

**THE GOOD, THE BAD, OR THE COOPERATIVE – A NEW APPROACH TO  
MORALITY: INVESTIGATING THE RELATIONSHIPS BETWEEN ATTACHMENT,  
COMPASSION, AND MORALITY-AS-COOPERATION**

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## **ABSTRACT**

### **Background and Aims**

The theory of Morality-As-Cooperation (MAC) proposes that moral standards are the collection of biological and cultural solutions to the problems of cooperation recurrent in human social life (Curry, 2016). In the psychological literature, there is an emerging interest in investigating how our moral relationships with others can be considered underpinned by developmental attachment styles or capacity for compassion. In the current study, potential associations and interactions between attachment, compassion, and MAC moral domains were investigated together in a general population sample.

### **Methods**

Drawing on a critical realist epistemological position, this study employed a cross-sectional, quantitative correlational design. Adult participants (N=200) were recruited via an online survey platform to complete a series of validated self-report measures of attachment and compassion, along with the MAC questionnaire (MACQ).

### **Results**

The results showed that attachment style and compassion have differential associations with reported relevance of MAC domains to moral judgements. Compassion to Others was found to mediate the relationship between secure attachment styles and moral relevance to Family Values, Group Loyalty, Fairness, and Possession Rights domains. In contrast, Compassion to Others did not mediate any relationships between Insecure-Anxious attachment styles and personal moral orientation.

### **Conclusion**

The findings suggest that morality is related to, and informed by, capacity for compassion and in specific attachments styles. The approach taken may contribute to understanding the relationships between developmental experiences and moral judgements. Clinical implications, particularly regarding contributions to psychological formulations and attachment- or compassion- based therapies, are

discussed. However, further research is needed to replicate the findings in a more diverse and representative sample.

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## CONTENTS

<b>1.0. INTRODUCTION .....</b>	<b>10</b>
1.1. Overview .....	10
1.2. Terminology and Definitions .....	10
1.2.1. Morality .....	11
1.2.2. Attachment.....	11
1.2.3. Compassion.....	11
1.3. Morality.....	11
1.3.1. Understanding Theories of Morality.....	12
1.3.2. Moral Development .....	14
1.3.2.1. Evolutionary perspective.....	15
1.3.2.2. Sex differences in morality .....	17
1.3.3. Cooperation and Morality .....	18
1.3.4. Morality-As-Cooperation .....	19
1.4. Attachment .....	24
1.4.1. Attachment and Social and Emotional Functioning .....	27
1.4.2. Attachment and Morality .....	27
1.5. Compassion .....	29
1.5.1. Compassion or Empathy? .....	30
1.5.2. Attachment to Compassion.....	31
1.5.3. Morality and Compassion .....	32
1.6. Literature Review .....	33
1.6.1. Related Literature .....	35
1.6.2. Relevant Literature .....	38
1.6.2.1. Robinson et al. (2015).....	38
1.6.2.2. Maranges et al. (2022).....	39
1.6.2.3. Koleva et al. (2014).....	41
1.6.3. Implications.....	42
1.6.4. Limitations .....	43
1.6.5. Summary .....	44

1.7. Rationale and Research Questions .....	44
<b>2.0. METHOD .....</b>	<b>46</b>
2.1. Epistemology .....	46
2.1.1. Self-Reflexivity .....	47
2.2. Design .....	47
2.3. Participants .....	48
2.3.1. Recruitment .....	48
2.3.2. Inclusion Criteria .....	48
2.3.3. Sample Size Requirements .....	49
2.4. Ethical Considerations .....	49
2.4.1. Informed Consent .....	49
2.4.2. Confidentiality .....	50
2.4.3. Potential Distress .....	50
2.4.4. Debriefing .....	51
2.5. Materials .....	51
2.5.1. Morality .....	52
2.5.2. Attachment .....	52
2.5.3. Compassion .....	53
2.5.4. Psychological Wellbeing and Distress .....	53
2.5.5. Demographics .....	54
2.6. Procedure .....	54
2.6.1. Prize Draw .....	55
2.7. Analytic Strategy .....	55
2.8. Applications and Programmes .....	55
2.9. Joint Project .....	56
<b>3.0. RESULTS .....</b>	<b>57</b>
3.1. Initial Data Exploration .....	57
3.1.1. Missing Data .....	57
3.1.2. Outliers .....	57

3.1.3. Participant Demographics .....	58
3.1.4. Assessment of Normal Distributions .....	58
3.2. Descriptive Statistics .....	60
3.2.1. Morality-As-Cooperation .....	60
3.2.2. Attachment Style Questionnaire .....	61
3.2.3. Compassionate Engagement and Action Scales.....	62
3.2.4. Sample Psychological Distress and Wellbeing.....	62
3.3. RQ1: Are There Gender Differences in the Relevance of MAC Domains to Moral Decisions?.....	63
3.4. RQ2: Is There a Relationship Between Attachment and MAC-R (or particular MAC-R domains)?.....	65
3.4.1. Is There a Unique Influence of Sex on Any Relationship Between Attachment and MAC-R?.....	65
3.4.2. Five-factor Model.....	66
3.5. RQ3: Is There a Relationship Between Compassion and MAC-R (or particular MAC-R domains)?.....	69
3.6. RQ4: Does Compassion to Others Explain via Mediation a Relationship Between Secure Attachment and MAC-R? .....	71
3.7. RQ5: Does Compassion to Others Explain via Mediation a Relationship Between Insecure-Anxious Attachment and MAC-R?.....	76
<b>4.0 DISCUSSION.....</b>	<b>78</b>
4.1. Summary of Results .....	78
4.2. Sex, Morality, and Cooperation .....	79
4.3. Attachment and Morality .....	80
4.3.1. Insecure-Avoidant Attachment and Morality .....	81
4.3.1.1. Discomfort with Closeness.....	82
4.3.1.2. Relationships as Secondary .....	83
4.3.2. Insecure-Anxious Attachment and Morality .....	83
4.3.2.1. Preoccupation with Relationships .....	84
4.3.2.2. Need for Approval .....	84

4.4. Compassion and Morality .....	86
4.4.1. Compassion from Others and Morality .....	87
4.4.2. Compassion to Others and Morality .....	87
4.5. Compassion as a Mediator Between Attachment and Morality .....	89
4.6. Implications for Moral Literature .....	91
4.7. Implications for Clinical Practice .....	93
4.8. Limitations .....	95
4.8.1. Internet-Based Research.....	95
4.8.2. Sample Generalisability .....	96
4.8.3. Theoretical Limitations.....	97
4.8.4. Effect Sizes.....	98
4.9. Future Research .....	99
4.10. Conclusion .....	100
<b>REFERENCES .....</b>	<b>102</b>
<b>APPENDICES.....</b>	<b>124</b>
APPENDIX A: Search Terms for Scoping Review.....	124
APPENDIX B: Ethics Application .....	125
APPENDIX C: Ethics Approval.....	139
APPENDIX D: Change of Title Approval Form.....	144
APPENDIX E: Participant Information Sheet .....	147
APPENDIX F: Consent Form .....	151
APPENDIX G: Participant Debrief Sheet .....	153
APPENDIX H: Study Questionnaires .....	155
APPENDIX I: Study Advert.....	164
APPENDIX J: General Linear Model Tests of Between-Subjects Effects For RQ2 .....	164



APPENDIX K: General Linear Model Tests of Between-Subjects Effects For RQ3 .....	166
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## LIST OF TABLES

<b>Table 2.</b> Participant Demographics.....	<b>59</b>
<b>Table 3.</b> Participant Scores on the Morality-As-Cooperation Questionnaire for both the Relevance and Judgement Subscales. ....	<b>60</b>
<b>Table 4.</b> Participant Scores on the Attachment Style Questionnaire and Compassion Engagement and Action Scale.....	<b>61</b>
<b>Table 5.</b> Frequency of Participant Scores on the Depression Anxiety and Stress Scale-21.....	<b>63</b>
<b>Table 6.</b> Comparisons between Male and Female Scores on the Morality-As-Cooperation Relevance Scale. ....	<b>64</b>
<b>Table 7.</b> Linear Regressions Demonstrating the Relationships between Attachment Style Questionnaire and Morality-As-Cooperation Relevance Scale.....	<b>68</b>
<b>Table 8.</b> Linear Regressions Demonstrating the Relationships between Compassionate Engagement and Action Scales and Morality-As-Cooperation Relevance Scale.....	<b>71</b>

## LIST OF FIGURES

<b>Figure 1.</b> PRISMA Diagram of Scoping Review. ....	<b>37</b>
<b>Figure 2.</b> Mediation Pathway Models for the Significant Indirect Effects between Confidence and Four Morality as Cooperation Relevance Domains Through Compassion to Others as a Mediator. ....	<b>75</b>

## **1.0. INTRODUCTION**

### **1.1. Overview**

Issues of morality permeate human lives: for example, you find out your family member is cheating on their partner, you are asked to donate to a charity you do not usually support, you have information that will upset a sick loved one, you witness a well-liked colleague cutting corners at work. These problems are often not easily solved; there is no one singular answer, and many contextual and historical factors will influence the outcome. Yet, 'morality' as a construct suggests that there is an available framework against which acts are judged as 'right' or 'wrong', 'good' versus 'bad' ('moral' versus 'immoral'). But what makes these situations 'moral' dilemmas: what is morality, what does it mean to be 'moral', how does morality develop? These are all questions which philosophers and researchers have long attempted to understand.

More recently, there has been an emerging interest in the connections between issues in morality (e.g., compassion, moral judgements, shame) and clinical issues (e.g., depression, attachment, loss, self-care) on the implications for theories about, and treatments for, mental health problems. One prominent example is Gilbert's work on compassion and the development of Compassion Focused Therapy (CFT; Gilbert, 2009, 2017). Another example is the growing investigations into reframing burnout as a consequence of moral injury (Dean et al., 2019; Mantri et al., 2021). Importantly to this thesis, recent developments in evolutionary psychology have opened further avenues for investigation; namely, how morality interacts with relational and clinical constructs, such as attachment and compassion.

I will begin by exploring the literature on these constructs, considering any points of interrelation, before presenting a literature review detailing how morality, attachment, and compassion have been directly investigated thus far. This leads to a rationale for the study's overall aims and research questions.

### **1.2. Terminology and Definitions**

### 1.2.1. Morality

Whilst there remains ongoing debate regarding the underlying virtues that constitute morality, there is a general agreement that morality refers to the system of principles, values, and beliefs that guide individuals and societies in distinguishing 'right' from 'wrong' behaviour. Alongside an emphasis on promoting wellbeing, fairness, and respect for others. Morality can refer to both the description of values personally adhered to by an individual as well as the normative standard to which members of a society are expected to abide (Gert & Gert, 2020). Throughout this thesis, I use the term 'morality' in its broadest sense, to encompass all underpinning theories and frameworks that give rise to the lay understanding of what it means to be moral.

### 1.2.2. Attachment

Attachment can be defined as the unique emotional bond that connects an infant to their primary caregiver and is the foundation for future healthy emotional and social development (Bowlby, 1969). A secure attachment, as described by Ainsworth et al. (1978), is characterised by feelings of security, trust, and comfort. Ainsworth's classic representation of attachment identified three distinct 'styles' (Secure, Insecure-Anxious, Insecure-Avoidant), however, research has highlighted that attachment styles are not mutually exclusive (Feeney et al., 1994). Therefore, in this thesis, attachment will primarily be modelled on Feeney et al.'s (1994) continuous scales of attachment (Insecure-Anxious, Insecure-Avoidance), whereby scoring lowly across both these scales represents a secure attachment.

### 1.2.3. Compassion

Compassion is commonly defined as "a sensitivity to suffering in self and others... with a commitment to try to alleviate and prevent it" (Gilbert et al., 2017, p.24). In this way, compassion entails (i) the intention and act of engaging with suffering and (ii) the intention to acquire wisdom of how to alleviate and prevent suffering that can then be acted on (Gilbert, 2015). Compassion is typically measured across three 'flows': receiving compassion from self, receiving compassion from others, giving compassion to others (Gilbert et al., 2017).

## **1.3. Morality**

To explore all the roots of moral literature and thinking would go beyond the scope of this section. Instead, I will introduce some of the recent research-based approaches to morality before narrowing the focus to theories emerging from evolutionary psychology.

However, it is important to be conscious of the harm caused by the concept of morality. Gert and Gert (2020) notes that morality can be viewed in three domains: as a philosophical principle, a personal precept, and a societal control. It is the domain of social control that is important to remain wary of throughout this thesis as throughout human history, morality has been weaponised to the detriment of groups and individuals. In many cases, this detriment has had traumatic and fatal consequences. From the legal and medical prosecution of queer people; to genocides predicated on racial, ethnic, or religious persecutions of an 'inferior' ('less moral') group of peoples; to the societal exclusion of individuals who do not fit a cultural norm. This can occur on a societal level, for instance countries ran by religious doctrines who subjugate their populations according to moral standards at odds with most modern societies (e.g., the Taliban in Afghanistan), as well as individual level, for instance, debates on rehabilitation versus incarceration for individuals who have broken a society's moral codes subsumed under laws. I am aware that contributing to the literature of morality implicitly contributes to the continued and sometimes harmful use of morality as a construct, however, ignoring a problem does not solve it. I hope that contributing to the literature will further draw the field away from positions of using morality as a merely punitive construct and, instead, encourage morality to be recognised as a social construct developed by humans simply as one tool of many to be facilitate group survival.

### 1.3.1. Understanding Theories of Morality

Theories constructing morality can be principally classified as either monist or pluralist. Monism ascertains that morality is derived from a single underlying value or virtue, such as justice (Kohlberg, 1971) or sensitivity to harm (Gray et al., 2012), whilst pluralism considers morality as being constructed from multiple elements, such as Gilligan's (1982) ethics of *care* and *justice* or Curry's (2016) seven moral domains within Morality-As-Cooperation. Nevertheless, further debate exists both

between and within these overarching constructions. For instance, deontological ethics state that there is a 'right' and 'wrong' based on a series of universal rules and frameworks (Gawronski & Beer, 2016) and monist universalism proposes that these rules and frameworks are implicit across all humans. Proponents highlight how there are common moral norms across all cultures and societies (such as it being morally wrong to murder another person or steal another person's belongings). Whereas, moral relativism, rooted in pluralism, argues that moral values differ across cultures and time, and thus moral disputes between groups holding conflicting values are unresolvable (Sturgeon, 1994).

However, one common criticism of monist morality is that there is no agreed upon definition of what the underlying moral value is; some argue that morality is based on justice, others argue sensitivity to harm, and yet others propose additional virtues. Furthermore, within philosophical scholarship, two of the most influential monist theories are Kantianism and Utilitarianism. Kantianism argues that morality is rooted in the motivation for an action; whereas Utilitarianism contends morality is rooted in an action's consequence (Woodward, 2013). One classic example within research of this debate is in the train trolley dilemma – would you kill one person in order to save five? Applying a monist perspective may result in the same action being judged as either moral or immoral depending on the identified underlying virtue. Therefore, another key criticism of monism is that relying on a singular virtue is vague and unfalsifiable without a clear definition (Graham & Iyer, 2012)

In contrast, pluralism rests on the assumption that there are multiple moral values, which can be conflicting but should be respected equally (Kekes, 1992). Moral pluralism has recently encountered a resurgence with the development of the Moral Foundations Theory (MFT; Graham et al., 2013). However, critics of pluralism note that this can result in inconsistent practical consequences (Callicott, 1990). For example, Pennings (2002) argued that allowing multiple and conflicting moral views can result in unequal access to some healthcare procedures (e.g., abortion) as an individual's access can depend on the prevailing moral framework of a country (e.g., whether it has been legalised/illegalised). Variations can even exist between states (United States of America) or hospitals themselves (Belgium). Further critical

exploration of these concepts, and other fundamental perspectives of morality, have been well-documented in moral literature and go beyond the scope of this thesis.

