation with avoidance orientation.

Act/Omission, Commission/Omission and Omission Bias

In addition to moral disengagement, another argument for considering avoidance behaviour in more depth and as separate to unethical behaviour stems from the act/omission distinction. This has been considered by scholars in theoretical and practical philosophy and, according to Woollard (2011), common sense would seem to indicate that it matters in normative ethics whether harm results from an individual taking action or not taking action, with the former seemingly easier to justify. In UK law the two concepts are also defined and treated as separate issues and this is true in the laws of many countries (Feinberg, 1984).

Psychologists refer to omission bias where an act of commission, for example starting a fire, is seen as more reprehensible than failing to act when a fire is observed. In moral dilemmas the harm occurring through action is judged to be worse than that caused through inaction.

Commission has been defined as a deviation from a reference point, making an active decision, doing something, or making a change (Feldman et al., 2020). This is in contrast to omission which is defined by a decision to do nothing (Feldman).

A further bias demonstrated by individuals faced by morally relevant dilemmas was proposed by Royzman & Baron (2002). They highlight the importance of distinguishing between indirect harm as opposed to direct harm when research participants were asked to make judgements about courses of action in morally relevant situations. Direct harm is that where the harm can be seen as inextricably part of the action whereas indirect harm can result from other causes that are connected to the action but not inextricably linked to it. Royzman & Baron refer to the difference between harm as a mediator and harm as an indirect result. In the case of the avoidance options in the SJT-EDM, participants decisions to avoid a telephone call might not directly cause harm but the result of their decision not to answer the call would indirectly cause the customer a problem. It may be that respondents choosing the avoidance option in the SJT-EDM were demonstrating a bias for indirect harm or it might not.

Cushman et al (2006) studied the influence of action/inaction, intended harm/unintended harm, and contact/no contact on moral-wrongness ratings and found that harmful acts were judged to be worse than harmful omissions, that intended harm (as a means to an end) was judged to be worse than harm occurring as a side effect and harm with direct contact worse than without contact.

Clearly, the distinction between commission and omission has implications in the area of business ethics. Omission bias is often viewed as self-serving (Hayashi, 2013), however others view omission as more likely to be explained by a preference for the default option (Gärtner and Sandberg, 2014). Some research has supported the notion that individuals may approach decisions in a way that allows them to pursue self-interest whilst also maintaining the impression that they are behaving fairly (Mazar et al. 2008; Asheim et al. 2010). In the situations provided for consideration in the SJT-EDM it may be that some individuals endorsed some of the avoidance options due to self-serving omission bias. In the situations provided, avoiding taking action could be seen as unethical behaviour, however there is insufficient data to draw this conclusion.

Insufficiency of Information

It is also important to note however, that in some cases omitting to take action might be due to a lack of information in the situation. Lacking information in an uncertain situation makes people more sensitive to action cues (Frisch & Baron, 1988; Spranca et al., 1991). Some of the situations, and the offered response options, may not have included sufficient information for some individuals. Also, the wording of the response option may not have been seen as a obviously unethical choice. However, most of the situations and the avoidance response options in the SJT-EDM clearly conveyed the message that avoidance was not an ethical option. Nevertheless the precise motivation for the respondents choice of the avoidance option could not be determined and this area shows promise for more in depth consideration.

SJT-EDM Avoidance Responses Summary

An interesting outcome of this study was that it appears that the avoidance option in the SJT-EDM can be seen as a distinct and separate construct, motivated by or determined by a number of different causes and the merging of it as one factor with the unethical response option might, in fact, be disguising an important difference between individuals when faced with an ethical dilemma. What cannot be concluded from the results of this study is the reason individuals endorsed the avoidance option although the close correspondence found

with unethical response options might indicate that the avoidance option sits more clearly in the unethical category. The implications of this for further research and organisational practice are discussed in the next chapter.

SJT-EDM – Authority Response Option

When considering the literature there are some arguments for retaining the four separate response options and to consider each, separately and not combine them into components (factors). It is proposed that Authority/Respect should be considered in its own right. The SJT-EDM response options related to authority allowed participants to seek direction from and to obey an authority figure. Advice given on using the cut-off point of Eigenvalues greater than 1 can also be re-considered if there are strong theoretical arguments for considering a factor. Whilst the reliability data for this scale did not reach the commonly accepted level (Cronbach's Alpha = α 0.51 and Spearman Brown + 0.58), it is proposed that these reliability figures would be improved by a closer examination of the wording of the relevant response options to match the targeted construct more closely. Also, as discussed elsewhere, some consider that a reliability of .6 is acceptable.

The data for this study demonstrated a small but highly significant correlation ($r = 0.27^{**}$) between the participants score for the Authority facet (as measured by the MFQ30) and the SJT-EDM items representing Authority/Respect thus demonstrating some evidence of criterion validity and supporting the retention of the authority response option within the SJT-EDM, albeit in a revised and improved version. The relationship between the MFQ30 Authority facet and the unethical and avoidance options in the SJT-EDM were also significant. Table 67 presents the bivariate correlations between the SJT-EDM Authority response option and some of the (non SJT-EDM) variables in the study. Only those correlations which showed highly significant results ($p < 0.001$) are shown in Table 70 in Appendix 10.

Weber (1924) defined authority in organisational setting as the ability of some to control the behaviour of others because of their position in the organisational hierarchy, i.e., legitimate authority. The concept of obedience to authority, notably stemming from Milgram's (1963, 1974) extensive experiments, has been referred to in many studies of ethical behaviour in organisations. It is suggested that the use of authority can sometimes lead to pressure to continue unethical practices (Pina e Cunha, Rego, & Clegg, 2010), managers often feel pressure to behave in ways they suspect are morally dubious (Ashforth, Gioia, Robinson, & Treviño, 2008) and that this pressure often results in failure to report illegal or immoral behaviour in organisations (Detert & Edmondson, 2011). The defence of 'only following orders' has been claimed in other high-profile cases of unethical conduct e.g. Abu Ghraib prison abuse Enron, MCI (Lehmann, 2002; Reid, 2005).

Mayhew and Murphy (2014) cite evidence from cases of fraudulent accounting behaviour to assert that there is evidence of acquiescence to authority in some high-profile legal cases. In considering the Authority response option, consideration should also be given to the theory of moral disengagement (Bandura et al., 1996; Bandura, 1999, 2015). The individual may rationalise their unethical behaviour in several ways including reconstructing the act as in some way being ethical, minimising or disregarding the consequences of the act or by locating the responsibility elsewhere. The latter concept of displacement of responsibility suggests that individuals may behave in a particular way if they can rationalise that another party will take responsibility, in this case someone in authority. Individuals in these cases can regard any consequences as the result of the dictates of authorities rather than their own actions. Moral disengagement has been shown to be related to making unethical decisions (Detert, Trevino, & Sweitzer, 2008).

Mayhew & Murphy (2014) also posit that the tendency to obey authority might apply particularly to individuals who are guided by Haidt's (2009) concept of respect and obedience to authority from Haidt's moral foundations theory. This thesis examined the relationship between MFQ facets as measured by MFQ30 and the SJT-EDM results. Cronbach's Alpha for the Authority/Respect facet (MFQ30) determined in this research was $\alpha .65$. A previous study by Graham et al (2017) reported test-retest reliabilities of .71 for Harm, .68 for Fairness, .69 for Ingroup, **.71 for Authority**, and .82 for Purity (all $p < .001$). The internal consistency figures from the same study were .69, .65, .71, **.74**, .84 respectively. Although the reliability figures for the Authority facet, as measured by the MFQ30, are mixed they approach acceptable levels.