### 1.3.2. Moral Development

Theorists generally agree that morality does not spontaneously appear but debate the extent to which internal and external factors influence its development. Some of the factors proposed to influence moral development are personality, sex, religion, culture, evolution (Killen & Smetana, 2015; Turiel, 2008). To fully explore the nuances of debating the factors affecting moral development lays outside the realms of this thesis, however I will briefly explore some of the key considerations.

Piaget's (1932) and Kohlberg's (1971) theories of moral development are two of the most well-known. Kohlberg's theory is based on a monist perspective of justice as the underlying principle, and postulated that children progress through six universal, developmentally-distinct stages:

- Pre-Conventional: i) obedience and punishment orientation, ii) self-interest orientation.
- Conventional: iii) interpersonal accord and conformity, iv) authority and social-order maintaining orientation.
- Post-Conventional: v) social contract orientation, vi) universal ethical principles.

Only once the individual has attained the final stage are they seen as morally-competent.

Kohlberg's research emphasised the moral atmosphere of a group as important for establishing values of cooperation between individual members, particularly through abilities such as perspective-taking (Kohlberg, 1971; Walker, 1980). However, this assumes that people of higher social status, elder age, or living inner-city, with better resources consequently have higher moral judgement maturity through increased opportunities to engage in perspective-taking – which critics soundly reject (Gibbs et al., 2007). Moreover, Kohlberg's theory is based on a Western, Eurocentric model of individualism, in which a human's morality is grounded on being an autonomous

being, whereas in non-Western cultures, interdependence and resolving conflict through collective decision-making is more valued (Dien, 1982; Hwang, 2001).

*1.3.2.1. Evolutionary perspective:* One approach, which has gained traction in recent years, is based upon theories of human evolution in social groups. Modern people come from a long ancestry of individuals living and working in social groups who relied upon one another in order to survive. Evolutionary perspectives state that morality originates from the adaptive processes humans evolved to enable cooperation in increasingly complex social transactions (Eisenberg, 2000; Tomasello, 2016). These processes include the psychological and cognitive mechanisms by which humans resolve conflicts of interest and maximised their gains. Subsequently, when these mechanisms enabled the adaptive resolving of a social dilemma, they became the 'moral' standard through which other interactions were judged (Krebs, 2008). Much research has gone into understanding the potential neurobiological processes through which moral decisions and judgements are made (e.g., Jiang et al., 2022; Mendez, 2009; Yoder & Decety, 2018).

MFT is one prevailing theory that is predicated on the role of evolution in constructing morality. It proposes that there is a 'first draft' of the moral mind, influenced by evolution, which is then refined and revised by experience, influenced by culture (Graham et al., 2013). In this manner, although evolution has constructed the mechanisms through which morality is processed, culture constructs its own virtues, narratives, and institutions that 'edit' the first draft of an individual's moral mind to develop a culturally-specific and culturally-competent moral adult (Hu et al., 2020). MFT proposes five foundations of moral ethics, which are grouped into two clusters (Graham et al., 2013).

Individual-based:

- Care/Harm: covering caregiving and motivations to alleviate suffering.
- Fairness/Cheating: covering judgements regarding cheating and rights violations.

Group-based:

- Loyalty/Betrayal: covering fidelity to group membership.
- Authority/Subversion: covering adherence to tradition and hierarchy.

- Sanctity/Degradation: covering values of purity and overcoming human carnal predispositions.

Later, Haidt (2012) also proposed a sixth, group-based foundation concerning Liberty/Oppression (covering the feelings of resentment people experience toward those who restrict their liberty).

In contrast to conceptualisations of morality that are defined by the underlying virtue(s), MFT defines morality by the social function of the six foundations. As Graham et al. (2013) explain: the individual-based foundations represent an individual's focus on the needs and rights of other individuals, and typically prevail in liberal, individualistic, secular contexts. The group-based foundations represent a 'binding' of individuals into roles and duties whereby they sacrifice their self-interests in order to foster social cohesion and benefit their group or system. These foundations typically prevail in conservative, collectivist, and religious contexts.

MFT claims that its pluralist approach enables an understanding of how individuals can hold what appear to be conflicting attitudes to issues typically associated with similar moral concerns (e.g., support of abortion but opposition to the death penalty; Graham et al., 2013). Crone and Laham (2015) further supported these claims that multiple moral foundations are involved in moral judgements. They utilised sacrificial dilemma scenarios and demonstrated that prioritisation of Care/Harm and Sanctity/Degradation negatively predicted, whilst focus on Loyalty/Betrayal positively predicted, the likelihood of endorsing harmful action to an individual to save multiple lives. Interestingly, Care and Sanctity explained similar amount of unique variance in the regression models. This finding contrasted with one of their hypotheses, based on Moral Dyad Theory (Gray et al., 2012) that, in a scenario which is centred on concerns of harm, Care/Ham would be the sole significant predictor (or, failing that, the most important predictor). Nevertheless, the study was unable to capture preferences for different moral codes (e.g., utilitarian versus deontological) nor, given the cross-sectional nature, able to clarify the causal mechanisms linking values to judgements – though the latter concern is one well-documented throughout relevant literature. Additionally, critics highlight limitations with MFT, such as its factor loadings (Harper & Rhodes, 2021), 'liberal ethnocentrism' (AlSheddi et al., 2020), and lack of theoretical basis (Curry et al., 2019a). Whilst the authors acknowledge that the



foundations they propose may not remain empirically validated, they iterate the importance of their pluralist approach to conceptualising morality (Graham et al., 2013).

*1.3.2.2. Sex differences in morality:* Although sex has long been hypothesised to influence moral development and judgements (Poppen, 1974; Wei, 2023), there is conflicting evidence in the empirical literature. On one hand, Gilligan's (1972) theory proposed that women are more oriented to making moral decisions through values of care whilst men are more prone to consider justice. This view has been supported in more contemporary literature such as Atari et al.' (2020) who demonstrated, using MFT, that women consistently showed higher concerns for Care, Fairness, and Purity in their moral judgements (compared to men). Concerns for Loyalty and Authority also yielded some sex differences; however, these were variable across cultures. Interestingly, these differences were more pronounced in Western, individualised societies where there was a more equal ratio of men to women. However, this is consistent with research that shows in male-dominated cultures, men are more likely to focus on family and caring values (Atari et al., 2020; Schwartz & Rubel-Lifschitz, 2009). Atari et al. (2020) was the first large-scale, cross-cultural investigation to empirically test multivariate sex differences in moral judgements within cultures, but, although the large-scale nature of the study confers statistical robustness to its results, the findings have not since been replicated and the authors themselves acknowledge the theoretical limitations of relying on MFT. In fact, they proposed the use of MAC as a more theoretically sound alternative.

Other research posits that there are no sex differences in moral judgements or orientations (Friedman et al., 1987; Krebs et al., 1994; Lifton, 1985). Although, all these studies particularly compare Gilligan's (1972) claims of moral sex differences to Kohlberg's (1971) model of moral development. Krebs et al. (1994) reported some partial evidence for the possibility that Kohlberg's moral tests are biased against females. Bussey and Maughan (1982) found males hold stronger beliefs that male moral decisions are based on justice whilst female moral decisions are based on emotions (in contrast to females who did not hold significantly different perspectives on the basis of male or female moral judgements). This might partly explain some of the sex differences seen when males versus females signal their behaviour. For

instance, when participants give qualitative accounts of their moral reasoning (Pratt et al., 1988) and when participating in group social behaviour (Balliet et al., 2011). The earlier studies that found there are no inherent sex differences, are supported by more recent literature investigating sex differences in cooperation. Spadaro et al. (2023) conducted a meta-analysis of 121 cross-cultural studies from over six decades examining cooperation using social dilemmas. They found that although cooperation was generally higher in female-dominated samples, there were no significant sex differences in cooperation.

### 1.3.3. Cooperation and Morality

The idea of morality being predicated on cooperation subsequently takes the evolutionary and cultural perspectives another step. Cooperative theories of morality state that the ultimate aim of evolution and culture is to create adaptive conditions, through which an individual survives and thrives. Therefore, “morality functions to facilitate the generation and maintenance of long-term social-cooperative relationships with others” (Rai & Fiske, 2011, p.59). Indeed, morality has long been associated with cooperation; from Aristotle’s ideas of justice (meaning to cooperate for the benefit of the whole community) to David Hume’s supposition that moral passions promote public interest and a cooperative common goal (Curry, 2016).

Cooperation has been entwined with successful evolution since life began; for example, genes that promoted cooperative strategies enabled the formation of multicellular organisms (Smith & Szathmáry, 1995) and natural selection continues to favour genes for cooperation across many species (Dugatkin, 1997). For early humans, the ability to cooperate (e.g., hunting in groups, community child-rearing) improved chances of success in the competitive natural world and so living with cooperative others became highly valued. Peters and Adamou (2022) highlighted how, over time, cooperative groups have been shown to outperform non-cooperating groups through pooling and sharing resources; it is thus also beneficial to the individual to be part of a cooperating group. To further enhance the replication of cooperative behaviours, an evolutionary-novel development of cultural ‘rules and tools’ took place (Apicella & Silk, 2019; Curry et al., 2019a, 2019b; Henrich & Henrich, 2006). Rules such as community hierarchies mean that individuals within a group can be organised into roles and positions that help coordinate cooperative

activities and allocate resources effectively; hierarchies also provide a framework for enforcing systems and resolving conflict, thereby maintaining cohesion and stability in the group. Shared language as a tool further enables cooperation through communication of complex ideas and intentions as well as facilitating social bonds.

Additional evidence for the importance of cooperation comes from research into moral emotions (e.g., shame, guilt, empathy, compassion, pride, etc.; Tangney et al., 2007; Tomasello & Vaish, 2013; Walsh, 2021). A typical defining feature of moral emotions is that they are other-focused, such as motivating actions towards maintaining and improving social relationships and status (Fiske, 2002). When an individual transgresses against their group, they experience negative emotions such as shame or guilt; when they appease the group, positive emotions such as pride are experienced (Tangney et al., 2002). This occurs even in anticipatory examples. Thus, in an attempt to minimise negative emotional experience, an individual would be more likely to engage in moral behaviour in order to feel 'good'. Furthermore, empathy is positively correlated with prosocial behaviour, including acts of altruism and cooperation (Dovidio & Halabi, 2017) – a relationship that is also evident in non-human species (Decety et al., 2016) and mediated through perceived social support (Fu et al., 2022).

Similarly, social psychology researchers highlight the roles of cultural rules and tools in encouraging group identity and cooperation. As well as positive reinforcers to encourage cooperation, cultural rules and tools also developed mechanisms of punishment to guard against cheating one's group in a social interaction. Individuals therefore become predisposed towards their own group as cooperation within an in-group is seen as safer (more predictable and trustworthy) than attempting cooperation with an out-group (Broom, 2006; Grigoryan et al., 2023). This has been demonstrated as particularly salient when the in-group develops based on a shared moral identity (Morris et al., 2011; Vives et al., 2022). In summary, morality evolved as a function to regulate human behaviour to promote cooperation in social interactions (Curry, 2005; Tomasello & Vaish, 2013).

#### 1.3.4. Morality-As-Cooperation

Drawing upon interdisciplinary research including psychology, economics, evolutionary biology, anthropology, and other fields, Morality-As-Cooperation (MAC; Curry, 2016) centres the evolutionary advantages of cooperation to constructing morality. MAC proposes morality is the biological and cultural solutions to human problems of cooperation. The theory utilised nonzero-sum games (i.e., games where the participants outcomes are not strictly balanced – meaning that all participants can gain or lose collectively) to empirically test recurrent moral problems. This enables opportunities for cooperation amongst participants in order to achieve mutual benefit and drawing on this approach should enable the making of specific, testable predictions about the nature of morality (Curry, 2016).

Accordingly, morality is the lens through which individuals judge other people's behaviour: those who exhibit behaviour that solves some problem of cooperation (e.g., helping a family member, reciprocating favours, deferring to authority) are regarded as being morally good, whereas people who fail to cooperate (e.g., betraying your group, cheating, being cowardly) are morally bad (Curry, 2016). MAC posits that, because problems of cooperation evolved as universal features of human social life, these judgements of moral behaviour are salient across cultures (i.e., that human morality concerns cooperation in every human culture). Yet, how this translates into cultural rules and institutions is diverse – as different societies and people evolved facing different problems of cooperation, different moral values are prioritised. For example, differences in typical family size, frequency of warfare, or degree of inequality may lead to differences in the importance a culture attaches to values concerning family, bravery, and respect (Curry, 2016). In Curry et al.'s (2019b) study of 60 diverse societies, the seven domains of MAC were uniformly considered morally good and there were no counter-examples of societies in which the MAC domains were considered morally bad. They also found significant salience of the domains across all investigated societies with equal frequency across cultural regions. These results give credence to the hypothesis of morality emerging through early evolutionary processes, as a result of biological and cultural solutions to problems of cooperation, and salient across cultures despite culturally varying rules and tools.

The seven problems of cooperation from which moral values derive are:

- **Family Values:** Natural selection favours genes that promote individuals to detect and deliver benefits (or avoid doing harm) to genetic relatives/kin, particularly when the benefit to the recipient(s) outweighs the individual's cost of helping (Dawkins 1979; Hamilton, 1964). Behaviours such as caring for offspring, helping family members, and avoiding inbreeding, are therefore regarded as morally good as cooperating with kin provides positive outcomes to the individual and group.
- **Group Loyalty:** Evolution in humans has also favoured the development of mechanisms that promote the individual to live and work within a social group for the greatest chance of survival. In this way, it is regarded as morally good to demonstrate behaviours which cooperate with your group – such as, forming friendships, adopting local conventions, participating in collaborative endeavours, and favouring your own group in exchanges.
- **Reciprocity:** When an individual attempts to exploit the cooperation of the others by accepting the benefit without paying the cost, this can create social dilemmas and disrupt homeostasis. Therefore, strategies which employ 'conditional cooperation' or 'tit-for-tat' have developed in multiple species (Axelrod 1984; Trivers 1971). MAC suggests that reciprocal social exchange behaviours (such as trusting others, seeking revenge for wrongs, expressing gratitude, making amends, reciprocating favours) are regarded as morally good.
- **Contests between Hawks (Heroism) and Doves (Deference):** These two moral values arise from conflict over resources. When there is conflict for resources such as food, territory, or mating (Huntingford & Turner, 1987), there are three possible resolutions: contests, division, and possession. Game theory has been used to demonstrate how conflicts can be resolved through 'contests' in which "individuals display reliable indicators of their 'fighting ability' and defer to the stronger party" (Curry et al., 2019b, p.49). These contests require both hawkish displays of heroism/dominance and dovish displays of deference/submission in order for successful cooperation. Typically, these behaviours can be seen in species with dominance hierarchies and human's culturally-elaborated

hierarchies (Curry, 2016). Accordingly, MAC states that both hawkish (e.g., bravery, fortitude, heroism) and dovish (e.g., humility, deference, obedience) behaviours are regarded as morally good.

- **Fairness:** Game theory posits multiple solutions to proportioning resource, such as dividing relative to an individual's bargaining power/status or equal division (Smith, 1988). Nevertheless, research in non-human primates and their reactions to unequal treatment in economic games evidences an innate 'sense of fairness' (Proctor et al., 2013). Although claiming a larger share may benefit the individual in the short-term, problems of longer-term consequences, for example relating to reciprocity, have led to the development of strategies to create rules of equal sharing and fairness (e.g., 'take turns', 'I cut, you choose'; Brams & Taylor, 1996). Consequently, behaviours that promote achievement of 'fairness' are seen as morally good – such as, reaching a compromise, being fair, dividing resources.
- **Possession Rights:** Lastly, game theory demonstrates that conflict over resources can be resolved by deferring to prior possession. Recognition of prior possession is prevalent across species behaviour (Strassmann & Queller, 2014) as well as in human cultural and legal traditions (e.g., American gold mines; McDowell, 2004). Therefore, deferring to previous possession is seen as morally valued.

Later, in 2022, Curry et al. also proposed the idea of moral 'molecules', which are combinations in sets of two of the moral domains ('elements'). These combinations are able to explain more intricate forms of moral behaviour and values. For instance, Group Loyalty and Heroism combine to form Patriotism, which is the idea of love for, and pride in, one's nation. Whereas, Group Loyalty and Deference combine to form Tribute, which is the idea that in order to help your group, you must defer to superior groups (e.g., social hierarchies, paying tax to the state). They located examples of these molecules in professional and popular literature and suggested this is further support for how the seven foundational domains can explain all problems of human cooperation through a combinatorial system (Curry et al., 2022).

MAC is a novel theory, yet the research conducted so far is promising. Although there are some similarities to MFT (being a pluralistic theory grounded on an evolutionary perspective of the function of morality), MAC rests on a more empirically-sound theoretical grounding and attempts to answer some of the gaps left in MFT. It has a growing research base including philosophical (Lu, 2023) and genetic (Zakharin et al., 2023) explorations. Nevertheless, one of the criticisms of MAC is the lack of attention paid to moral normativity (ignoring the distinction between morally 'good' and 'bad' cooperation; Li et al., 2023). In a debate for the Association of Social Anthropologists (ASA) conference (2018), Cook and Venkatesan argued against the proposal of "morality is fundamentally an evolved solution to problems of social cooperation" (see Gellner et al., 2020, p.415). They debated that MAC is a reductionist theory that contrasts with philosophical and anthropological explorations of morality and fails to capture the meaning of morality for lay people. To counteract, Curry and Alfano argued that MAC is a scientific theory of lived experience that seeks to understand and explain the inter-community similarities in human moral values. This statement is supported by Yilmaz et al.'s (2021) study that found lay representations of morality were well represented by the MAC Relevance subscale in both Turkish and United States (US) participants.

Alfano further argued that MAC guards against presumptions of ethnocentrism by providing an understanding of how moral codes can be culturally refined, whilst also avoiding impotent relativism to enable criticism of moral codes, including one's own (Gellner et al., 2020). Curry and Alfano (Gellner et al., 2020) acknowledged that the conceptualisation of MAC might challenge lay understandings of morality, however this supports earlier arguments made in this thesis concerning the need for an evolution in moral frameworks. Li et al.'s (2023) paper commends the use of scientific methods to conduct and support its arguments, highlighting the pressure MAC places on the evolution of moral literature (typically grounded in philosophical ethics). They further stated that MAC offers valuable insights into the formation of moral behaviour, considering individual character alongside external influences. To explore all nuances of this debate goes beyond the scope of this thesis, yet it's important to recognise the criticisms to the theory on which this research is largely founded.

## 1.4. Attachment

Attachment is another evolutionarily-developed relational mechanism for survival. As an infant, establishing early attachment to a responsive adult(s) is essential for survival, and later healthy physical and mental development, across human and non-human primates (Gervai, 2009). Bowlby, considered the forefather of modern attachment research, posited that human infants have evolved with innate behavioural mechanisms that promote the development of attachment (e.g., crying, reaching) as this increases chance of survival (Bowlby, 1969). Initially these attachment strategies are focused onto a primary caregiver (typically a parent) who is responsible for responding to the infant's physical needs, protecting them, and providing emotional comfort. The relationship with the primary caregiver is critical in providing a framework ('an internal working model') for how the individual, as they grow, manages longer periods of separation and forms, and maintains, relationships with others (e.g., peers, romantic relationships, etc.) (Bowlby, 1969).

The infant acquires knowledge (on the availability and responsiveness of others and worthiness of themselves) from the interactions with the primary caregiver. Perhaps the most well-known of studies investigating the role of attachment in human infancy is Ainsworth et al.'s (1978) Strange Situation. From the behaviours demonstrated by an infant in response to their primary caregiver and a 'strange' other, Ainsworth posited four attachment styles: Secure, Insecure-Anxious, Insecure-Avoidant Insecure-Disorganised. In 1991, Bartholomew and Horowitz proposed a model of adult attachment, which largely fit with Ainsworth's childhood attachment styles. Bartholomew and Horowitz (1991) modelled four attachment styles predicated on two dimensions (positive/negative models of the self/others), of which an individual can lie at either end of the scales:

- Secure: positive models of self and others.
- Preoccupied: negative model of self and positive model of others.
- Dismissing-avoidant: positive model of self and negative model of others.
- Fearful-avoidant: negative models of self and others.

Research demonstrates that an individual's internal working model remains fairly stable throughout the lifespan, indicating that the attachment patterns established in



early relationships often persist into adulthood (McConnell & Moss, 2011; Mikulincer & Shaver, 2007). However, some factors have been identified which can influence change in attachment styles (e.g., significant life events, psychological distress, therapeutic interventions; Cozzarelli et al., 2003; McConnell & Moss, 2011).

Ainsworth's categorisation is still utilised in contemporary understanding of attachment, however there is also a move towards a less discrete approach. One key criticism is that the categories, and underpinning research, are primarily based on Western, Educated, Industrialised, Rich, and Democratic (WEIRD; Henrich et al., 2010) populations and fail to account for cultural differences in parenting and caregiving. As Keller (2013) argued, maternal sensitivity is not merely positioned as an influence on attachment development, but also a judgement on maternal adequacy and is based on a Western ideal of parenting norms. The focus on mother-infant parenting also ignores the prevalence of 'alloparenting' (child-rearing provided by non-parental members of a social group) in non-Western cultures. From an evolutionary perspective, Hrdy (1999) argued that humans would not have survived without a cooperative, alloparental model. Another criticism is that individual differences within the attachment categories are overlooked (Cassidy & Shaver, 2016), for instance, an individual may exhibit varying attachment behaviours in different contexts or with different caregivers. Feeney et al. (1994) demonstrated that individuals could score highly on both Insecure-Anxious and Insecure-Avoidant scales, which were virtually uncorrelated. In other words, an individual could be both highly Insecure-Anxious and highly Insecure-Avoidant. Instead, the largest distinction appears to be between secure versus insecure attachments – secure ratings had a weak negative correlation with Insecure-Anxious and a strong negative correlation with Insecure-Avoidant.

Feeney et al.'s (1994) paper proposed a new measure of attachment (Attachment Style Questionnaire; ASQ), which included five contributing factors to attachment style (Confidence in self and others, Discomfort with Closeness, Relationships as Secondary to achievement, Preoccupation with Relationships, and Need for Approval). These five factors broadly align with Bartholomew and Horowitz's theories of self/other models of attachment (see Table 1). Later exploratory factor analysis of a short form version of the ASQ (ASQ-SF; Karantzas, et al., 2010), retained the

original five factors, but revealed better fit for a two-dimension model of attachment that captured an Insecure-Avoidant/Insecure-Anxious distinction rather than using models of self/other. Karantzas et al. (2010) therefore argued that the ASQ-SF provides important research and clinical utility; the use of the two-dimension model fits with broader landscape of attachment conceptualisations but retaining the five-factor model of attachment aspects enables clinicians to understand more specifically an individual's maladaptive interpersonal functioning.

**Table 1. Descriptions of the domains within the Two-Dimension and Five-Factor of the Attachment Style Questionnaire.**

<b>Two-Dimension Attachment Model</b>	<b>ASQ Five-Factor Model</b>	<b>Description</b>	<b>Attitudes to Self/Other</b>
Secure	Confidence	Reflects an individual's positive attitude to both the self and others.	Assesses attitudes to both self and others (positive).
Insecure-Anxious	Need for Approval	Reflects an individual's need for others' acceptance and confirmation.	Assesses attitudes to self.
	Preoccupation with Relationships	Reflects an individual's anxious attempts to reach out to others in order to fulfil dependency needs.	
Insecure-Avoidant	Discomfort with Closeness	Reflects an individual's tendency to avoid emotional intimacy with others, often due to a fear or rejection or dependence.	Assesses attitudes to others.
	Relationships as Secondary	Reflects an individual's attempt to protect themselves against hurt and vulnerability by emphasising achievement and independence.	

#### 1.4.1. Attachment and Social and Emotional Functioning

How we interact and perceive ourselves and other people has implications on our social functioning and wellbeing. Adults with a secure attachment, compared to an insecure attachment style, report more positive self-esteem and life satisfaction, more feeling of emotional support from others, and fewer negative mental health outcomes such as depression and anxiety (Chu et al., 2010; Cronin et al., 2018; Cruwys et al., 2013; Jetten et al., 2014; Zhang et al., 2022). Across cultures, Securely attached individuals are more likely to engage in altruistic behaviour (Gillath et al., 2005a; Kogut & Kogut, 2013; Pan et al., 2019; Shamer, 2014). They also feel more able to rely on friends and family when experiencing stress (Schmidt et al., 2002) and experience better psychotherapy outcomes (hypothesised to result from relational factors such as a more positive experience of the therapeutic alliance; Mikulincer et al., 2013).

In contrast, insecure attachment styles are associated with higher rates of negative affect (e.g., low mood) and severe and enduring problems and diagnoses (Palitsky et al., 2013; Zhang et al., 2022). Multiple pathways for these associations have been proposed, including more negative interactions with other people, reduced capacity to feel able to rely on others for emotional support, less emotional awareness, and less skilled methods of coping (Mallinckrodt & Wei, 2005; Shaver & Mikulincer, 2007). Mikulincer and Shaver (2012) found that individuals who have an Insecure-Avoidant attachment are less motivated to engage in prosocial behaviour and desire to be independent, whereas individuals with an Insecure-Anxious attachment may engage in prosocial behaviour but out of selfish motivations such as promoting their place within the social group. In contrast, individuals with a secure attachment engage in prosocial behaviour based on a genuine concern for others' welfare.

#### 1.4.2. Attachment and Morality

Accordingly, a secure attachment style has been associated with several key markers of morality (e.g., prosocial behaviour and emotions, altruistic motivations for providing care, and having a genuine interest in others' welfare; Feeney & Collins, 2003; FitzPatrick, 2017; George & Solomon, 2008; Roisman, 2016; Shaver & Mikulincer, 2012; Wang et al., 2023) and theorised to have an evolutionary basis

(Barbaro, 2020). Some research has, thus, begun to further investigate a possible relationship between morality and attachment.

Van Ijzendoorn and Zwart-Woudstra (1995) provided early thinking on the association between morality and attachment. They hypothesised that securely attached children were more stimulated by their parents to develop moral identities free of conflict, as they had more opportunity to engage in Kohlberg's (1971) role-taking practices (van Ijzendoorn, 1997). George and Solomon (2008) supported this hypothesis by arguing that a securely attached individual knows what it is like to be cared for by considerate others and thus wants to, and is able to, replicate that experience. In contrast, insecurely attached individuals draw upon more egotistical reasons for helping a romantic partner: for instance, an Insecure-Avoidant individual will help their romantic partner to avoid a negative reaction or receive something explicit in return, whilst an Insecure-Anxious partner will hope to gain a partner's approval or increase the partner's relationship commitment (Feeney & Collins, 2003). Consequently, it is proposed that the evaluative social and cognitive processes underlying moral judgements are infilled through the attachment process of early caregiver interactions, in which an infant engrains to their internal working model a system of rules to determine right versus wrong (Govrin, 2014; Maranges, 2022).

Shaver and Mikulincer (2012) experimentally linked attachment to morality. They used sacrificial dilemma scenarios in which a moral option was pitted against a financial loss (i.e., whether to report and pay taxes on prize money) and found two main effects. Firstly, that people with higher Insecure-Avoidant attachment were less likely to choose the moral option, and secondly, people with higher Insecure-Anxious attachment were more likely to choose the moral choice after experiencing threat to their self-esteem (termed 'defensive morality'). The self-esteem threat condition entailed participants being presented with feedback that they had failed four unsolvable tasks. These results were replicated in their second study which utilised brief security priming (the participant was reminded of their personal figure of secure attachment) and a 'real-life' moral dilemma scenario (whether to return a second lottery ticket they were 'accidentally' given). Interestingly, they found a three-way interaction in which, if a person high in Insecure-Anxious attachment underwent brief security priming, self-esteem threat had no impact on their decision. In other words,

security priming did not lead to fewer moral choices but reduces the likelihood of defensive morality. Meaning, when people with higher Insecure-Anxious attachment undergo attachment security priming, they still chose the moral option but not as a defence against the threat to their self-esteem. Security priming did not have an effect on those with high Insecure-Avoidant attachment and no significant differences were found across either study with people who demonstrated a secure attachment.

Two recent studies explored the hypothesis that engagement underpins the relationship between attachment and prosocial behaviours, including cooperation. Moral disengagement is defined as the cognitive processes an individual employs to justify immoral behaviour and therefore distance themselves from feelings of guilt or responsibility (Bandura, 1999). Both Shi et al. (2020) and Wang et al. (2023) utilised measures of prosocial behaviour that included forms of cooperation and found that secure attachment was positively associated with prosocial behaviour, which was mediated by moral disengagement. In other words, the more securely attached an individual is, the reduced their tendency towards moral disengagement, and thus more prosocial behaviours are exhibited. Shi et al. (2020) further demonstrated that the mediation effect was stronger for participants with higher level of moral identity.

This section has begun demonstrating some of the key relationships identified between morality and attachment. Considering cooperation as a form of prosocial behaviour (Hinde & Groebel, 1991; Simpson & Willer, 2015), there is good rationale for further investigation of the role of attachment and its correlates (e.g., compassion; Mikulincer et al., 2005) in morality research.

## **1.5. Compassion**

As framed by Goetz et al. (2010), in order to be considered moral, and develop positive relationships with others, we must be compassionate. This view is supported by experimental studies demonstrating a direct relationship between compassion with morality (Mikulincer et al., 2005) and attachment (Mikulincer & Shaver, 2012). Compassion has also been theorised to have an evolutionary basis, whereby displays of compassion have an adaptive basis in promoting care for, and

cooperation with, others (Gilbert, 2017; Goetz et al., 2010; Narvaez, 2017). Although long alluded to as integral to morality and secure attachment, the relationship between compassion, morality and attachment is a relatively new area of research and little work has been done to draw these constructs together empirically.

Gilbert et al. (2017) defined compassion as “sensitivity to the suffering of the self and others, with a deep commitment to try to alleviate and prevent it” (p.24).