There was a significant correlation between those participants who endorsed the SJT-EDM authority option and who scored more highly on the MFQ facet of Authority/Respect ($r=.27^{**}$ $p<.01$). Standard multiple regression was applied with the SJT-EDM authority option as the dependent variable and the MFQ30 facets. The model summary reveals that the MFQ facets account for 29% of the variance in the authority choice ($p<.0005$). Importantly, the Authority/respect facet was the only independent variable to make a significant contribution to the prediction of the Authority option being chosen ($p<.005$). These results would seem to support the suggestions, made by Mayhew & Murphy, that some individuals are more prone to demonstrate obedience to authority and, therefore, more likely to bow to pressure to behave unethically (2014).

The argument for retaining the SJT-EDM Authority response option as a separate variable is to further consider the relationship between it and the SJT-EDM Avoidance response option. The bivariate correlation (Pearson) between the SJT-EDM Authority response option and the Avoidance Option ($r=.7^{**}$). A key finding from this research is that the SJT can discriminate between people who endorse an ethical choice, proactively endorse an unethical choice and those that report themselves as most likely to avoid making a decision. There are strands in EDM research relevant to avoidance behaviour, for example, the concept of moral disengagement (Bandura et al., 1996; Bandura, 1999, 2015). If there is indeed a connection between those who are more likely to refer to authority and those who are more likely to avoid a decision when faced with an ethical dilemma then moral disengagement may have an explanatory role to play in this relationship. This finding would also have significance for organisations and practice.

Demographic Data and SJT-EDM Results

Gender Differences

The issue concerning gender differences was not the focus of this thesis however some analysis was undertaken. As described in the literature review, studies considering the differences between men and women in relation to ethical/unethical behaviour and decision-making have produced mixed findings. Those that have found gender differences tend to report that men are likely to demonstrate or report more unethical behaviours. Jonason et al (2017) found that men scored higher than women in the Dark Triad personality traits and women higher in the moral foundations (MFQ30) but also determined that the sex differences that did emerge in relation to the commission of sin were more associated with the personality traits than the moral foundations.

Some gender differences were found in the data reported in this study however most showed low correlations. There was a predominance of females in the sample (60%). The bivariate correlations for those variables showing significant gender differences are reported in the results chapter (Table 56). The variables measured in this study which showed the slightly larger correlations (approaching or above $r = .2$) with gender and were significant at

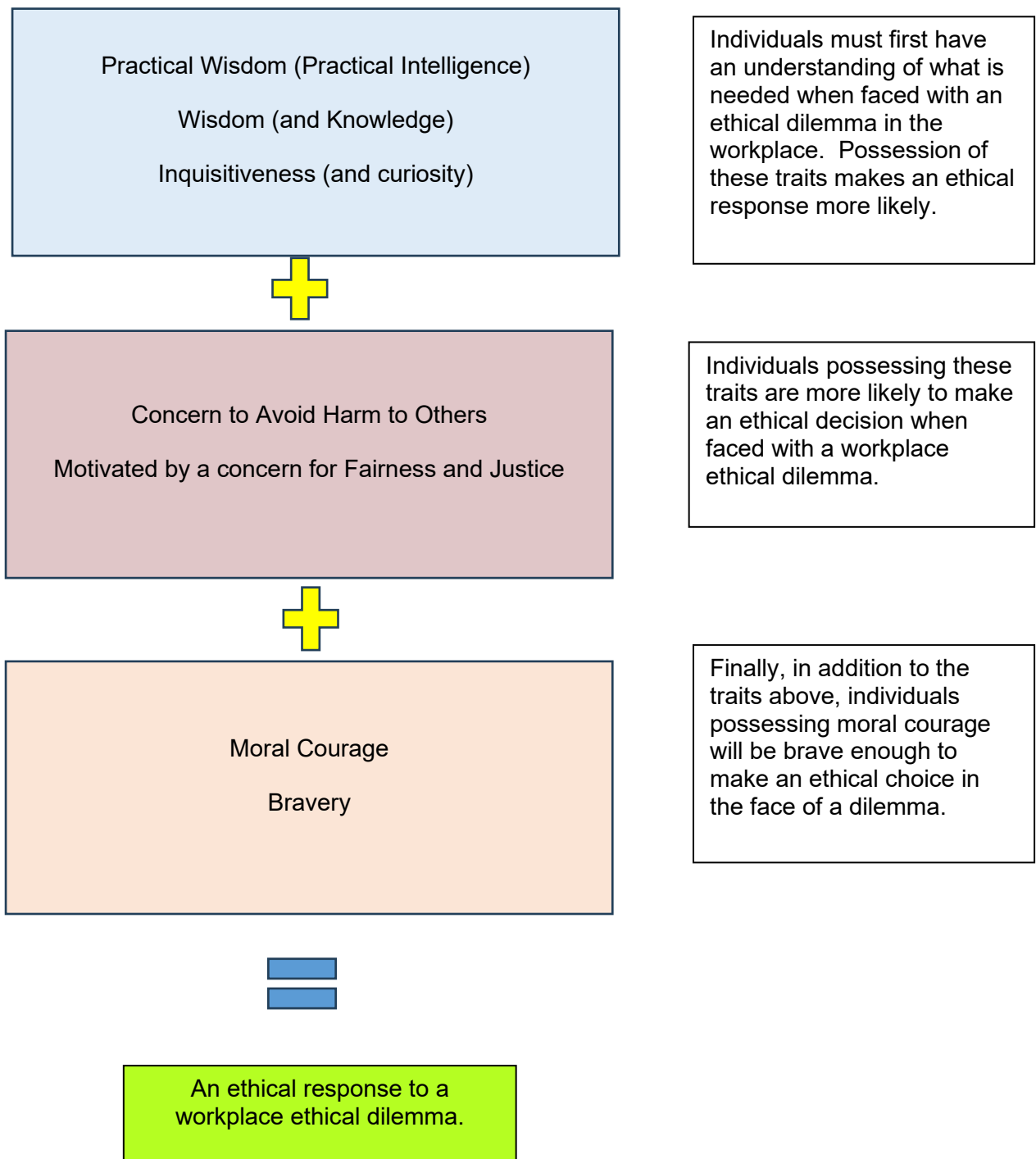
** $p < .01$ (two tailed) included the SJT-EDM Unethical response option (+.19) indicating that males were more likely to endorse the unethical response option as one they were more likely to take. They also reported the SJT-EDM loyalty response as more like them, but this result is hampered by the low reliability of the SJT-EDM scale. There were no significant correlations with gender when the SJT-EDM factor scores were calculated. Other data is presented in the Results chapter.

Final Conclusion and Model

To conclude, this research demonstrates that individuals who possess practical wisdom, are in possession of traits concerning a need fairness and justice, who also possess the ability to feel for others and dislike causing harm to others and additionally have (moral) courage are more likely to make ethical choices in the face of ethical dilemmas rather than passively avoid decisions or proactively choose an ethical course of action. This model is presented below. The constructs included in the model are individually discussed below.