Nevertheless, this work is predicated on centuries of Eastern philosophy that has centralised the role of compassion (Augustine & Wayne, 2019; Walsh-Frank, 1996). Recently, Western research has begun to recognise the importance of compassion and three key ‘flows of compassion’ have been identified. These are defined as: Compassion to Others (i.e., the abilities to recognise distress in others and compassionately engage with it); Compassion from Others (i.e., the abilities to accept and engage with compassion from people around us), and Compassion to Self (Gilbert et al., 2017). Self-compassion has been extensively researched by Neff, who delineates it into three interrelated elements, which are displayed at times of pain and failure (Neff, 2003):

- Being kind and understanding towards oneself, instead of self-critical.
- Recognising one’s experiences are part of the larger human experience, rather than in isolation.
- Holding one’s painful thoughts and feelings in mindful awareness, as opposed to becoming enmeshed with them.

Furthermore, increasing compassion (e.g., through compassion training and psychotherapeutic techniques) has been associated with multiple intrapersonal and interpersonal benefits; such as, improvements in psychological wellbeing (Ferrari et al., 2019), health outcomes (Homan & Sirois, 2017), and prosocial behaviour such as caring and cooperation (Gilbert, 2017; Leiberg et al., 2011). Developing compassion is the key focus of some newer models of psychotherapy, including CFT (Gilbert, 2009) and Attachment-Based Compassion Therapy (Navarro-Gil et al., 2020).

### 1.5.1. Compassion or Empathy?

In lay terms, compassion and empathy are often used interchangeably (Batson, 2011; Gillath et al., 2005a; Jeffrey, 2016), however important distinctions are recognised in the literature. One key distinction is that of self-focused versus other-focused emotions. Singer and Klimecki (2014) highlighted that empathy is the capacity to share the feelings of others (i.e., to feel *with*) whereas compassion is characterised by feelings of care and concern for others alongside the motivation to alleviate their suffering (i.e., to feel *for*). As such, empathy is considered self-focused, whilst compassion is considered other-focused. This is an important distinction considering moral emotions are typically other-focused (Fiske, 2002). Furthermore, although there are similarities across compassion and empathy, for instance, the recognition of another person's suffering (Strauss et al., 2016) and positive associations with prosocial behaviour (Batson et al., 1987), Chierchia and Singer (2017) argued that compassion is more integral to prosocial behaviour than empathy. They argued that empathy is more likely to lead to personal distress than other-focused care. This idea has been supported by affective neuroscientific research such as Stevens and Taber (2021), who conducted a comprehensive review of recent advances in affective neuroscience examining the construct of empathy and its relation to prosocial behaviour. Stevens and Taber highlighted that compassion is needed, above empathy, to increase the likelihood of prosocial behaviour. Some researchers use the term 'empathic concern', which they define within a similar emotional and motivational process as compassion (Niezink et al., 2012) and distinct to other constructs of empathy (Zickfeld et al., 2017). Within this thesis, I will focus on the role of compassion as it encompasses the motivation and successive action to alleviate another's suffering; this aligns with our perspective of morality as stemming from prosocial, cooperative behaviour. Additionally, as a construct, it has a significant and empirically-tested base and clinical relevance for psychotherapeutic techniques.

### 1.5.2. Attachment to Compassion

As described by Mikulincer et al. (2005), one aspect of the attachment system is the role of the 'safe haven', in which an individual engages in practices (e.g., soothing) to reduce an attachment partner's suffering. Although the attachment model typically focuses on parent-infant or romantic partner dyads, this caregiving system is also activated by witnessing another person's distress, even with strangers, and involves

a similar process to a compassionate response (i.e., recognition of another's distress and motivation to reduce their suffering). Research highlights the importance of a secure attachment system in order to enable a compassionate focus on another person's needs. The ability to help and care for others is a consequence of an individual having the experience of being cared for themselves (George & Solomon, 2008; Mikulincer et al., 2005). I have already discussed how insecure attachments can lead to seemingly prosocial behaviour, but that these actions may be caused by egotistic motives (Shaver & Mikulincer, 2012). Importantly, across five international studies, Mikulincer et al. (2005) demonstrated that attachment security priming (showing participants the name of their own close attachment figure) led to greater compassion and willingness to help a person in distress, irrespective of their attachment style. A comprehensive investigative review by Mikulincer & Shaver (2007) further supported these findings. Consequently, a positive relationship is evidenced between compassion and altruistic behaviour, which is increased by attachment security.

### 1.5.3. Morality and Compassion

One of the earliest proponents to emphasise compassion within a construct of morality was Gilligan (1982) with her *feminist ethics of care* theory. Gilligan stated that, whilst men resolve moral dilemmas from a framework of justice, women resolve the same dilemmas from a framework of compassionate care for others. The centrality of compassion to morality has been argued by many scholars (e.g., Batson, 2011), with compassion named as a "moral barometer" (Goetz et al., 2010, p.366) due to its function of attuning an individual to harm violations and motivating them to respond to the welfare of others (Cameron & Payne, 2012).

Unfortunately, some people develop in childhood environments where compassion is alien or negatively perceived (e.g., in parenting characterised by low affection, abuse, neglect, or high criticising standards). This can lead to the development of fears of compassion (Gilbert et al., 2011). Fears of compassion can present throughout all three compassionate flows (to self, to others, from others). Crimston et al. (2022) utilised a cross-sectional correlational model to investigate the extent that compassion acts as a driver, and fears of compassion act as an inhibitor, of moral expansiveness (defined as the motivation to acknowledge the moral rights of others



and the commitment to defend those rights). They found compassion to others was positively correlated with moral expansiveness, whereas fear of compassion to others was negatively correlated with moral expansiveness. Furthermore, compassion and fears of compassion were stronger predictors of moral expansiveness than empathy and mindfulness. Similarly, Cameron and Payne (2012) demonstrated that when individuals actively suppress their compassion, such as in situations where they perceive the benefit to the self outweighs the cost of being compassionate, this suppression not only affects an individual's moral decisions but creates a dissonance in their moral self-concept. Cognitive dissonance refers to the discomfort or tension that individuals feel when their beliefs, attitudes, or behaviours are in conflict. To alleviate this discomfort, individuals may attempt to resolve the conflict by rejecting or altering one of the conflicting factors (Aronson, 1969). Thus, when faced with a discrepancy between their actions (e.g., suppressing compassion to benefit themselves) and moral values, individuals may experience psychological distress, leading to an adjustment of their moral beliefs or behaviours to reduce the dissonance. Taken together, the research presented in this section not only highlights the positive influence of compassion as a moral model, but also the active negative influence of an absence of compassion (e.g., through suppression or fears).

Interestingly, the majority of the research between compassion and morality has focused on the role of compassion to others. Gilbert et al. (2017) stated that being compassionate to others is generally regarded as the most basic focus of *compassion* and is the most similar compassionate flow to concepts such as empathic concern. Some research has explored a link between self-compassion and morality, which largely summarised that although increased self-compassion led to decreased unethical behaviour (via lessened moral disengagement; Yang et al., 2020), it also predicted less acceptance of own moral transgressions when they did occur (Wang et al., 2017). Furthermore, despite the availability of access to caring and compassionate support in infancy being well-linked to moral development (Narvaez et al., 2019), little research has been conducted into the experience of compassion from others and morality in adulthood.

## **1.6. Literature Review**

Although morality, attachment, and compassion are well-researched independently, the relationship between the three constructs is a relatively emergent area of interest. A scoping review, following Peters et al.'s (2020) guidance, was therefore conducted to examine any previous research into the role of attachment style in moral judgement/decision making, including compassion as an influencing variable.

As explored in this chapter, MAC (Curry, 2016) is a novel theory of morality and so the scope of this literature review was widened to include other conceptualisations of morality in moral judgements in order to capture all relevant papers. Similarly, after an initial search highlighted that measures of empathic concern were often used in place of compassion, it was decided to also expand the search terms for compassion to allow for the inclusion of empathy and empathic concern. This decision was rationalised by the afore discussion of the interchangeability of 'compassion' and 'empathy' in research (Section 1.5.1.) and was supported by the fact that compassion was encompassed within definitions of empathic concern in the included papers.

Using Booth et al.'s (2012) framework to define the scope of this review, I therefore explored:

1. Who = morally developed adults in the general population.
2. What = morality, attachment, compassion.
3. How (will the study impact on the who) = situate the current study within previous research by identifying literature that explores relationships or interactions between morality, attachment, and compassion in human adults.

With support from the thesis supervisor and University psychological librarian, identified databases for the systematic search were: PsychINFO, Academic Search Ultimate, CINAHL Plus, and Scopus. The search string (moral\* AND attach\* AND (compass\* OR empath\*)) was used to search all databases for studies published before 15<sup>th</sup> December 2023. The terms were searched within the title, abstract and keywords or all fields depending on the options available. Identified relevant papers' reference and citation lists were also searched, as well as additional searches of grey literature (using Google Search). Further details of the searches conducted

(including search terms, limiters applied, inclusion and exclusion criteria) are found in Appendix A.

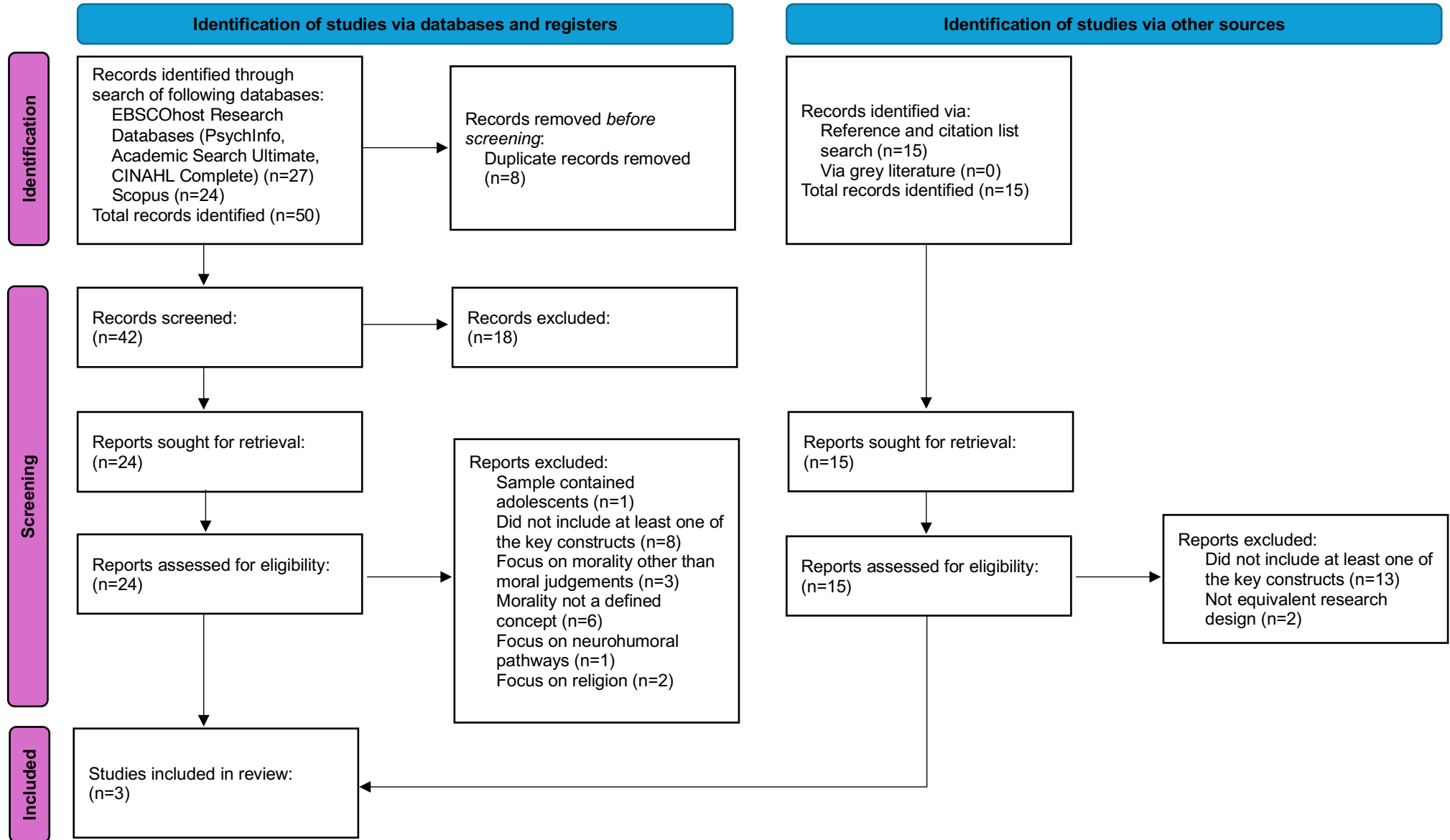
In total, 57 unique papers were initially identified (see Figure 1; Page et al., 2021), with their titles and abstracts screened. Of which, 24 were thoroughly reviewed as full-text documents. In conclusion, three papers were eligible for inclusion, reflecting the novelty of this research area. Nevertheless, these three papers were rich in data, consisting of eight empirical studies with a total of 16,249 participants.

### 1.6.1. Related Literature

The purpose of a scoping review is to map out existing literature, identifying the key concepts, theories, evidence gaps, and research methodologies in a particular research area (Pham et al., 2014). A breadth of research was identified using the search strategy described, however, although related, much of the literature was not suitable for inclusion in this review. Alongside some of the conspicuous reasons for exclusion (e.g., participant sample consisting of morally-developing adolescents; Koenig & Gao, 2022), a nuanced debate took place over the exclusion of some literature. It was inevitably decided though that the focus of this scoping review would be on studies which were methodically similar (i.e., cross-sectional, online, correlational designs) and included the three named constructs (moral judgements, attachment, and compassion). These criteria of the scoping review were set in order to ensure the focus was on assessing the evidence base and feasibility of an investigation exploring the influence of a three-way relationship between the constructs. Therefore, one reason for exclusion was the omission of morality, attachment, or compassion (or its correlates, e.g., empathic concern) in the research variables. Another reason for exclusion was the framing of morality with regards to moral concepts other than judgements, for example, moral disengagement, moral identity, or moral authority. And finally, papers were also excluded when they did not integrate morality as a defined framework, instead drawing on examples of prosocial behaviour, such as charitable giving and volunteering. Although these forms of prosocial behaviour are typically considered as morally good, and a form of cooperation, these studies were excluded as firstly, the forms of prosocial behaviour were specific to certain scenarios, and/or secondly, the authors' definitions of the behaviours did not reference the function of the behaviour as morally-bound. This

therefore failed to capture the broader moral considerations that guide individuals' behaviour.

Figure 1. PRISMA Diagram of Scoping Review.



### 1.6.2. Relevant Literature

I will now summarise the included papers.

*1.6.2.1. Robinson et al. (2015):* The researchers investigated how attachment anxiety and avoidance predict utilitarian moral judgements using sacrificial moral dilemma scenarios, whereby the choice options were judged as either deontological (action is judged as right/wrong according to universal, harm-rejecting rules) or utilitarian (maximising positive outcomes for the majority of people). Robinson et al. (2015) reported how previous research on deontological/utilitarian dilemmas had typically focused on exploring emotional versus cognitive mechanisms, such as neurophysiological processes or decision pathway models, but it was the work of Koleva et al. (2014) which identified the role of attachment style as an important interpersonal variable in moral judgements. Koleva et al. (2014) briefly reported that individuals with Insecure-Avoidant attachment had a positive tendency towards utilitarian decisions for personal moral dilemmas, which was mediated by reduced empathic concern, however Robinson et al. (2014) stated that this was not explored in great detail and so prompted their own research.

Robinson et al. (2015) therefore conducted three studies (in addition to one pre-test study) to explore whether insecure attachment affected an individual's likelihood of making deontological or utilitarian decisions. And, if so, what the mechanisms of this relationship are. The results of their pre-testing with US adult participants demonstrated that Insecure-Anxious attachment had a positive correlation with utilitarian decisions and no correlation with deontological decisions, whilst Insecure-Avoidant had a positive correlation with utilitarian and negative correlation with deontological decisions. In other words, both attachment types tend to favour decisions which maximised benefit for the group over the wellbeing of a sacrificed individual.

This finding was replicated in their first and second studies (421 and 488 US adult participants, respectively), which also investigated the socioemotional mechanisms of the pathways. The authors reported, that for individuals with an Insecure-Anxious attachment, a stronger need to belong plus group empathy (i.e., focus on the welfare of the group) underlay the tendency towards utilitarianism. For Insecure-Avoidant

attachment, it was their discomfort caring for others and reduced empathy for the individual, that led to utilitarianism. In their third study (218 US adult participants), the authors created a manipulation condition whereby participants were informed the group preferred either the utilitarian or deontological choice, to see if this influenced their decision. Results revealed that, when the group preferred the utilitarian choice, higher Insecure-Anxious attachment resulted in higher adherence to group preference (i.e., more enthusiastically committing to the utilitarian option). In contrast, there was no effect for when the group preferred the deontological option or if the individual scored low on Insecure-Anxious attachment (i.e., there remained an overall preference to utilitarianism). On the other hand, although Insecure-Avoidant people typically preferred the utilitarian option, when the group preferred the utilitarian choice, higher Insecure-Avoidant individuals were more likely to choose deontologically. In other words, more highly Insecure-Avoidant people actively opposed the group preference.

Robinson et al. (2015) noted that although their effect sizes were small, the results were robust and replicable. However, there were some methodological issues with Robinson et al.'s (2015) studies as they relied on conventional dilemma judgements, which cannot disentangle the points where higher utilitarian overlaps with lower deontological decisions nor detect predictive patterns at lower levels of both response options (Maranges et al., 2022).

*1.6.2.2. Maranges et al. (2022):* This paper consequently aimed to extend the previous research by using process dissociation to more precisely separate response patterns (e.g., when an individual selects a deontological response but with utilitarian considerations, such as accepting harm when harm maximises group outcomes). They also used moral dilemma scenarios, differentiated into two sets of ten: one set were incongruent dilemmas (harm is relatively easy to justify through utilitarian ethics, i.e., harm to one person is justified in order to save many people); the second set were congruent dilemma versions (described similar scenarios, but harm was unrelated to overall outcomes, i.e., harm to one person did not influence overall wellbeing or was difficult to justify due to the relatively trivial alternative). For example, the incongruent dilemma would be whether to torture one man or to let a

bomb kill many people, whereas the congruent version would be whether to torture one man to stop a paint bomb from making a mess.

Maranges et al.'s (2022) first study of 116 students did not replicate Robinson et al.'s (2015) findings, as they found Insecure-Anxious attachment was not related to utilitarian or deontological decisions. Rather, their primary finding was that Insecure-Avoidance negatively correlated with deontological decisions, which was partially mediated via reduced empathic concern. In other words, people higher in Insecure-Avoidance rejected harm less partly through reduced empathy for the sacrificed person. No relationship was found between Insecure-Avoidant attachment and utilitarian attitudes.

In order to test these findings across wider attachment relationships and socioemotional functioning, in their second study Maranges et al. (2022) included additional attachment and candidate mediators (need to belong, discomfort with helping, emotional suppression, empathic concern for the group and the individual). In this study (247 online participants), the negative relationship between Insecure-Avoidant and deontological decisions was replicated. Insecure-Avoidance was also marginally correlated with utilitarianism however process dissociation highlighted that this is due to lower deontological concerns (compared to securely attached individuals), rather than a relationship to utilitarianism. Interestingly, contrary to their findings in study one and Robinson et al. (2015), Insecure-Anxious attachment was demonstrated to be negatively related to both deontological and utilitarian decisions. Further mediation analyses utilising the socioemotional factors demonstrated that people scoring higher on Insecure-Avoidant attachment experienced less empathic concern for the wellbeing and helping of others, leading to reduced concern about causing harm or maximising outcomes on moral dilemmas (i.e., weaker deontological and utilitarian tendencies). Using structural equation modelling to partial out variance due to other variables (predictors, mediators, demographic controls) revealed that Insecure-Avoidant attachment is negatively correlated with a need to belong, which predicted weaker deontological and utilitarian tendencies. For those scoring higher on Insecure-Anxious attachment they experienced less empathic concern and desire to help others but an increased need to belong, which also led to reduced harm rejection and maximisation of wellbeing for the group.



Maranges et al. (2022) acknowledged there are limitations to using moral dilemma scenarios, as they rest on the assumption that participants will accept the premises of the dilemma (i.e., they choose according to the belief that their action causes the outcome). Furthermore, their participants were primarily from WEIRD (Henrich et al., 2010) backgrounds which limited the generalisability of the results. They discussed that Western and non-Western countries often report different patterns of attachment modelling as well as sub-cultural within-culture differences.

*1.6.2.3. Koleva et al. (2014):* This paper conducted three studies examining how insecure attachment is related to moral concerns set out in MFT. Their research differs from the previous as instead of using a deontological framework of 'right' versus 'wrong' moral decisions, Koleva et al. (2014) were interested in how attachment style predicts individual conceptions of morality – and whether these relationships are explained by emotional differences.

Study one (7,533 online participants) investigated whether any MFT domains were related to insecure attachment styles. Due to the large sample size, a significance criterion of  $p < .01$  was used. The results showed a negative relationship between insecure-avoidance and Harm and Fairness (i.e., reduced concern for these domains) and a positive relationship between Insecure-Anxious and Harm, Fairness, and Purity. Study two (7,125 online participants) included two potential mediators: empathic concern and disgust sensitivity. Empathic concern was demonstrated to mediate the independent negative relationships between Harm and Fairness with Insecure-Avoidance, and the positive relationships between Harm and Fairness with Insecure-Anxious. Disgust sensitivity mediated the positive relationship between Purity and Insecure-Anxious.

A subsection of study two participants also completed an additional utilitarian set of moral dilemma scenarios, which involved moral decisions containing either direct or indirect physical harm to one person in order to save multiple people. Using this utilitarian framework demonstrated a positive association between insecure-avoidance attachment and moral acceptance of harm in direct scenarios, which was mediated by empathic concern. In other words, those with Insecure-Avoidant

attachment have reduced empathic concern which leads to less concern for harm to others. Koleva et al. (2014) highlighted how conducting this additional study using a different moral framework strengthened their previous results.

Although both studies had shown a negative relationship between Insecure-Avoidance and Fairness concerns, in the second study this association had been reduced to a trend when the other foundations were controlled for. Thus, in their third study (101 online participants) Koleva et al. (2014) examined in more detail the relationship between Insecure-Avoidance and Fairness. They categorised Fairness into three key principles: Equity, Equality, and Retribution. The results highlighted that there are distinct differences in how 'fairness' can be perceived in social settings: concerns about Equity were positively related to Insecure-Anxious attachment and negatively related to Insecure-Avoidance; Retribution was positively related to Insecure-Avoidance and negatively related to Insecure-Anxious; and Equality was not related to either insecure attachment scale.

The authors state that this is, to their knowledge, the first paper to investigate attachment style and its association to moral concerns and judgements as well as recognising the important mediating effects of empathic concern and disgust sensitivity. By drawing upon a pluralist moral framework, the authors were able to highlight a differentiating moral profile between Insecure-Anxious and Insecure-Avoidant people, which they stated as suggesting important clues as to why these individuals have poorer relationships compared to securely attached individuals. By using the MFT, they were also able to capture 'everyday life' moral decisions/judgements instead of moral judgements specific to a hypothetical moral dilemma.

### 1.6.3. Implications

In summary, a limited literature does suggest that there are links between morality, attachment, and compassion. Robinson et al. (2015) proposed that Insecure-Anxious attachment leads to greater morally-relevant prosocial behaviour through genuine desire to maximise group wellbeing. However, further research, which has been able to differentiate moral concerns, highlight a pattern in which people with Insecure-Anxious attachment styles operate with a defensive morality; driven by a need to

belong, increased sensitivity to perceiving situations as harmful to themselves, and applying a 'tit-for-tat' relational model (Koleva et al., 2014; Maranges et al., 2022). More specifically, Maranges et al. (2022) stated that preoccupation with attachment figures may come at the cost of concern for other people, and the need to belong may result in selfish actions in order to promote their own social standing.

The three studies found that people with an Insecure-Avoidant attachment style demonstrated reduced empathic concern for others and a tendency towards self-promoting behaviour. Maranges et al. (2022) further highlighted that Insecure-Anxious people have a reduced concern for deontological frameworks (i.e., they are less likely to make decisions based on universal moral rules). These findings all support Koleva et al.'s (2014) proposition that Insecure-Avoidant individuals do not view their detached social behaviour as morally reprehensible, and may instead make moral decisions on the basis of other factors. Insecure-Avoidant people were consistently shown as being 'less moral' when a utilitarian framework was used (e.g., by rejecting harm to the individual less often; Maranges et al., 2022; Robinson et al., 2015) yet this may not have good ecological validity. For instance, it may be that Insecure-Avoidant individuals were less likely to choose the 'moral' option due to their own set of moral beliefs that were not captured by the study variables.

#### 1.6.4. Limitations

One limitation of the existing studies is that their moral dilemma scenarios rest on the assumption that there is a 'right' and 'wrong' option; and that they do not define the underlying ethic from which morality is judged – only operating instead from a generalised 'utilitarian' framework. Whilst Maranges et al. (2022) attempted to separate deontological and utilitarian motivations through process dissociation, they nevertheless used distinct moral dilemma scenarios and were not able to capture the values or factors which participants considered as part of their decision-making. In contrast, Koleva et al. (2014) adopted a pluralist approach to morality using everyday judgements, and so were able to begin delineating how moral concerns, often conflicting (e.g., Fairness), may play a role in judgement.

Another limitation to the papers was the use of empathic concern as a mediating variable. As previously discussed, empathy typically only captures other-related

feelings (towards another person) and not any commitment to acting on those feelings. Therefore, although empathic concern was found as a significant mediator, it may not fully explain the relationship between a person's feelings and actions in a moral judgement scenario. Furthermore, measures of empathic concern do not capture a person's motivations for acting to benefit themselves or how they perceive receiving assistance from other people. These reasons are why compassion is used as the experimental variable despite previous research focusing on empathic concern.

#### 1.6.5. Summary

In summary, although this is a novel area of research, the research which has been conducted suggests a strong relationship between attachment style and moral judgements. It has also demonstrated that these associations are in part explained by empathic concern and differing concerns towards moral values. However, research that utilises a pluralistic moral approach is needed, in order to address more explicitly which values a person considers when making a moral judgement. Furthermore, using a measure of morality which frames moral judgements in everyday social contexts will reduce the limitations of using moral dilemma scenarios. Finally, although empathic concern was highlighted as a significant variable in the relationship between attachment and morality, future research benefit from including measures which includes focus on the self as well as commitment to action for others (i.e., compassion).

### **1.7. Rationale and Research Questions**

This study therefore aims to fill some of these gaps. It will utilise MAC as a basis from which to explore the associations between attachment and moral judgement as well as examining whether compassion is an influencing variable in any relationship.

Utilising Gilbert's (2010; 2017) framework of compassion will provide some clinical utility by contributing to the growing compassion-focused psychotherapeutic field, which is particularly relevant as issues of morality are also often linked to experiences of shame and guilt (de Hooge et al., 2007; Teroni & Bruun, 2011). Similarly, understanding how individuals vary in their moral values of cooperation

may enable therapeutic techniques such as formulation and engagement. Morality research is also particularly relevant in today's political and social upheaval where moral issues (e.g., women's rights, humanitarian crises, rights to protest, etc.) are at the forefront.

As MAC is a relatively new theory and this is a novel area of research, it was more appropriate for the study to be guided by broad research questions rather than specific hypotheses. Therefore, the study questions are:

1. Are there gender differences in the relevance of MAC (MAC-R) domains to moral decisions?
2. Is there a relationship between attachment and MAC (or particular MAC domains)?
  - a. Is there a unique influence of gender on any relationship between attachment and MAC?
3. Is there a relationship between compassion and MAC (or particular MAC domains)?
4. Does Compassion to Others explain via mediation a relationship between secure attachment and MAC-R?
5. Does Compassion to Others explain via mediation a relationship between Insecure-Anxious attachment and MAC-R?

## **2.0. METHOD**

This chapter will begin by outlining the study's epistemological position and my own self-reflexivity on the topic. Next, I will describe the design, participant strategy, and ethical considerations, before outlining the study materials and procedure. Finally, the analytic strategy is discussed.

### **2.1. Epistemology**

This thesis was conducted from a critical realist stance. Critical realism is a meta-theoretical perspective which is rooted in ontology (i.e., the study of the nature of reality and its entities) but can also be applied as an epistemological position (i.e., the study of the nature of knowledge and how it is acquired) (Goertz & Mahoney, 2012; Kant, 2014; Fletcher, 2017; Yucel, 2018). Critical realism lies between positivism (which states that reality is directly observable and that knowledge is produced in objective ways) and social construction (which perceives reality as constructed through discourse and culture and that knowledge production is theory-dependent) (Cruickshank, 2012). In contrast, critical realism states that there is an independent reality, however, our perception of it is subjective to our individual and cultural beliefs and expectations (Bhaskar, 1998; Fleetwood, 2014).

Accordingly, from a critical realist perspective, the hypotheses and interpretations of results in this thesis are inherently bound to the social systems and power structures which have influenced the development of the available conceptual frameworks and the methods used to study these concepts (McEvoy & Richards, 2003). This is particularly relevant given the cultural implications of using the term 'morality'. In the context of morality, critical realism suggests that there are objective moral truths and principles that exist independently of individual or cultural beliefs. This aligns with the proposed evolutionary basis and cooperative function of the MAC model.

Nevertheless, that humans' knowledge of these moral truths will be intrinsically linked to historical, social, cultural, and political contexts. Importantly, critical realism recognises the limitations of human perception and emphasises the importance of critical reflection and engagement (Bhaskar, 1998). Therefore, in the context of this

research, although the data offers valuable information about the participants' and researchers' experiences of their reality, it is influenced by their own contexts and how the included measures quantify their experience.

### 2.1.1. Self-Reflexivity

In-line with the critical realist perspective, throughout researching and conducting this thesis, I was conscious of engaging with a critical reflexivity. To this end, a reflective diary was kept throughout the process. When beginning the topic, I was struck by a discomfort with involvement in a project reliant on ideas of morality, given the historical and social contexts of how ideas of moral and mental 'otherness' have been, and continue to be, used as methods of societal subjugation, alienation, and even genocide (as discussed in Section 1.3.).

However, through exploration of the evolutionary basis, and importance, of morality as a function of cooperation (delving not just into the direct literature concerned with MAC but related fields and constructs), I began to assess even more critically my own initial discomfort with the topic. I wondered at how maintaining 'morality' as a topic that instigates discomfort in engagement with, in fact benefits the power structures that utilise its gatekeeping.