Figure 29

Morally Relevant Traits and EDM (Explanatory Model)



Limitations of this Study

Limitations – the Research Measures

SJT-EDM

The SJT-EDM developed for this study proved effective in enabling reliable and valid data to be collected however there were weaknesses that need to be considered. The scales related to the ethical response options did not reach the traditionally accepted levels. This occurred despite their being constructed specifically to target constructs. Whilst this might be considered as evidence that SJT are measurement methods and should be considered as multidimensional measurement methods, it was also clear that, on closer inspection, some response options may not have sufficiently targeted the constructs. This was particularly true of the response options targeting Loyalty/Respect which showed very poor internal consistency. The scenarios may well have offered several different considerations concerning who the participant might be loyal to, thereby confusing the issue and the respondents. If the SJT-EDM is required to measure relevant constructs more accurately, then further work would be needed to improve the psychometric properties. If it is acceptable as a measure which discriminates between broad categories of individuals, i.e. those who endorse either an ethical, unethical or avoidance response it is a more useful tool but would still benefit from further refinement.

The issue of socially desirable responding may have impacted on the validity of the results. This might be less concerning if the SJT-EDM is used for research purposes but in high stakes settings, e.g. selection then socially desirable responding and faking would be a major concern. The limitations placed on this research in this regard were that in order to conduct statistical examination of the relationships, Likert scale response format was employed. Alternative scoring methods such as ipsative scoring may have provided a more accurate picture of the individuals who participated and their possession of the traits and variables measured as well as the relative status of each trait in their personality.

H/H, MFQ30 and VIA-IS-M

The results provided further evidence of the reliability and validity of the H/H scale of HEXACO and evidence that it is predictive of important aspects of ethical behaviour. The complete HEXACO framework was not tested in this research and therefore no conclusions can be drawn about the complete HEXACO framework in relation to EDM in the workplace.

The results and conclusions from this study may have been impacted by the low levels of internal consistency obtained for the MFQ30 foundation scales and VIA-IS-M strengths scales. This meant that some variables were excluded from further analyses. Further research would be needed to identify improved measurement of some of the variables before a firm conclusion could be drawn concerning their significance.

Limitations on the Conclusions From Research Results

Whilst the study revealed some significant findings concerning the traits of participants and how these shape their responses to workplace EDM, the results do not mean that all of the traits under consideration, that did not show significant relationships, can be ruled out. As mentioned above, the foundation of Loyalty/Respect did not appear as significant. This might be because the foundation is not valid in this context or it might have been due to measurement error.

This research did not consider the nature of any interaction between the variables that were found to be of significance. Dual processing theories suggest an interaction between the

rational and intuitive (automatic) decision-making systems. This would be an important further development.

This research, as in many other studies, focuses on participants self-reported intentions and self-reported assessment of their traits, dispositions and intentions. The difficulty of self-report measures are well-documented but their convenience renders them useful. As already indicated and discussed elsewhere, self-report measures are prone to many biases. Inevitably the results for this research do not help gain insight into the knowledge-action gap. Reported intentions are not always translated into behaviour. The field of behavioural business ethics does not lend itself readily to studies that would allow examination of real behaviour, except for analysis of corporate wrong-doing in hindsight.

Chapter 6 Overall Conclusion

The field of behavioural ethics has focused on many areas in an attempt to understand and explain what lies behind unethical behaviour. Studies have developed from situationalist and individualistic perspectives and most settle on an interactionalist perspective. In behavioural business ethics models of EDM have incorporated differences related to individuals and in some cases, these have included personality traits. Frequently these models are limited to the FFM of personality. Whilst they may also include some other trait based, psychological constructs, far less research has focused on morally relevant dispositional traits. The development of the HEXACO model of personality, incorporating the H/H domain has spurred some research interest and H/H has been shown to be predictive of many aspects of unethical behaviour. This research has demonstrated that it can be included in EDM models as an individual difference which is a significant predictor of unethical/ethical choices made by individuals in response to workplace scenarios presented in the form of a SJT-EDM.

Moreover, this research has identified that virtue ethics perspectives can also contribute to EDM models. Nguyen & Crossan (2022) call for considerations of character to be included to better understand misbehaviour in organisational settings. This research goes some way to answering this call and has demonstrated that some aspects of character and virtue are also related to and predictive of the choices individuals endorse when faced with an ethical workplace dilemma. Arnold et al (2021) suggest that character-based judgment is an important area for attention in diverse areas of professional practice. In particular, this research has demonstrated that practical wisdom, and courage, both constructs with roots in virtue ethics and positive psychology, contribute to predicting whether an individual chooses to endorse an unethical action in response to a workplace ethical dilemma.

This thesis concludes that a SJT of EDM can achieve acceptable reliability and validity and be used to study individual differences in workplace EDM. It further concludes that there are morally relevant individual differences which impact on individuals' responses to ethical dilemmas. Furthermore, these aspects of individual difference should be included in models of workplace EDM, thereby extending knowledge of important antecedents in interactionalist models of EDM.

It must be acknowledged that the relationships between the variables observed in the data obtained for this study are not large but they are nevertheless significant. This is likely to be partly due to the complexity of influences that operate in situations requiring ethical decisions. The interactionalist models of EDM already incorporate some of this complexity and these results can be taken to indicate that, although small, the effects of individual differences of moral traits and dispositions can be incorporated in explanatory models. The evidence from this study indicates that, in particular, individual differences of the traits fairness, care (avoidance of harm), practical wisdom (linked with practical intelligence,

curiosity and inquisitiveness), and courage all affect individuals reported responses to work-related scenarios requiring a decision and which have ethical connotations. To summarise, ethical workplace decisions are more likely to be made by courageous individuals who have an innate sense of fairness, wish to avoid causing harm to others and who possess higher levels of practical wisdom and intelligence.

Chapter 7 Contribution to Knowledge

The exploration of moral psychology is a field of great interest and its application to the world of work is important. A greater understanding of how individuals approach ethical dilemmas in the workplace will help organisations to better select and train individuals and improve organisational culture. This thesis continues to build on work that seeks to bridge the gap between philosophical considerations of moral character and the empirically focused psychology of individual differences. It stems from a consideration of normative ethics as opposed to a consequentialist view of EDM. The complexity or the interaction between the individual (as considered in the field of the psychology of individual difference) and that of the situation the individual finds themselves in has been highlighted in many studies. This thesis has explored the role of the individual through the lens of character and morally relevant behavioural traits whilst also providing a situational context to facilitate the exploration, thereby reinforcing the interactionist perspective. It has contributed to the existing knowledge concerning individual differences as predictors of ethical or unethical decision-making.

It has also contributed to the field by developing a SJT-EDM, with content empirically determined, which can be used as a reliable and valid research tool. SJTs have been developed to measure some morally relevant constructs however, to the best of the authors knowledge no SJT currently exists which measures EDM and the SJT-EDM developed proved capable of distinguishing between individuals who make ethical choices, avoid making a decision or who opt for an unethical response. There is a need for robust measures of EDM to be used in the study of workplace ethical behaviour. This research has demonstrated that a SJT can be developed to measure EDM by individuals in the workplace. Whilst the SJT-EDM itself would benefit from further refinement it demonstrated sufficient levels of reliability and validity and this enabled an empirical investigation to be made of individual differences in approaches to ethical dilemmas. Snow et al (2019) cite Draper (1987, p 424), as remarking that 'all measures are wrong but some are useful'.

Fleeson et al (2014) comment that the tools and techniques used in the study of personality would be likely to bring valuable insights to the field of morality. The SJT-EDM developed for this thesis provided useful evidence of some of the character strengths, virtues, dispositional traits and moral foundations that differentiate some individuals from others when faced with an ethical dilemma. This has contributed to the field of moral psychology and behavioural ethics by developing an SJT specifically focused on EDM which discriminates between individuals who make ethical and unethical choices concerning workplace dilemmas.