Critical realism supports the critical engagement with questioning underlying assumptions and advocating for social change. And, as I came to question my own beliefs on morality even further, I recognised it as one tool of many which humans have used to facilitate group survival. However, I wonder whether the term 'morality' has become too laden with historical context, and new terminology should be developed. Or whether it is important to 'reclaim' morality through changing the narrative in its literature and social use.

My views on this topic will likely change again as I continue to critically engage with ongoing dialogue and reflection to challenge existing norms and practices.

## **2.2. Design**

A cross-sectional, quantitative correlational model was used. Data was collected via self-report online questionnaires, with the survey software able to be accessed on computers, smart phones, and tablets. The questionnaire battery contained measures not included in this thesis as the current study forms part of a joint project undertaken with another researcher. The variables measured in this study are moral judgements/values, attachment style, compassion, and psychological wellbeing.

As MAC and this research area are relatively novel, the research was guided by exploratory research questions rather than specific hypotheses. In-line with the research questions, this thesis is intended to explore the relationships between variables, which would recommend a quantitative approach. Additionally, as many of the cognitive and emotional processes involved in the variable constructs are implicit, and therefore difficult to capture qualitatively (e.g., the processes leading to moral judgements), this supported the use of a quantitative approach. Anonymous online data collection methods were used due to the possibility of social desirability bias, and the sensitive nature of some measures included.

## **2.3. Participants**

### 2.3.1. Recruitment

Recruitment occurred between June 2023 to February 2024 using opportunity and convenience sampling to increase the representativeness of the sample. The study was advertised online through social media (e.g., Instagram, Facebook, Reddit, LinkedIn), internet forums (e.g., Mumsnet, Dadsnet, ClinPsy), and online survey exchange websites (e.g., SurveyCircle, SurveySwap). Where necessary, permission to advertise was sought and granted.

### 2.3.2. Inclusion Criteria

The study aimed to be representative of an adult general population and so few exclusion criteria were applied. Participants had to be aged over 18 years to avoid issues of moral development and to have a level of fluency in reading/writing English to comprehend and respond to the survey. Otherwise, people of any gender, ethnicity, geographic location, etc. were invited to participate.



### 2.3.3. Sample Size Requirements

Due to not knowing the population standard deviations, a priori power calculation for sample size was not possible. However, three 'rule of thumb' calculations were computed to assess for the minimum sample size. In order to ensure the sample size was sufficiently large for all intended analyses, these calculations were based on the analytic model that contained the most predictor variables ( $m$ ; i.e., the five-factor ASQ-SF included in Research Question Two). Green's (1991) two calculations resulted in a minimum requirement of 109 participants,  $N > 104 + m$ , or 90 participants,  $N \geq 50 + 8m$ , where power = .8 and  $\alpha = .05$ . The third accepted guideline is '10 cases per independent variable' (Harrell, 2001; Harris, 1985), which suggested a minimum of 80 participants. To ensure robustness, the largest sample size condition was then used as the baseline, meaning that 109 or more participants were required.

## **2.4. Ethical Considerations**

Ethical approval was granted by the University of East London, School of Psychology Research Ethics Committee (REC; Appendix C). Minor revisions were suggested by the REC and were implemented prior to recruitment, and later amendment requests were submitted by the researcher (Appendix D). The ethical approval was granted as part of the joint project, so co-submitted by two researchers. Ethical considerations were informed by the British Psychological Society (BPS) guidelines including the Code of Ethics and Conduct (BPS, 2018), Ethics Guidelines for Internet Mediated Research (BPS, 2021), and Guidance on the use of Social Media by Clinical Psychologists (BPS, 2012).

### 2.4.1. Informed Consent

A detailed Participant Information Sheet (PIS; Appendix E) was provided to potential participants prior to obtaining consent. This detailed key information regarding the study, such as its purpose and aims, some brief background information, the expected processes, and considerations for confidentiality and anonymity. Participants were given the researchers' and project supervisor's contact and were encouraged to contact the research team prior to consenting or during/after completing the study if they had any questions or concerns. Participants were informed of their right to withdraw and given a timeframe and the process for doing

so. Following the PIS, participants were presented with the consent form (Appendix F), for which participants had to indicate their consent by ticking a list of statements outlining key aspects of data collection, storage, and use. It was not possible to proceed to the study without providing consent at this stage. Non-completion of the questionnaire battery (i.e., stopping mid-survey) was also considered as a withdrawal of consent and so this data was not included in the statistical analyses. After completing the measures, participants were given further details of the study's nature in the debrief form (Appendix G) and, again, given the researchers' contact details to contact if they wished to withdraw their answers.

#### 2.4.2. Confidentiality

In the PIS, participants were informed that their responses would be anonymised, and no identifiable information would be collected. The study was hosted online using the survey software Qualtrics, which assigned a unique randomised identification number to each participant's data. After submitting their responses, participants were invited to enter a raffle to thank them for their time. If they wished to enter then they clicked on a link which led them to a separate survey in order to enter their email address. This means that the email addresses were stored separately to any responses and so could not be linked. All email addresses were deleted upon completing the raffle.

All data was securely stored in password-protected documents on password-protected devices only accessible by the researchers. The anonymised survey responses will be retained securely for three years and then deleted in line with the Caldicott principle (1997) and Data Protection Act (2018).

#### 2.4.3. Potential Distress

Participants were informed of potential risks in the PIS, which outlined that there was no expectation of significant distress being caused but it was possible that the questionnaires would bring up difficult thoughts, feelings, and/or memories. One questionnaire in the battery contained an open-text question which asked participants to describe a childhood experience of shame. For every other question, the survey software would not let the participant proceed unless they had answered all questions on the page, however, to counteract any potential distress brought up

by having to answer the early shame experience question, participants were made aware that they could opt to 'skip' the question if they preferred. Although this questionnaire was not included in the current study's analysis, it was important that it still remained conscious of its presence in the questionnaire battery.

To minimise the potential distress, participants were given a brief overview of the nature of the questionnaires in the PIS (including that they would be asked to answer questions, both multiple choice and written text format, on topics regarding morality, shame, compassion, attachment, and general wellbeing) so that they could make an informed choice on whether to proceed. Participants were also informed that their participation was voluntary, and they could exit the survey at any time. Signposting information for wellbeing support services were also provided in the PIS and at the end of the study in the debrief form. Contact details of the researchers and project supervisor were also included in the debrief form in case a participant wished to arrange an individual debrief meeting. Consideration was given to the cost/benefit of participants engaging with the potentially distressing questionnaires without face-to-face support, however it was noted that all included questionnaires had previously been utilised in an online study format, multiple measures were put in place to minimise any risks (e.g., the overview of the questionnaires' nature in the PIS, ability to 'skip' a potentially distressing question, signposting information, availability of the researchers' contact details, etc.), and that the online format offered increased access to participants which added to the scientific integrity of the study.

#### 2.4.4. Debriefing

Upon completion of the questionnaires (or if they indicated 'no' on the consent form), participants were presented with a debrief sheet, which reminded participants of their rights to confidentiality and anonymity, a brief overview of the study's purpose, wellbeing support services, and the researcher's contact details.

### **2.5. Materials**

The questionnaires used were reviewed by the research team and were selected based on their psychometric properties, length, face validity, and use in previous research. Questionnaires were re-formatted in Qualtrics so that they were

appropriate to use on mobile devices. Permission was gained for any questionnaires which were not publicly available. Two additional questionnaires presented within the study battery are not dealt with here as they were included due to the nature of the co-researcher's topic. See Appendix H for included study questionnaires.

### 2.5.1. Morality

Morality was assessed using the Morality-As-Cooperation Questionnaire (MACQ; Curry et al., 2019a), which is directly derived from MAC (Curry, 2016; Curry et al., 2019b) and encompasses the seven domains of cooperation mapping onto distinct moral domains. MACQ contains 42 items equally split into two sections: Relevance (MAC-R; the extent the participant considers a cooperative domain as relevant to a moral decision) and Judgement (MAC-J; which contextualises the Relevance subscale into specific cooperative dilemmas). For both sections, participants used a five-point Likert scale between 'not at all relevant'/'strongly disagree' to 'extremely relevant'/'strongly agree' (MAC-R and MAC-J, respectively). Some items are reverse-coded. The subscales are rated independently; an average score for each moral domain is calculated whereby a higher score represents a stronger alignment to that domain. For the purposes of the current research's aims, the analyses primarily focused on the MAC-R subscale, due to better empirical fit and predictive validity (Yilmaz et al., 2021), however participants also completed the MAC-J for comparative reasons. The questionnaire has good internal consistency ( $\alpha=.53-.83$ ) and test-retest reliability ( $r=.66-.87$ ) (Curry et al., 2019a).

### 2.5.2. Attachment

Attachment was assessed using the Attachment Style Questionnaire-Short Form (ASQ-SF; Karantzas et al., 2010). This is a 29-item short-form version of the original Attachment Style Questionnaire (Feeney et al., 1994). Participants use a six-point Likert scale from 'totally disagree' to 'totally agree'. Some items are reverse-coded. The ASQ-SF was selected due to its ability to cover the two-dimension model of attachment insecurity (Insecure-Anxious, Insecure-Avoidant) and a five-factor model (Confidence in self and others, Discomfort with Closeness, Relationships as Secondary, Preoccupation with Relationships, and Need for Approval). Additionally, the ASQ-SF can capture the attachment models of those with little or no experience of romantic relationships. On the two-dimension model, scores are calculated

through averaging on each domain with a higher score representing a more insecure anxious or avoidant attachment. Low scores on both domains are typically considered as secure attachment (Feeney et al., 1994; Karantzas et al., 2010). On the five-factor model, scores are also calculated with higher scores representing a stronger alignment to the factor. The Confidence subscale addresses the security of attachment independently. Across tests of age and gender, the ASQ-SF demonstrated a better fit than the full ASQ and good internal consistency on both the two-dimension ( $\alpha=.82-.86$ ) and five-factor ( $\alpha=.70-.86$ ) models. Through this thesis, “ASQ” will refer to the attachment domains/factors whilst ASQ-SF refers to the specific questionnaire items used.

### 2.5.3. Compassion

Compassion was measured using the Compassionate Engagement and Actions Scales (CEAS; Gilbert et al., 2017) which is based on Gilbert et al.’ research into the three flows of compassion and CFT. The CEAS contains 29-items split equally across three subscales: Self-Compassion, Compassion to Others, and Compassion from Others. Each subscale is further split into two sections: the first, asks participants to rate how motivated and able they or others are to engage with distress; the second, asks participants to rate how they or others cope in distressing situations. Participants rated on 10-point Likert scale from ‘never’ to ‘always’. Some items are reverse-coded. The questionnaire has good internal consistency ( $\alpha=.89-.94$ ) and test-retest reliability ( $r=.59-.75$ ) (Gilbert et al., 2017).

### 2.5.4. Psychological Wellbeing and Distress

Wellbeing was measured using the Short Warwick-Edinburgh Mental Well-Being Scale (SWEMWBS; Stewart-Brown et al., 2009) which comprises 7-items. The SEWMWBS is rated on a five-point Likert scale, from ‘none of the time’ to ‘all of the time’ over the past two weeks. Participant scores are obtained through summing the ratings, with a higher score representing increased wellbeing. It has been used extensively in research and has high internal consistency ( $\alpha=.90$ ) and good test-retest reliability ( $r=.64-.77$ ) (Vaingankar et al., 2017).

Psychological distress was assessed using the short form 21-item Depression Anxiety and Stress Scale (DASS-21; Lovibond & Lovibond, 1995). This scale was

selected due to its conceptualisation of distress on a dimensional scale, it has three subscales of seven items measuring common symptoms of: Depression, Anxiety, Stress. The DASS-21 is rated on a four-point Likert scale, from 'did not apply to me at all' to 'applied to me very much or most of the time' over the past week. Scores are calculated by summing the scores per each subscale and multiplying by two. It has high internal consistency across the subscales ( $\alpha=.87-.94$ ) (Antony et al., 1998).

#### 2.5.5. Demographics

Participants were asked to provide their age, ethnicity, gender, and highest educational attainment. Options were selected from predetermined categories. Ethnicity categories were based on those used in the 2021 United Kingdom Census (Office for National Statistics, 2022). Participants were also given an optional textbox to briefly describe if they had ever experienced mental health difficulties or received a mental health diagnosis and, if so, whether this was currently affecting them.

### **2.6. Procedure**

An online advertisement (Appendix I) directed participants to the study hosted on Qualtrics. Upon following the study URL, participants were presented with a first page asking them to confirm they were aged over 18 years and could read/write in English. In order to proceed, they must have selected 'yes' (if they selected 'no' then they were automatically taken to the end of the survey). Then, participants were presented with a brief welcome page that detailed the next steps, then the PIS, and consent form. Again, on the consent form, participants had to indicate their agreement in order to proceed. To enable the collection of complete datasets, a similar strategy was used whereby participants were not able to continue without completing all items on the current page. Measures were presented as follows: SWEMWBS, DASS-21, MAC-R, MAC-J, ASQ-SF CEAS, demographics. After completing all measures, participants were given the opportunity to withdraw their data (by selecting either 'yes' or 'no'). Following this, participants had the opportunity to leave their contact information if they would like to be entered into the raffle or receive the study results. Finally, participants received a debriefing form and were thanked for their participation.

### 2.6.1. Prize Draw

As an expression of thanks for committing their time to the survey, participants were given the option of being entered into a prize draw for one of two £50 Amazon vouchers. This was voluntary and participants could opt in or out. In order to enter the draw, participants entered their email address securely into Qualtrics and this was then stored separately to other survey data.

In order to select the two winning participants, each email address was assigned a number (between 1-106) and then entered into a random number generator, witnessed by the co-researcher in order to ensure fairness. The winners were then emailed to collect any further necessary personal information to then email their voucher to them. Once received, all email addresses and personal information collected was then destroyed.

## **2.7. Analytic Strategy**

Descriptive statistics were computed for the questionnaires data and demographic information. To answer Research Question One (RQ1), independent samples t-tests were conducted. For Research Questions Two (RQ2) and Three (RQ3), General Linear Models were used to ascertain model evaluation and parameter estimation. Finally, for Research Question Four (RQ4), Model Four mediation analyses (Hayes, 2013) were conducted.

## **2.8. Applications and Programmes**

Qualtrics is an online survey subscription software, on which the current study was hosted. The survey was held on a private log-in, only accessible to the researchers, that enabled responses to be collected securely and to export the final data to other applications for analysis.

All statistical analyses were computed on Statistical Package for the Social Sciences version 29.0 (SPSS; IBM Corp., 2022).

Random.org is an online random number generator that was used to select the winning participants of the prize draw (Section 2.6.1.).

## **2.9. Joint Project**

This study contained within this thesis was ran as part of a joint project with another Doctorate in Clinical Psychology thesis. The joint project was devised due to the theoretical cross-over in variables and in order to aid with recruitment. The joint working aspects entailed: the ethics application; developing and running the online study including associated materials (e.g., study poster, PIS); participant recruitment; and initial data exploration. Otherwise, the compilation of this thesis was conducted separately, with the support of the supervisor.



## **3.0. RESULTS**

This chapter will begin with an overview of the participant sample, including initial management of missing data and outliers as well as the final sample demographics. Next, descriptive statistics of the study measures will be explored. Then, details of the statistical analyses and results relating to each research question will be reported.

### **3.1. Initial Data Exploration**

All participant data was downloaded from Qualtrics (via a Microsoft Excel .xlsx file) to SPSS.