Whilst some SJTs have been developed to measure some morally relevant constructs, e.g., integrity, this SJT-EDM provides both a broader measurement tool and therefore has wider application. SJTs are most commonly developed for, and used in, selection settings; the development of a SJT-EDM for use in research is a slight departure from their normal use however it may be that the SJT-EDM could be used also in selection and also in development settings following further refinement.

This research endeavoured to contribute to the debate concerning whether SJT response options should be written to focus on specific constructs. In line with TAT the response options included cues designed to trigger the targeted response options.

The method used to develop the situations for the SJT-EDM and how the response options were determined, provides a contribution to knowledge in this area. The use of SJT in organisations has been growing, partly due to ease of use and their apparently high levels of validity but further empirical evidence of exactly what they measure, how they sit in relation to psychometric measures, and why and how they achieve the reported validity levels is needed. This research contributes to knowledge in this area.

This research has also contributed to the debate concerning what SJT's measure. The results from this study provide some evidence to suggest that the 'general judgement' proposed by amongst others as an explanation for the failure to find coherent factor structures within most SJTs might be related to aspects of practical wisdom, a concept from virtue ethics. As far as the researcher is aware, this link has not been made previously in the literature. Also, this thesis contributes to the debate in this area by linking concepts of practical intelligence (Sternberg, 1996, 1999), to that of practical wisdom, rooted in Aristotelian virtue ethics. Little discussion of this possible link has been offered in the literature related to the topics covered in this dissertation. Whilst the relationships between the relevant variables measured in this study were not high, they were nevertheless highly significant.

The results of this research might be taken to indicate that the search for a construct-oriented approach to designing SJTs is not as straightforward as identifying the constructs, writing the response options and the ensuring that they demonstrate acceptable internal consistency. The view that considers SJTs as measures of a general judgement factor, similar to the practical intelligence suggested by Sternberg (1997, 1999) may be the better solution to the discussion. This would encompass an interactionalist standpoint, where the specifics of the situation are considered by the individual and that those who possess, or have developed, higher levels of practical wisdom are able to draw on the most appropriate responses to those situations. It is further proposed that responding appropriately to the situations requires the application of relevant dispositional traits. In the case of EDM, the focus of this research, the appropriate dispositional traits relate to the morally relevant dispositional traits that individuals possess, or not, as the case may be. This thesis does not contradict the argument that the search for specific constructs is the way forward. It does, however, propose that the 'compound trait' of practical wisdom interacts with dispositional traits in EDM. This interaction will affect the individual's particular response to the ethical dilemma they are faced with. This concurs with the call for closer links between dispositional trait-based approaches to individual differences and socio-cognitive, dynamic and interactionalist approaches.

In line with the stated objective of this thesis, a further contribution to knowledge stems from the exploration of what role the possession of morally relevant dispositional traits play in determining whether an individual makes an ethical, or unethical choice, when faced with workplace ethical dilemmas. The interactionalist approach to EDM supports the notion that individual differences exist which do impact on these choices. This research has demonstrated that some morally relevant traits do show significant relationships with ethical/unethical choices. There has been much debate concerning whether morally relevant traits should be re-instated to widely accepted trait-based models of personality. The findings of this research support the argument that they should; therefore, contributing to knowledge in this important field. The research supports the call, made by some, for a wider consideration of individual differences. It also advocates for closer links between dispositional trait-based approaches which seek correspondence, i.e. direct links between

traits and behaviour, with socio-cognitive models, which seek to build more dynamic and interactive models.

This research adds to previous empirical findings that the Honesty/Humility scale is an important addition to or extension of the Big 5 model of personality. It makes a significant contribution to predicting the choices made by individuals when faced with the ethical dilemmas in the SJT-EDM. This further reinforces the inclusion of morally relevant personality and dispositional traits to be reinstated into the psychology of individual difference.

The importance of cross-disciplinary research is also acknowledged. Moral behaviour has been studied from many perspectives including social psychology, behavioural ethics, moral philosophy, organisational behaviour, sociology and theological disciplines, occupational psychology to name some of the areas. This research has explored the applicability of moral foundations theory (Haidt) to ethical workplace dilemmas. In doing so it has taken a theory developed in social psychology and not specifically designed to apply to workplace EDM and considered its relevance and applicability. Results from this research indicate that the reliability and the factor structure of the MFQ30 are not entirely robust as measured by the normal parameters for reliability. Importantly though, the research demonstrated that some facets of MFQ as measured by the MFQ30 might extend knowledge in relation to individual differences concerning the individual's tendency to obey authority, thereby adding to knowledge in this area.

The model of character strengths and virtues developed theoretically by Peterson & Seligman (2004) requires more empirical studies to investigate both its psychometric properties and its applicability in organisations. The VIA institute are continually refining the model and the surveys designed to measure the hypothesised variables. The VIA institute's most recent model and refined questionnaire were used in this research to investigate the relationship between character strengths and virtues and the choices made by individuals faced with the ethical dilemmas in the SJT-EDM. The research for this thesis contributes to knowledge by re-examining the factor structure of the results obtained, by considering the relationship between the character strengths and virtues and EDM as measured by the SJT-EDM. Very few studies are reported in the literature that consider the relationship and therefore this study moves forward the knowledge of both the robustness of the model and its relevance to workplace behaviour.

Of significance in the results of this thesis was the inclusion of an avoidance option in the SJT-EDM. It is proposed that this is a distinctive behaviour and likely to be driven by a number of different traits or dispositions. It is, as many corporate scandals reveal, a behaviour that whilst it might not cause harm directly, frequently facilitates others' wrongdoing or ultimately, indirectly, results in a negative impact. Alternatively, a deliberate decision not to act, when an action would have stopped the undesirable or unethical event the avoidance can also be considered unethical. Equally, if avoidance is an intuitive response for some individuals, then this is also an important area which merits further exploration. Whilst the results of this study showed that participants who were likely to endorse the unethical option were very likely also to endorse the avoidance option, the differences between individuals and the specific situational determinants of the different choices (to respond in an unethical way, or to avoid) merits further investigation.

Chapter 8 Implications for Practice

The purpose of researching the role of morally relevant traits and dispositions in workplace EDM is to contribute to effective and ethical functioning in organisations. Identifying which traits and dispositions are relevant to ethical practice can contribute to the selection and

development of employees. A clearer understanding of what constitutes good character and how this impacts on ethical behaviour in organisations can also inform education of business leaders and inform decisions which impact on organisational climate and culture.

In selection there has been a move to values based recruitment, particularly in areas such as medicine. Greater clarity concerning good character would enable selection criteria to include aspects of character and virtue and morally relevant personality traits. Since SJT have demonstrated good predictive validity, often out-performing personality measures, an SJT that assesses moral character and approaches to EDM could contribute to better selection. Cavanagh & Williams have proposed that more attention should be devoted to selection criteria in order to ensure that business leaders are appointed who possess good character (2022).

Understanding what constitutes good character and which traits and dispositions contribute to ethical behaviour in organisations can also be used in business education, in organisational training and development settings and in organisational development initiatives designed to improve organisational ethical climate and culture. Sekerka et al. (2009) proposed moral courage could be developed and those responsible for organisational design should create environments that foster and support moral action. A quasi-experimental study indicated that moral courage was increased after a business ethics education programme in comparison to a control group (May et al 2014).

Chapter 9 Opportunities for Further Research

Individual differences and EDM

Greater refinement of the SJT-EDM would facilitate additional consideration of the role of personality and dispositional traits in workplace EDM. The full HEXACO model could be tested rather than limited to the H/H domain. Further insight might be gained to the differences between individuals who choose the unethical option as distinct from the avoidance option. It might be hypothesised, for example, that the trait conscientiousness may play a role and further investigation of the FFM in relation to the SJT-EDM would inform this.

Avoidance behaviour

Greater clarity concerning the drivers for the avoidance choice in EDM could be gained by further, possibly qualitative studies. It might be hypothesised that avoidance behaviour links with, for example, moral disengagement or omission bias. Indeed, further research of a qualitative nature has been advocated by Procópio, (2022) who asserts that the dominance of positivist quantitative research in EDM has not allowed a deeper consideration of the reasons behind peoples decisions. The SJT-EDM developed for this thesis could be used as a vehicle for such studies.

Moral conduct in organisations – role models

Not reported in this study results but drawn from the qualitative interviews conducted in the SJT-EDM development stage was the emergence of a theme concerning role models and the influence on moral conduct in organisations. Role models in leadership studies are reported in the literature however the narrower focus on role models and ethical behaviour would be of specific interest in business behavioural ethics.

Ipsative scoring

There is an opportunity to produce a version of the SJT-EDM with ipsative scoring. This would potentially provide a deeper understanding of how character dispositions and morally relevant traits impact on workplace EDM. This could be linked to an idiographic rather than a nomeographic approach to personality.

Latent Profile and Latent Class Analysis

The data obtained in this study lends itself to alternative forms of analysis which may throw more light on the individual differences that exist in approaches to workplace EDM. Most studies take a variable-centred approach which, as indicated previously, has been the dominant approach in personality psychology. Variable centred approaches, as highlighted by Najderska & Ciecuch, (2018) make one important assumption which can be questioned. This assumption is that variables are similarly related across all individuals and that rules out the possibility of differences in individual patterns of relationships existing. To address this consideration the authors conducted both factor analysis to examine the factor structure (variable centred approach) but also latent class analysis to examine any emerging 'types' (person-centred approach).

Whilst recognising the important role that both the FFM and HEXACO, (factorially derived) models of personality, have performed in advancing understanding of personality, some propose that a more detailed understanding of the dynamic nature of traits and their

expression is necessary in order to progress knowledge further. Latent Profile Analysis (LPA) was suggested as an alternative means of analysis of personality data (Merz & Roesch, 2011). As an alternative to Factor Analysis, LPA allows complex interactions of personality components to be captured and, in essence, produces a typology (Ferguson & Hull, 2018). A typological analysis of moral personality may be of particular interest to researchers and practitioners alike.

The use of the SJT-EDM in an experimental study utilising functional magnetic resonance imaging or functional MRI (fMRI) would help gain further insight into the biological basis and the nature of the reasoning process undertaken when considering ethical dilemmas. The relevance of dual processing theories in EDM is significant and to what extent morally relevant decisions are made automatically as opposed to through cognitive deliberation needs to be clarified to inform further research. Such studies would allow both the speed and the location of brain activity to be determined. Ciorciari et al (2019) assert that both cognitive and social neuroscience should treat understanding of the neural basis of personality as an imperative. Further commenting that neuroimaging techniques are very useful in determining how personality is coded in the brain.

The opportunities for further research arise from both parts of this thesis i.e. the development of an SJT-EDM itself and as a tool to aid further research.

Decision-Making – Cognitive and Decision-making Science

Dual Processing (Dual Systems) Models

Brookes & Highhouse (2006) asserted that the construct of judgment were not seriously discussed in SJT research and advocated that researchers should draw on judgment and decision-making (JDM) research and theory. More recently this has been re-iterated by Grand (2020) who pointed to the widespread acknowledgment that the development of SJT has been driven by practice and can be criticised for a lack of theoretical underpinning. Grand also stresses the importance of drawing from the cognitive and decision-making sciences (2020). The SJT in this research was developed in order to assess SJT ability to measure individual characteristics and determine any relationship with EDM, not to consider how judgments and decisions are made. It is worth noting at this juncture that when considering how individuals approach decisions, with or without a moral component, dual processing theories are playing an increasingly important role in exploring the micro-foundational mechanisms at individual, team, and organisational levels (Hodgkinson & Sadler-Smith, 2018). These authors refer to Evans & Stanovich's (2013) classification into Type 1 (intuition) and Type 2 (reflection) which may be underpinned by multiple cognitive or neural systems. Type 1 system is considered to be favoured as it requires less cognitive resources. Put simply, the difference can be summarised by the terms conscious and non-conscious processing. A distinction is made between default/interventionist and parallel/competitive frameworks theories with a preference being stated for the latter for research in management and organisational studies (Hodgkinson & Sadler-Smith, 2018). The former proposes that Type 1 process leads to speedy judgements which may, or may not, be agreed, corrected, or overridden by the slower, Type 2 process (Evans, 2007; Kahneman & Frederick, 2002). These dual-processing theories have been applied to decision-making in a variety of contexts and Heyler et al, (2016) discuss a dual-processing theory of moral judgement that proposes that emotion and intuition are used as well as reason when individuals approach ethical decisions. Luoma & Martela (2021) also express greater confidence in the parallel/competitive framework but argue that in addition to intuition and analysis, the cognitive strategy of reframing needs to be included when considering strategic decision-making. McManus (2022) targets the role of emotion in a dual-processing

model of ethical decision-making in organisations but favours a default/interventionist stance.

Dual processing models have also been applied to personality. As discussed earlier, trait-based approaches to personality have been highly influential and have allowed greater understanding of personality within psychology. The field of personality dynamics is considered by many scholars to offer further potential to advance understanding. Structural trait-based approaches to personality are descriptive but personality dynamics approaches, as the name implies, considers processes, mechanisms, and functions both at the intra-individual and inter-individual levels (Kuper et al, (2021). WTT, discussed in a previous section, was developed to bridge the gap between structural trait-based approaches and social cognitive approaches and Fleeson acknowledges that both have facilitated progress in understanding of personality (2012). However, proponents of dynamic theories of personality point to the importance of understanding how traits impact on behaviour which trait-based approaches fail to do.

Robertson et al (2017) describe how neuroscience is contributing to the study of business ethics. Whilst they warn against the danger of over-interpreting from studies looking at brain activity in specific parts of the brain, they provide an explanation of some of the findings relevant to EDM. They point to the pre-frontal cortex which appears to be activated and associated with evaluating current experiences, reflections on the past and memory retrieval and the amygdala which is associated with memorising and emotional reactions and appear to be associated with moral development. They also point to the importance of Theory of Mind (ToM) and empathy, in ethical behaviour. The term ToM refers to the capacity to infer and predict the behaviour of others. Originally the term was used in studies of chimpanzees but was then applied to human psychology and is considered important for effective and competent social communication. ToM has been demonstrated to involve neural activation in specific brain regions (primarily the anterior paracingulate cortex, posterior superior temporal sulcus, and temporo-parietal junction) (see, Rilling et al. 2004b; Vogeley et al. 2001). Empathy appears to involve the temporo-parietal junction, medial pre-frontal cortex, and middle temporal gyrus. They cite Bzdok et al (2012) who found that brain areas related to ToM and empathy (temporo-parietal junction, medial pre-frontal cortex, middle temporal gyrus) are engaged in moral decision making, emphasizing again the relevance of both abstract-cognitive and intuitive-emotional skills for ethical behaviour.