#### 3.1.1. Missing Data

A total of 376 people accessed the online survey. Of these, 89 accessed as far as the PIS and a further 16 proceeded to the consent page but then exited the survey. Of the 271 who began completing the study, 67 did not finish their submission. As noted in the Method chapter, due to the sensitive nature of the study questionnaires, non-completion of the questionnaire battery was taken as a withdrawal of consent and so these people were also removed from the sample. As the demographic questions were located at the end of the study, it was not possible to discern any participant identity factors that might have contributed to withdrawal. This resulted in 204 participants who completed the survey.

#### 3.1.2. Outliers

After deriving the participants' subscale scores, boxplots were visually inspected using interquartile ranges (IQR) to check for potential outliers. Data points more than 1.5 IQR points below the first quartile/above the third quartile were considered possible outliers. These participants were then manually checked in their raw scores to identify whether there was cause to remove them from the sample. Tukey (1977) stated that cautiousness should be applied in the handling of outliers to protect data integrity, instead encouraging the use of robust statistical techniques which are less sensitive to outliers and to consider the context of the data when making decisions.

Nevertheless, four participants were removed from the sample as further investigation revealed the participants scores were biased in a repetitive entering of the same score (e.g., scoring '6' on every question across multiple questionnaires).

### 3.1.3. Participant Demographics

The final sample consisted of 200 participants. Participants were primarily female, of young working age, White ethnic background, and educated to an Undergraduate level. Table 2 illustrates participant demographics in further detail.

### 3.1.4. Assessment of Normal Distributions

Initial inspection of all data (e.g., participant demographics and questionnaires scores) was carried out. Histograms suggested a general pattern of normal distribution across variables, with some notable exceptions (e.g., participant Age, DASS-21 Anxiety subscale).

Curran et al.'s (1996) criteria states that, to be considered normally distributed, skewness ( $s$ ) and kurtosis ( $k$ ) scores must be within  $s=+2/-2$  and  $k=+7/-7$ . As calculated by SPSS, it was found that all participant demographics and questionnaires scores met these criteria with the exception of Age ( $k=12.49$ ). Z-scores for skewness and kurtosis were also calculated alongside the Shapiro-Wilk test of normality. These more stringent criteria highlighted a larger number of the demographic and questionnaire subscales were skewed and kurtotic against a z-score criteria of 2.58 (Field, 2013) and Shapiro-Wilk criteria of  $p>.05$  (Thode, 2002). However, it was decided that the data would not be subjected to any data transformation for four reasons: firstly, the central limit theorem suggests that the large sample size ( $N>30$ ) would be robust to violations of normality (Field, 2013); secondly, according to Curran et al.'s (1996) criteria there were fewer violations of normal distribution; thirdly, due to the heterogeneity across variables, no single data transformation was appropriate (Field, 2013); and fourthly, data transformations frequently do not rectify non-normal data (Glass et al., 1972; Wright & Field, 2009) and can cause problems interpreting results (Feng et al., 2014). Nonetheless, as Age remained highly negatively skewed, it is important to consider this in interpreting the generalisability of any results.

**Table 2. Participant Demographics.**

<b>Demographic</b>	<b>Number of Participants (%)</b>
<b>Age Bracket</b>	
18-27	107 (53.5%)
28-37	37 (18.5%)
38-47	24 (12.0%)
48-57	19 (9.5%)
58-67	3 (4.5%)
68-77	0 (0.0%)
78+	1 (0.5%)
<b>Gender</b>	
Male	48 (24.0%)
Female	144 (72.0%)
Transgender Male	2 (1.0%)
Non-binary	5 (2.5%)
Prefer not to say	1 (0.5%)
<b>Ethnicity</b>	
Arab or Arab-British	4 (2.0%)
Asian or Asian-British	28 (14.0%)
Black or Black-British	6 (3.0%)
Mixed/multiple	7 (3.5%)
White or White-British	148 (74.0%)
Any other ethnic group	7 (3.5%)
<b>Education</b>	
Secondary School	9 (4.5%)
College/Sixth Form	19 (9.5%)
Undergraduate	89 (44.5%)
Postgraduate	70 (35.0%)
Doctoral	13 (6.5%)
<b>Mental Health Diagnosis</b>	
Yes	63 (31.5%)
No	89 (44.5%)
Did not answer	48 (24.0%)

### 3.2. Descriptive Statistics

#### 3.2.1. Morality-As-Cooperation

The MAC-R subscales are scored across a possible minimum of 3 and maximum of 18, with a higher score indicating increased relevance of the moral domain to a participant's moral decision making. In all subscales, the lowest and highest possible scores were reported by at least one participant. Although Possession Rights had the highest number of participants reporting the highest score (N=31), on average Reciprocity was considered the most relevant to moral decisions (see Table 3).

**Table 3. Participant Scores on the Morality-As-Cooperation Questionnaire for both the Relevance and Judgement Subscales.**

Morality-As-Cooperation Domains	Relevance Scale		Judgement Scale	
	M (SD)	Minimum-Maximum	M (SD)	Minimum-Maximum
Family Values	13.31 (2.93)	3-18	9.05 (2.90)	3-15
Group Loyalty	11.99 (3.00)	3-18	10.60 (2.15)	3-15
Reciprocity	13.58 (3.42)	3-18	11.57 (1.63)	6-15
Heroism	11.35 (3.25)	3-18	9.36 (2.30)	3-15
Deference	9.47 (3.33)	3-18	7.75 (2.41)	3-14
Fairness	11.24 (3.57)	3-18	12.35 (2.09)	4-15
Possession Rights	13.31 (3.71)	3-18	10.42 (2.12)	5-15

*Note: M= Mean, SD = Standard Deviation*

Whilst all MAC-R subscales had participants score on the lowest and highest possible scores, no MAC-J subscales demonstrated this. As seen in Table 3, the MAC-J scores typically exhibited more restricted ranges with less variance. Only four subscales reported the lowest possible score, and the highest scores reported were

15 (whereas 18 was the highest possible score). Higher scores represented greater agreement with the moral judgements statement. Similar to MAC-R, Deference was rated as the least agreed with, whereas Fairness was considered most agreed with. Thus, in accordance with the thesis research questions, previous research that supports the utility of the MAC-R subscale (Yilmaz et al., 2021), and supported by the greater variance in MAC-R scores, it was decided that the subsequent analyses would utilise the MAC-R.

**Table 4. Participant Scores on the Attachment Style Questionnaire and Compassion Engagement and Action Scale.**

<b>Questionnaire Scales</b>	<b>M (SD)</b>	<b>Minimum-Maximum</b>
<b>ASQ Two-Dimension Model</b>		
Insecure-Avoidant	3.60 (0.54)	2-5
Insecure-Anxious	3.55 (0.61)	2-5
<b>ASQ Five-Factor Model</b>		
Confidence in Relationships	3.75 (0.86)	1-6
Discomfort with Closeness	3.88 (0.91)	1-6
Relationships as Secondary	2.81 (0.86)	1-5
Need for Approval	3.58 (1.00)	1-6
Preoccupation	3.45 (1.03)	1-6
<b>CEAS</b>		
Compassion to Self	6.24 (1.35)	3-10
Compassion to Others	7.42 (1.36)	2-10
Compassion from Others	6.03 (1.64)	1-10

*Note: M= Mean, SD = Standard Deviation, ASQ = Attachment Style Questionnaire, CEAS = Compassionate Engagement and Action Scales*

### 3.2.2. Attachment Style Questionnaire

As discussed previously, the ASQ-SF can be scored as both a two-dimension and five-factor model, using continuous scales. Unlike other attachment questionnaires, participants are not assigned a categorical attachment style, rather subscales scores

range from 1-6 with participants scoring along the continuum. On the two-factor model (Insecure-Avoidant and Insecure-Anxious), a higher score represents a more insecure attachment, whilst a lower score represented a more secure attachment. As seen in Table 4, our sample scored comparatively similar on the average participant score for Insecure-Avoidant and Insecure-Anxious attachment. Across both scale models, no participant scored the lowest or highest possible score. On the five-factor model, participants scored highest on Discomfort with Closeness, followed by: Confidence, Need for Approval, Preoccupation with Relationships, Relationships as Secondary.

### 3.2.3. Compassionate Engagement and Action Scales

The CEAS subscales are scored between 1-10, with a higher score representing increased experience of compassion and the commitment to act to own (Compassion to Self) or others' (Compassion to Others) distress, or actively able to receive compassion when experiencing distress (Compassion from Others). As seen in Table 4, although there was the least variability in Compassion to Self, participants on average scored highest on Compassion to Others.

### 3.2.4. Sample Psychological Distress and Wellbeing

When asked, 44.50% indicated that they had struggled with (current or historical) mental health problems and/or diagnosis. This answer was given in a short-form text box, which participants could use to describe these difficulties in more detail if they desired. These answers were then coded by researchers as either 'yes' or 'no' (with blank text boxes being coded as 'no') to the question of "Have you ever suffered with mental health difficulties or received a mental health diagnosis? If so, please give a brief description below, including whether this is still currently affecting you."

Participants gave written answers including depression, anxiety, eating disorder, personality disorder, Post-Traumatic Stress Disorder, amongst others.

Neurodivergent conditions (e.g., Attention Deficit Hyperactivity Disorder, Autism Spectrum Disorder) were not classified as mental health conditions unless explicitly stated that these conditions had impacted their mental health or caused distress.

Interestingly the DASS-21 scores highlighted high rates of depressive and anxious symptoms in our sample (Table 5), however the SWEMWBS evidenced similar

wellbeing in our sample,  $M=21.31$ ,  $SD=3.48$ , when compared to a standardised England population in a national health survey,  $M=23.61$ ,  $SD=0.05$  (Ng Fat et al., 2017). This suggests our results can be generalised to a population with

**Table 5. Frequency of Participant Scores on the Depression Anxiety and Stress Scale-21.**

Depression Anxiety Stress Scale-21	Frequency (%)				
	Normal	Mild	Moderate	Severe	Extremely Severe
Depression	0 (0.0%)	0 (0.0%)	76 (38.0%)	41 (20.5%)	83 (41.5%)
Anxiety	0 (0.0%)	0 (0.0%)	29 (14.5%)	62 (31.0%)	109 (54.5%)
Stress	6 (3.0%)	23 (11.5%)	44 (22.0%)	62 (31.0%)	65 (32.5%)

### 3.3. RQ1: Are There Gender Differences in the Relevance of MAC Domains to Moral Decisions?

The first research question aimed to investigate whether there were *gender* differences in the relevance of MAC domains to moral decisions. As the numbers of people who identified with gender options other than ‘female’ or ‘male’ were so small,  $N=8$ , they could not be examined statistically. As a result of their removal from statistical analysis, the question was re-defined in terms of ‘are there any sex differences (i.e., male versus female) in the relevance of MAC domains to moral decisions?’ This resulted in a sample of 192 participants, of which males comprised 48 participants versus 144 females.

As shown in Table 6, an initial look at the descriptive statistics yielded higher mean scores for females across all MAC domains, although differences were typically within  $SD<.05$ . There were no outliers in the data, as assessed by inspection of a boxplot. MAC-R scores for each level of sex were normally distributed, as assessed

by Shapiro-Wilk's test ( $p > .05$ ), and there was homogeneity of variances, as assessed by Levene's test for equality of variances ( $p = .174$ ). Independent samples *t*-tests confirmed there were no significant differences between males versus females across any of the MAC-R domains (Table 6). There were small effect sizes (*d*) for Heroism, Fairness, and Possession Rights, where females were likely to score higher on these domains than males, however this was a trend rather than a statistically significant difference.

**Table 6. Comparisons between Male and Female Scores on the Morality-As-Cooperation Relevance Scale.**

<b>Morality-As-Cooperation Domains</b>	<b>Male M (SD)</b>	<b>Female M (SD)</b>	<b>Mean difference (95% CI)</b>	<b><i>t</i> (p-value)</b>	<b>Cohen's <i>d</i></b>
Family Values	13.06 (2.91)	13.44 (2.98)	-0.38 (-1.35,0.59)	-0.74 (.44)	-.13
Group Loyalty	11.69 (3.24)	12.00 (2.95)	-0.31 (1.31,0.68)	-0.62 (.54)	-.10
Reciprocity	13.33 (3.66)	13.72 (3.41)	-0.39 (-1.53,0.75)	-0.67 (.50)	-.11
Heroism	10.71 (3.13)	11.61 (3.25)	-0.90 (-1.96,0.16)	-1.68 (.09)	-.28
Deference	9.42 (3.21)	9.52 (3.41)	-0.10 (-1.21,1.00)	-0.19 (.85)	-.03
Fairness	10.75 (3.51)	11.36 (3.59)	-0.61 (-1.78,0.56)	-1.03 (.30)	-.17
Possession Rights	12.90 (3.94)	13.45 (3.68)	-0.56 (-1.79,0.68)	-0.89 (.38)	-.15

*Note:* *M* = Mean, *SD* = Standard Deviation. Degrees of freedom = 190.



### 3.4. RQ2: Is There a Relationship Between Attachment and MAC-R (or particular MAC-R domains)?

#### 3.4.1. Is There a Unique Influence of Sex on Any Relationship Between Attachment and MAC-R?

Although no differences were found between sexes on MAC-R scores, part of the second research question was concerned with whether there was a unique influence of sex on the relationship between attachment (measured by ASQ-SF) and MAC-R. To address this, a General Linear Model (GLM) was employed using the 192-participant sample. The model incorporated two covariates (Insecure-Anxious, Insecure-Avoidant), seven dependent variables (MAC-R domains), and sex (male, female) as a fixed factor. This allowed for the examination of the unique variance attributed to Insecure-Anxious or Insecure-Avoidant attachment. The direction of investigated relationship between attachment and morality was predicated on the MFT hypothesis that there is a 'first draft' of the moral mind, which is then edited by early experience (Graham et al., 2013; see Section 1.3.2.1.).

Visual inspections of scatterplots suggested a linear relationship among the DVs. The homogeneity of the data was supported by the non-violation of Levene's test of equal variance,  $p=.341-.968$ , and visual inspection of Spread-vs-Level plots. Pearson's correlations demonstrated no evidence of multicollinearity,  $r<.29$  in all cases. Mahalanobis distance values revealed there was one multivariate outlier, using the criteria of  $\chi^2(7)>24.32$ ,  $p<.001$  (Tabachnick & Fidell, 2014); but, when the analyses were run both including and excluding the outlier, they produced similar results, resulting in the decision to not remove the outlier. As the outlier is included, Pillai's Trace ( $V$ ) statistic was utilised due to its robustness to assumption violations (Olson, 1974). Additionally, homogeneity of covariance matrices was confirmed via Box's M test,  $p=.011$ .

The GLM yielded a small contribution of sex to MAC-R scores,  $F(7,181)=0.47$ ,  $p=.857$ ,  $\eta_p^2=.018$ . With sex controlled for, the overall influence of attachment to MAC-R scores was moderate from Insecure-Anxious,  $F(7,182)=2.46$ ,  $p=.020$ ,  $\eta_p^2=.086$ , and Insecure-Avoidant,  $F(7,182)=2.07$ ,  $p=.049$ ,  $\eta_p^2=.074$ . When investigated further, looking at the specific contributions of Insecure-Anxious and Insecure-Avoidant

attachment to individual MAC domains, the GLM revealed some small effects (Appendix J). The relationships demonstrating at least a small effect size were subsequently examined using linear regression to identify the predictive nature of the specific relationships. Table 7 illustrates the significant relationships found, all of which exhibited small effect sizes.