Some studies looked at differences in fMRI results when subjects evaluate scenarios with and without moral content (Moll et al 2011). The scenarios containing moral judgements activated a network comprising the medial orbitofrontal cortex, the temporal pole, and the superior temporal sulcus of the left hemisphere. Other scenarios which had an emotional, but not specifically moral content activated the left amygdala, lingual gyri, and the lateral orbital gyrus. They concluded that the findings provided evidence that the orbitofrontal cortex has dedicated subregions specialized in processing specific forms of social behaviour. Yoder & Decerty (2014) found higher levels of neural activity in areas of the brain for moral judgements made by participants concerning prosocial behaviour as opposed to judgements about anti-social behaviour. Navarro (2022) study (with neurotypical adults) supported the dual-system processing model in cognitive tasks, demonstrated the existence of individual difference that it is likely related, to but distinct from, general cognitive ability, that ToM consists of different dimensions and is dynamic in nature. The importance of individual differences in EDM is the focus of this thesis and the nature and extent of studies considering these are now discussed along with models that have been proposed. Further evidence of intuitive processing comes from studies that consider temporal effects on moral judgments. Ward & King (2018) found that there were individual differences in the use of moral intuition when judging morally relevant scenarios, with those individuals relying on fast intuitive response making harsher judgements than those who were included to deliberate longer.

Studies have demonstrated that the brain is automatically activated in response to situations requiring moral judgement providing evidence of a level of intuitive processing and this is now widely accepted.

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Appendices

Appendix 1 Descriptive Statistics for Study Variables

Table 48 SJT – EDM Descriptive Statistics for Study Variables

Situations ^a	<i>M</i>	<i>SD</i>
Care	3.65	.35
Fairness	3.79	.38
Loyalty	3.17	.31
Authority	3.70	.35
Unethical	2.03	.53
Avoidance	2.21	.47

^a *n* = 320 for each group.

Table 49
Correlations SJT-EDM

Situations ^a	1	2	3	4	5	6
1. Care	–					
2. Fairness	.458**	–				
3. Loyalty	-.016	.036	–			
4. Authority/respect	.140*	.353**	.176**	–		
5. Unethical	-.219**	-.458**	.437**	-.084	–	
6. Avoidance	-.079	-.242**	.307**	-.047	.683**	–

^a $n = 320$ for each domain.

* $p < .05$. ** $p < .01$.

Table 50
Descriptive Statistics MFQ30

Variable ^a	<i>M</i>	<i>SD</i>
Harm/care	4.84	.62
Fairness/reciprocity	4.84	.62
Ingroup/loyalty	3.56	.83
Authority/respect	3.92	.83
Purity/sanctity	3.66	1.01

^a $n = 320$ for each domain.

Table 51
Descriptive Statistics MFQ30

Variable ^a	1	2	3	4	5
1. Harm/care	–				
2. Fairness/reciprocity	.561**	–			
3. Ingroup/loyalty	.188**	.146**	–		
4. Authority/respect	.185**	.123*	.614**	–	
5. Purity/sanctity	.266**	.138*	.531**	.714**	–

^a $n = 320$ for each domain.

* $p < .05$. ** $p < .01$.

Table 52
Correlations H/H domain and facets

Variable ^a	<i>M</i>	<i>SD</i>
Honesty-humility	3.65	.50
Sincerity	3.51	.61
Fairness	3.81	.68
Greed-avoidance	3.26	.78
Modesty	4.01	.63

^a *n* = 320 for each domain.

Table 53
Correlations H/H domain and facets

Variable ^a	1	2	3	4	5
1. Honesty-humility	–				
2. Sincerity	.680**	–			
3. Fairness	.791**	.531**	–		
4. Greed-avoidance	.730**	.235**	.364**	–	
5. Modesty	.752**	.327**	.469**	.451**	–

^a *n* = 320 for each domain.

p* < .05. *p* < .01.

Table 54
Descriptive Statistics VIA strengths

Variable ^a	<i>M</i>	<i>SD</i>
Appreciation of Beauty and Excellence	3.59	.66
Bravery	3.52	.66
Creativity	3.73	.70
Curiosity	3.99	.66
Fairness	3.96	.68
Forgiveness	3.22	.76
Gratitude	3.75	.62
Honesty	4.00	.62
Hope	3.85	.65
Humility	3.50	.67

Humour	3.60	.71
Judgement	3.51	.63
Kindness	3.92	.65
Leadership	3.42	.67
Love	3.70	.83
Love of Learning	4.24	.59
Perseverance	3.29	.79
Perspective	3.82	.61
Prudence	3.76	.69
Self-Regulation	3.30	.69
Social Intelligence	3.48	.74
Spirituality	3.37	1.02
Teamwork	3.48	.68
Zest	3.44	.79

^a $n = 320$ for each domain.

Correlations VIA Strengths

Table 55
Correlations H/H domain and facets

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
	AB	Br	Cr	Cu	Fa	Fo	Gr	Hn	Ho	Hu	Hr	Ju	Ki	Le	Lo	LL	Pr	Ps	Pu	SR	SI	Sp	Tw	Z	
1	<i>r</i>																								
	<i>p</i>																								
2	<i>r</i>	.07																							
	<i>p</i>	.19																							
3	<i>r</i>	.14	.57																						
	<i>p</i>	.01	<.001																						
4	<i>r</i>	.30	.39	.47																					
	<i>p</i>	<.001	<.001	<.001																					
5	<i>r</i>	.11	.18	.24	.19																				
	<i>p</i>	.05	.001	<.001	.001																				
6	<i>r</i>	.06	.16	.19	.16	.44																			
	<i>p</i>	.30	.005	.001	.004	<.001																			
7	<i>r</i>	.19	.36	.35	.29	.45	.42																		
	<i>p</i>	.001	<.001	<.001	<.001	<.001	<.001																		
8	<i>r</i>	.10	.34	.31	.30	.46	.36	.43																	
	<i>p</i>	.08	<.001	<.001	<.001	<.001	<.001	<.001																	
9	<i>r</i>	.13	.39	.40	.34	.37	.40	.59	.45																
	<i>p</i>	.02	<.001	<.001	<.001	<.001	<.001	<.001	<.001																
10	<i>r</i>	-.01	-.04	.05	-.02	.36	.15	.28	.25	.17															
	<i>p</i>	.89	.47	.37	.66	<.001	.007	<.001	<.001	.002															
11	<i>r</i>	.05	.29	.28	.23	.24	.34	.30	.21	.41	-.06														
	<i>p</i>	.35	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	.31														

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
		AB	Br	Cr	Cu	Fa	Fo	Gr	Hn	Ho	Hu	Hr	Ju	Ki	Le	Lo	LL	Pr	Ps	Pu	SR	SI	Sp	Tw	Z	
12	<i>r</i>	-.15	.17	.24	.10	.25	.19	.20	.34	.24	.29	.29														
	<i>p</i>	.008	.003	<.001	.08	<.001	.001	<.001	<.001	<.001	<.001	<.001	<.001													
13	<i>r</i>	.15	.24	.30	.23	.33	.21	.39	.40	.35	.20	.25	.13													
	<i>p</i>	.006	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	.02													
14	<i>r</i>	.03	.53	.41	.32	.26	.24	.35	.38	.40	.01	.31	.24	.33												
	<i>p</i>	.64	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	.82	<.001	<.001	<.001												
15	<i>r</i>	.15	.33	.27	.32	.27	.34	.44	.29	.44	-.04	.32	.08	.34	.34											
	<i>p</i>	.01	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	.47	<.001	.16	<.001	<.001											
16	<i>r</i>	.20	.41	.44	.56	.33	.17	.35	.42	.37	.13	.29	.19	.25	.24	.25										
	<i>p</i>	<.001	<.001	<.001	<.001	<.001	.003	<.001	<.001	<.001	.02	<.001	.001	<.001	<.001	<.001										
17	<i>r</i>	-.02	.29	.34	.14	.31	.30	.43	.43	.44	.30	.20	.39	.30	.33	.28	.21									
	<i>p</i>	.68	<.001	<.001	.011	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001									
18	<i>r</i>	.12	.41	.46	.34	.30	.18	.38	.38	.41	.23	.35	.37	.36	.45	.28	.40	.36								
	<i>p</i>	.03	<.001	<.001	<.001	<.001	.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001								
19	<i>r</i>	.03	.21	.33	.20	.29	.19	.34	.38	.32	.40	.17	.63	.26	.23	.18	.30	.49	.46							
	<i>p</i>	.62	<.001	<.001	<.001	<.001	.001	<.001	<.001	<.001	<.001	.002	<.001	<.001	<.001	.002	<.001	<.001	<.001							
20	<i>r</i>	-.02	.30	.29	.19	.30	.34	.43	.46	.46	.30	.26	.53	.23	.35	.27	.28	.73	.40	.61						
	<i>p</i>	.70	<.001	<.001	.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001						
21	<i>r</i>	.19	.30	.22	.24	.19	.29	.30	.28	.35	-.03	.29	.05	.35	.34	.40	.18	.17	.35	.12	.18					
	<i>p</i>	.001	<.001	<.001	<.001	.001	<.001	<.001	<.001	<.001	.55	<.001	.34	<.001	<.001	<.001	.001	.002	<.001	.03	.001					
22	<i>r</i>	.27	.29	.23	.16	.24	.22	.46	.16	.39	.25	.09	.05	.29	.32	.14	.24	.25	.28	.23	.23	.32				
	<i>p</i>	<.001	<.001	<.001	.005	<.001	<.001	<.001	.004	<.001	<.001	.098	.38	<.001	<.001	.01	<.001	<.001	<.001	<.001	<.001	<.001	<.001			
23	<i>r</i>	.08	.19	.17	.20	.18	.31	.28	.17	.30	-.09	.26	.08	.24	.26	.36	.11	.20	.10	.08	.17	.28	.14			
	<i>p</i>	.13	.001	.002	<.001	.001	<.001	<.001	.002	<.001	.11	<.001	.16	<.001	<.001	<.001	.04	<.001	.07	.18	.003	<.001	.01			
24	<i>r</i>	.15	.41	.39	.40	.26	.41	.55	.39	.63	-.01	.43	.22	.38	.45	.38	.32	.41	.31	.27	.40	.31	.24	.36		

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	AB	Br	Cr	Cu	Fa	Fo	Gr	Hn	Ho	Hu	Hr	Ju	Ki	Le	Lo	LL	Pr	Ps	Pu	SR	SI	Sp	Tw	Z
<i>p</i>	.007	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	.90	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001

Note. *n* = 320 for each domain. AB = Appreciation of beauty and excellence; Br = Bravery; Cr = Creativity; Cu = Curiosity; Fa = Fairness; Fo = Forgiveness; Gr = Gratitude; Hn = Honesty; Ho = Hope; Hu = Humility; Hr = Humour; Ju = Judgement; Ki = Kindness; Le = Leadership; Lo = Love; LL = Love of learning; Pr = Perseverance; Ps = Perspective; Pu = Prudence; SR = Self-regulation; SI = Social intelligence; Sp = Spirituality; Tw = Teamwork; Z = Zest.

Appendix 2 MFQ, Honesty/Humility (HEXACO), VIA

Reliability – MFQ Foundations and Super-Factors

Table 56
Internal Consistency (Cronbach's Alpha) MFQ30 Foundations and Super-Factors

MFQ	Cronbach's α
Foundation	
Fairness/Reciprocity	.57
Harm/Care	.59
Ingroup/Loyalty	.62
Authority/Respect	.65
Purity	.74
Super-factor	
Individualising	.71
Binding	.85

Graham et al (2011) reported Cronbach's Alphas for MFQ-30 foundations ranging from .65-.84). Graham et al suggest these low Cronbach's alpha levels are a desirable trade-off between internal consistency and content validity; the ability for a scale to exhaustively measure a concept (Bannigan & Watson, 2009). The results of reliability analysis of Super-factors found in this study were broadly supportive of other studies e.g. those found by Doğruyol et al (2019) which were reported separately for WEIRD and non-WEIRD countries. The results were Individualising (WEIRD and non-WEIRD) $\alpha = .73$ and $.86$ respectively and Binding (WEIRD and non-WEIRD) $\alpha = .76$ and $.79$ respectively.

Reliability – H/H Domain and Facets

Table 57
Internal Consistency Reliabilities (Cronbach's Alpha) of the HEXACO-PI Scales

H/H domain and facets	Cronbach's α	
	This study ($n = 320$)	Lee & Ashton (2004)
Honesty-humility (domain)	.88	.92
Sincerity	.73	.79
Fairness	.76	.85
Greed avoidance	.82	.87
Modesty	.82	.83

The alpha coefficients found in this study were slightly lower than those reported by Lee & Ashton (2004). They are within the commonly accepted margins of range of .7 - .9 These guidelines stem from the work of Nunnally, (1967, 1978: Nunnally & Bernstein, 1994).

Reliability – VIA-IS-M

Cronbach’s Alpha was calculated for the VIA-IS-M for the data obtained in this study. Table 7 shows the results alongside the Cronbach’s Alpha reported by the VIA organisation. The table shows results for the individual strengths, the six virtues structure and the three virtue structure.

Table 58
Internal Consistency (Cronbach’s Alpha) VIA-IS-M

VIA	Cronbach’s α	
	This study ($n = 320$)	Reported ^a
VIA strength		
Appreciation of beauty	.55	.82
Bravery	.66	.74
Creativity	.75	.85
Curiosity	.70	.78
Fairness	.73	.71
Forgiveness	.70	.74
Gratitude	.60	.75
Honesty	.72	.78
Hope	.62	.79
Humility	.60	.69
Humour	.64	.74
Judgement	.53	.62
Kindness	.70	.74
Leadership	.62	.71
Love	.82	.85
Love of learning	.75	.83
Perspective	.73	.80
Perseverance	.70	.80
Prudence	.70	.74

Self-regulation	.60	.72
Social intelligence	.68	.76
Spirituality	.83	.84
Teamwork	.71	.77
Zest	.75	.84
VIA 6 virtue structure		
Wisdom	.66	.72
Courage	.70	.71
Humanity	.52	.62
Justice	.61	.68
Temperance	.68	.68
Transcendence	.79	.82
VIA 3 factor structure		
Courage	.75	.78
Inquisitiveness	.72	.79
Self-control	.72	.75

^a Data obtained from <https://www.viacharacter.org/researchers/assessments/via-is-m>
(Accessed 15th May 2022)

Appendix 3 PCA MFQ30

Table 59 PCA MFQ30 Structure Matrix

	Component	
	1	2
MFQ_Authority/Respect	.904	
MFQ_Purity/Sanctity	.869	
MFQ_Ingroup/Loyalty	.817	
MFQ_Fairness/Reciprocity		.888
MFQ_Harm/Care		.879

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

Table 60 Communalities

	Initial	Extraction
MFQ_Harm/Care	1.000	.777
MFQ_Fairness/Reciprocity	1.000	.791
MFQ_Ingroup/Loyalty	1.000	.668
MFQ_Authority/Respect	1.000	.819
MFQ_Purity/Sanctity	1.000	.757

Extraction Method: Principal Component Analysis.

Table 61 Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	2.452	49.033	49.033	2.452	49.033	49.033	2.328
2	1.360	27.198	76.231	1.360	27.198	76.231	1.676
3	.502	10.043	86.275				
4	.420	8.399	94.674				
5	.266	5.326	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Appendix 4 Bivariate correlations between the H/H facet Fairness, VIA strength Fairness, MFQ30 Fairness and SJT-EDM fairness

The bivariate correlations between the H/H facet Fairness, VIA strength Fairness, MFQ30 Fairness and SJT-EDM fairness are summarised below Table (59) along with the bivariate correlations with the SJT Unethical option.

Table 62
Correlations

Variable ^a	1	2	3	4
1. MFQ Fairness/reciprocity	–			
2. H/H Fairness	.19**	–		
3. Situations Fairness	.28**	.36**	–	
4. VIA Fairness	.18**	.47**	.27**	–

^a $n = 320$ for each domain.

** $p < .01$.

Table 63
Correlations

Variable ^a	1	2	3	4
1. MFQ Fairness/reciprocity	–			
2. H/H Fairness	.19**	–		
3. VIA Fairness	.18**	.47**	–	
4. Situations Unethical	-.20**	-.58**	-.45**	–

^a $n = 320$ for each domain.

** $p < .01$.

Appendix 5 Bivariate Correlations Between Study IVs and SJT-EDM Fairness Response Option and SJT Harm/Care Response Option

Table 64
Bivariate Correlations Between Study IVs and SJT-EDM Fairness Response Option and SJT Harm/Care Response Option.

Variable	Pearson's <i>r</i>	
	SJT-EDM Care	SJT-EDM Fairness
SJT		
Care	—	.46**
Fairness	.46**	—
Honesty/humility		
Domain score	.14*	.33**
Sincerity	.16**	.25**
Fairness	N/A	.36**
Greed avoidance	N/A	.12*
Modesty	.15**	.27**
MFQ		
Harm/care	.33**	.30**
Fairness/reciprocity	.25**	.28**
Authority/respect	N/A	.22**
Purity/sanctity	N/A	.2**
VIA virtue (6)		
Wisdom	N/A	.15**
Courage	N/A	.18**
Humanity	N/A	.13*
Justice	N/A	.14*
Temperance	.131*	.17**
Transcendence	N/A	.16**
VIA Strengths		
Creativity	N/A	.12*
Fairness	.14*	.27**

Gratitude	.13*	.19**
Honesty	N/A	.21**
Humility	N/A	.20**
Judgement	N/A	.15**
Kindness	.12*	.12*
Leadership	N/A	.18**
Love of learning	N/A	.14*
Perseverance	N/A	.2**
Perspective	N/A	.16**
Prudence	N/A	.15**
Self-control	N/A	.18**
Spirituality	N/A	.12*
VIA virtue (3)		
Caring	N/A	.17**
Inquisitiveness	N/A	.13*
Self-control	N/A	.19**

Note. Only significant correlations are shown.
 * $p < .05$. ** $p < .01$.

Appendix 6 Bivariate Correlations (Pearson's) VIA Wisdom (6) Virtue and VIA Component Strengths With SJT-EDM Response Options

Table 65
Bivariate Correlations (Pearson's) VIA Wisdom (6) Virtue and VIA Component Strengths With SJT-EDM Response Options

SJT-EDM response option	Virtue (6) Wisdom and Knowledge	Virtue (3) Inquisitiveness
Care	.15**	N/A
Fairness	N/A	.13*
Loyalty	N/A	N/A
Authority	.20**	.17**
Unethical	-.21**	-.23**
Avoidance	-.25**	-.27**

Note. XXX
 * $p < .05$. ** $p < .01$.

Table 66
Correlations

VIA strength	SJT-EDM					
	Care	Fair	Loyalty	Authority	Unethical	Avoidance
Creativity	N/A	.12*	N/A	.13*	-.14*	-.17**
Curiosity	N/A	N/A	N/A	N/A	-.28**	-.25**
Judgment	N/A	.15**	N/A	.20**	-.13*	-.14*
Love of learning	N/A	.14*	N/A	N/A	-.26**	-.30**
Perspective	N/A	.16**	N/A	N/A	-.21**	-.27**

* $p < .05$. ** $p < .01$.

Appendix 7 Bivariate Correlations (Pearson's) VIA (3 Virtues – Inquisitiveness) 11 Component Strengths With SJT-EDM Response Options

Table 67
Bivariate Correlations (Pearson's) VIA (3 Virtues – Inquisitiveness) 11 Component Strengths With SJT-EDM Response Options

VIA strength	SJT-EDM					
	Care	Fair	Loyalty	Authority	Unethical	Avoidance
Appreciation of beauty and excellence	N/A	N/A	N/A	N/A	N/A	N/A
Bravery	N/A	N/A	N/A	N/A	-.13*	-.17**
Creativity	N/A	.12*	N/A	.13*	-.14*	-.17**
Curiosity	N/A	N/A	N/A	N/A	-.28**	-.25**
Hope	N/A	N/A	N/A	N/A	-.26**	-.26**
Humour	N/A	N/A	N/A	N/A	-.16**	-.17**
Judgment	N/A	.15**	N/A	.2**	-.13*	-.14*
Love of learning	N/A	.14*	N/A	N/A	-.26**	-.3**
Perspective	N/A	.16**	N/A	N/A	-.21**	-.27**
Social intelligence	N/A	N/A	N/A	N/A	-.12*	-.12*
Zest	N/A	N/A	N/A	N/A	-.19**	-.13*

* $p < .05$. ** $p < .01$.

Appendix 8 Bivariate Correlations Between H/H scale (HEXACO) and VIA Strength (Honesty).

Table 68
Bivariate Correlations Between H/H scale (HEXACO) and VIA Strength (Honesty).

Variable	VIA Honesty strength
Honesty/humility (domain)	.39**
H/H Sincerity (facet)	.34**
H/H Modesty (facet)	.28*
H/H Greed avoidance (facet)	.14*
H/H Fairness (facet)	.42**

Note. XXX

* $p < .05$. ** $p < .01$.

Appendix 9 Bivariate Correlations (Pearson's) VIA Courage (6) Virtue and Component Strengths With SJT-EDM Response Options

Table 69
Bivariate Correlations (Pearson's) VIA Courage (6) Virtue and Component Strengths With SJT-EDM Response Options

SJT-EDM response	VIA virtue				
	Courage	Bravery	Honesty	Perseverance	Zest
Care	N/A	N/A	N/A	N/A	N/A
Fairness	.18**	N/A	.21**	.20**	N/A
Loyalty	N/A	N/A	N/A	N/A	N/A
Authority	N/A	N/A	N/A	.15**	N/A
Unethical	-.35**	-.13*	-.37**	-.12*	-.19**
Avoidance	-.33**	-.17**	-.37**	-.17**	-.13*

* $p < .05$. ** $p < .01$.

Appendix 10 Pearson Bivariate Correlation Authority and Study Variables

Table 70
Pearson Bivariate Correlation Authority and Study Variables

Variable ^a	<i>r</i>
SJT-EDM	
Fairness	.35**
Loyalty	.18**
MFQ	
Ingroup/loyalty	.16**
Authority/respect	.27**
Purity/sanctity	.16**
VIA strengths	
Judgment	.20**
Perseverance	.15**
Prudence	.27**
Self-regulation	.18**
Teamwork	.13**
VIA virtue (3)	
Inquisitiveness	.17**
Self-control	.21**
VIA virtue (6)	
Wisdom	.20**
Transcendence	.17**

Note. XXX

^a *n* = 320 for each domain.

p* < .05. *p* < .01.