The regression equations for relationships with Insecure-Anxious attachment:

- Relevance of Family Values =  $9.19 + 1.18x(\text{Insecure-Anxious})$ . Meaning, for every one-point increase in Insecure-Anxious attachment, there was an increase of 1.18 points in relevance of Family Values, 95%CI[0.49,1.88].
- Relevance of Group Loyalty =  $9.30 + 0.75x(\text{Insecure-Anxious})$ . Meaning, for every one-point increase in Insecure-Anxious attachment, there was an increase of 0.75 points in relevance of Group Loyalty, 95%CI[0.02,1.47].
- Relevance of Heroism =  $8.18 + 0.91x(\text{Insecure-Anxious})$ . Meaning, for every one-point increase in Insecure-Anxious attachment, there was an increase of 0.91 points in relevance of Heroism, 95%CI[0.14,1.68].
- Relevance of Deference =  $5.75 + 1.07x(\text{Insecure-Anxious})$ . Meaning, for every one-point increase in Insecure-Anxious attachment, there was an increase of 1.07 points in relevance of Deference, 95%CI[0.27,1.86].
- Relevance of Fairness =  $6.18 + 1.43x(\text{Insecure-Anxious})$ . Meaning, for every one-point increase in Insecure-Anxious attachment, there was an increase of 1.43 points in relevance of Fairness, 95%CI[0.59,2.27].
- Relevance of Possession Rights =  $9.55 + 1.07x(\text{Insecure-Anxious})$ . Meaning, for every one-point increase in Insecure-Anxious attachment, there was an increase of 1.07 points in relevance of Possession Rights, 95%CI[0.17,1.97].

The regression equations for relationships with Insecure-Anxious Attachment:

- Relevance of Reciprocity =  $8.14 + 1.53x(\text{Insecure-Avoidant})$ . Meaning, for every one-point increase in insecure-Avoidant attachment, there was an increase of 1.53 points in relevance of Reciprocity, 95%CI[0.63,2.43].

### 3.4.2. Five-factor Model

As sex exhibited only a minor influence on MAC-R domains, and the two-factor attachment model accounted for a modest effect size in explaining the relationship between ASQ-SF and MAC-R, a subsequent General Linear Model (GLM) was conducted using the five-factor ASQ-SF model without sex as a factor. This model included five covariates (Confidence, Discomfort with Closeness, Relationships as Secondary, Preoccupation with Relationships, and Need for Approval) and seven dependent variables (MAC-R domains). Thus, the sample consisted of 200 participants.

As before, visual inspections of scatterplots suggested a linear relationship between the DVs, and Pearson correlations demonstrated no evidence of multicollinearity,  $r < .68$  in every case. No outliers were identified using Mahalanobis distance values,  $\chi^2(7) > 24.32$ ,  $p < .001$  (Tabachnick & Fidell, 2014) and Pillai's  $V$  statistic was employed again to ensure robustness. As there were no fixed factors in the model, Levene's test of equal variance and Spread-vs-Level plots could not be produced.

The GLM yielded medium unique contributions of Confidence,  $F(7,188)=2.39$ ,  $p=.023$ ,  $\eta_p^2=.082$ , Discomfort with Closeness,  $F(7,188)=2.814$ ,  $p=.008$ ,  $\eta_p^2=.095$ , Relationships as Secondary,  $F(7,188)=3.27$ ,  $p=.003$ ,  $\eta_p^2=.108$ , and Preoccupation with Relationships,  $F(7,188)=1.75$ ,  $p=.100$ ,  $\eta_p^2=.061$ . A small unique contribution was found from Need for Approval,  $F(7,188)=1.62$ ,  $p=.131$ ,  $\eta_p^2=.057$ . Again, the specific contributions of the five factors revealed some small effects (Appendix J), which were subsequently examined using linear regression to identify the predictive nature of the specific relationships (see Table 7). The relationships found were at small effect sizes.

The regression equations for relationships with Discomfort with Closeness:

- Relevance of Reciprocity =  $10.46 + 0.81x(\text{Discomfort with Closeness})$ . Meaning for every one-point increase in Discomfort with Closeness, there was an increase of 0.81 points in relevance of Reciprocity, 95%CI[0.29, 1.32].
- Relevance of Deference =  $7.13 + 0.60x(\text{Discomfort with Closeness})$ . Meaning for every one-point increase in Discomfort with Closeness, there was an increase of 0.60 points in relevance of Deference, 95%CI[0.10, 1.11].

**Table 7. Linear Regressions Demonstrating the Relationships between Attachment Style Questionnaire and Morality-As-Cooperation Relevance Scale.**

Relationship between ASQ and MAC-R Domains		Variability Explained	<i>F</i>	<i>r</i>	<i>p</i> -value
<b>Two-Dimension Model</b>	<b>Insecure-Anxious</b>				
	Family Values	5.6%	11.22	.24	<.01*
	Group Loyalty	2.1%	4.12	.15	.04
	Heroism	2.8%	5.41	.17	.02
	Deference	3.5%	6.94	.19	.01
	Fairness	5.6%	11.26	.24	<.01*
	Possession Rights	2.8%	5.56	.17	.02
	<b>Insecure-Avoidant</b>				
Reciprocity	5.6%	11.28	.24	<.01*	
<b>Five-Factor Model</b>	<b>Discomfort with Closeness</b>				
	Reciprocity	4.6%	9.48	.21	<.01
	Deference	2.7%	5.52	.16	.02
	<b>Relationships as Secondary</b>				
	Group Loyalty	5.4%	11.23	.23	<.01*
	<b>Need for Approval</b>				
	Family Values	3.3%	6.69	.18	.01
	Fairness	4.8%	9.93	.22	<.01
	<b>Preoccupation with Relationships</b>				
	Group Loyalty	2.3%	4.69	.15	.03
Heroism	2.4%	4.87	.15	.03	

*Note: Degrees of freedom for Two-Dimension Model = (1, 190). Degrees of freedom for Five-Factor Model = (1, 198). ASQ = Attachment Style Questionnaire. MAC-R = Morality-As-Cooperation Relevance Subscale. \* =  $p < .001$ .*

The regression equations for relationships with Relationships as Secondary:

- Relevance of Group Loyalty =  $14.26 - 0.81x(\text{Relationships as Secondary})$ . Meaning for every one-point increase in Relationships as Secondary, there was an decrease of 0.81 points in relevance of Group Loyalty, 95%CI[-1.29,-0.33].

The regression equations for relationships with Need for Approval:

- Relevance of Family Values =  $11.40 + 0.53x(\text{Need for Approval})$ . Meaning for every one-point increase in Need for Approval, there was an increase of 0.53 points in relevance of Family Values, 95%CI[0.13,0.94].
- Relevance of Fairness =  $8.84 + 0.78x(\text{Need for Approval})$ . Meaning for every one-point increase in Need for Approval, there was an increase of 0.78 points in relevance of Fairness, 95%CI[0.29,1.27].

The regression equations for relationships with Preoccupation with Relationships:

- Relevance of Group Loyalty =  $10.46 + 0.44x(\text{Preoccupation with Relationships})$ . Meaning for every one-point increase in Preoccupation with Relationships, there was an increase of 0.44 points in relevance of Group Loyalty, 95%CI[0.04,0.84].
- Relevance of Heroism =  $9.66 + 0.49x(\text{Preoccupation with Relationships})$ . Meaning for every one-point increase in Preoccupation with Relationships, there was an increase of 0.49 points in relevance of Heroism, 95%CI[0.05,0.92].

Interestingly, in these models, the only MAC-R domain not accounted for by one of the five ASQ-SF factors was Possession Rights. The Confidence subscale was not found to be a specific predictor of any MAC-R domain.

### **3.5. RQ3: Is There a Relationship Between Compassion and MAC-R (or particular MAC-R domains)?**

The third research question was concerned with a possible relationship between compassion (as measured by CEAS) and MAC-R. A GLM was conducted, including

three covariates (Compassion to Self, Compassion to Others, Compassion from Others) and the seven MAC-R domains (DVs). The sample was 200 participants.

As before, visual inspections of scatterplots suggested a linear relationship between the DVs and Pearson's correlations demonstrated no evidence of multicollinearity,  $r < .35$  in every case. The outlier identified by Mahalanobis distance values,  $\chi^2(7) > 24.32$ ,  $p < .001$  (Tabachnick & Fidell, 2014), was retained in the sample with the use of Pillai's  $V$  statistic to increase robustness. As there were no fixed factors in the model, Levene's test of equal variance and Spread-vs-Level plots were not produced.

The GLM yielded a medium contribution of Compassion to Self,  $F(7,190)=1.82$ , Pillai's  $V=.063$ ,  $p=.086$ ,  $\eta_p^2=.063$ , and Compassion from Others,  $F(7,190)=2.04$ , Pillai's  $V=.070$ ,  $p=.052$ ,  $\eta_p^2=.070$ , on MAC-R scores. For Compassion to Others, a large unique effect was revealed,  $F(7,190)=6.14$ , Pillai's  $V=.185$ ,  $p < .001$ ,  $\eta_p^2=.185$ . Similar to the attachment analyses, the GLM yielded some small-to-medium effect sizes for the unique contributions of the three compassion variables to specific MAC domains (Appendix K) and subsequent regression analyses were conducted (Table 8). Interestingly, whilst most effect sizes found were small, Compassion to Others predicted Family Loyalty with a moderate effect. The Self-Compassion subscale was not found to be a specific predictor of any MAC-R domain.

The regression equations for relationships with Compassion to Others:

- Relevance of Family Values =  $7.28 + 0.75x(\text{Compassion to Others})$ . Meaning, for every one-point increase in Compassion to Others, there was an increase of 0.75 points in relevance of Family Values, 95%CI[0.47,1.04].
- Relevance of Group Loyalty =  $8.01 + 0.54x(\text{Compassion to Others})$ . Meaning, for every one-point increase in Compassion to Others, there was an increase of 0.54 points in relevance of Group Loyalty, 95%CI[0.24,0.84].
- Relevance of Fairness =  $7.45 + 0.51x(\text{Compassion to Others})$ . Meaning, for every one-point increase in Compassion to Others, there was an increase of 0.54 points in relevance of Fairness, 95%CI[0.15,0.87].

**Table 8. Linear Regressions Demonstrating the Relationships between Compassionate Engagement and Action Scales and Morality-As-Cooperation Relevance Scale.**

<b>Relationship Between CEAS and MAC-R Domains</b>	<b>Variability Explained</b>	<b>F</b>	<b>r</b>	<b>p-value</b>
<b>Compassion to Others</b>				
Family Values	12.2%	27.54	.35	<.01*
Group Loyalty	5.9%	12.59	.24	<.01*
Fairness	3.8%	7.77	.19	.01
Possession Rights	2.2%	4.39	.15	.37
<b>Compassion from Others</b>				
Reciprocity	2.0%	3.98	.14	.05

*Note: Degrees of freedom = (1,198). CEAS = Compassionate Engagement and Action Scales. MAC-R = Morality-As-Cooperation Relevance Subscale. \* = p<.001.*

- Relevance of Possession Rights =  $10.34 + 0.40 \times (\text{Compassion to Others})$ . Meaning, for every one-point increase in Compassion to Others, there was an increase of 0.40 points in relevance of Possession Rights, 95%CI[0.02,0.78].

The regression equations for relationships with Compassion from Others:

- Relevance of Fairness =  $11.27 + 0.18 \times (\text{Compassion from Others})$ . Meaning, for every one-point increase in Compassion from Others, there was an increase of 0.18 points in relevance of Fairness, 95%CI[0.00,0.36].

### **3.6. RQ4: Does Compassion to Others Explain via Mediation a Relationship Between Secure Attachment and MAC-R?**

Although the ASQ-SF two-factor model captured secure attachment, it was not defined as a separate construct, instead it is conceived as the 'opposite' on the insecure attachment scales, and so the Confidence subscale of the five-factor ASQ-SF was employed as the measure of attachment security.

Baron and Kenny's (1986) causal steps approach to mediation suggested that there should be a significant relationship between: i) the predictor and outcome variable; ii) the predictor to the mediating variable; iii) the mediator to the outcome variable when both the predictor and mediator are tested as IVs; and finally, iv) the coefficient relating the predictor to the outcome variable must be larger than the coefficient when the mediator is included in the model. Hayes (2009) argued that this causal model actually results in the least power and contradicts the intended aim of a mediation model, namely, to test the intervening effect. Similarly, empirical research has highlighted that there can be a significant indirect effect even in the absence of a significant direct relationship between X and Y (Agler & de Boeck, 2017; Loeys et al., 2015). This is pertinent considering that earlier GLM analyses did not reveal any unique influence of Confidence on MAC-R domains, although previous research and conceptualisations of the constructs (e.g., Koleva et al., 2014) supported further investigation of the possible relationships (see Section 1.6. for the literature review).

Historically, limitations of Baron and Kenny's (1986) approach were addressed through implementing the Sobel test (Sobel, 1982) to assess the statistical significance of the indirect effect. Nevertheless, as Bollen and Stine (1990) highlighted, the Sobel test was limited by its strong assumptions of normality. Bias-corrected bootstrapping methods were therefore developed to increase robustness by calculating values for Confidence Intervals (CI) of the indirect effect sizes (Efron & Tibshirani, 1994; Haukoos & Lewis, 2005). Of the available bootstrapping measures, bias-corrected bootstrapping is typically recommended in the literature (Hayes, 2018).

The assumption of multicollinearity was not violated when checked with Pearson's correlations,  $r = .19$ . An *a priori* power calculation using G\*Power recommended a sample size of 68, based on a linear multiple regression fixed model with  $R^2$  deviation from zero and two IVs (whereby power  $1 - \beta = .80$  and  $\alpha = 0.05$ ), which was exceeded by the study's sample size ( $N = 200$ ). To assess for multivariate outliers, three distance values (Mahalanobis, Cook's, and Leverage) were computed for each participant. Mahalanobis values greater than 13.82,  $= \chi^2(2) > 13.82$ ,  $p < .001$ ; Cook's



values greater than .02,  $=4/(N-k-1)$  (whereby N is the number of participants, and k is the number of IVs); and Leverage's values greater than 0.03,  $=(2*k+2)/N$ , were assigned a value of one. A total value was then computed by summing the assigned distance values, whereby a criterion of one or more indicated an outlier.

Across all distance values, twelve participants were denoted as an outlier on one distance value, one participant was an outlier on two, and one participant was an outlier on all three. Nevertheless, both Tabachnick and Fidell (2014) and Hayes (2018) advise cautiousness in the removal of outliers, due to the possibility of biasing parameter estimates and distorting results. When including the outliers, visual inspection of histogram and P-P plots suggested a normal distribution and linearity of the data, and scatterplot analysis supported homogeneity of variance. Thus, as bias-corrected bootstrapping increases robustness to assumption violations (Steffener, 2021), it was decided to retain the identified outliers.

The PROCESS v4.2 macro for SPSS software was used to conduct a Model Four (Hayes, 2018) mediation framework. These were based on 5000 bootstrap samples and 95% bias-corrected bootstrapped CIs. Values were selected to be probed at  $p < .10$ , conditioning values were selected at  $M \pm 1SD$ . Seven mediation models were run, for each of the MAC-R domains, whereby Confidence was the X variable, Compassion to Others was the M variable, and MAC-R domains were the Y variable.

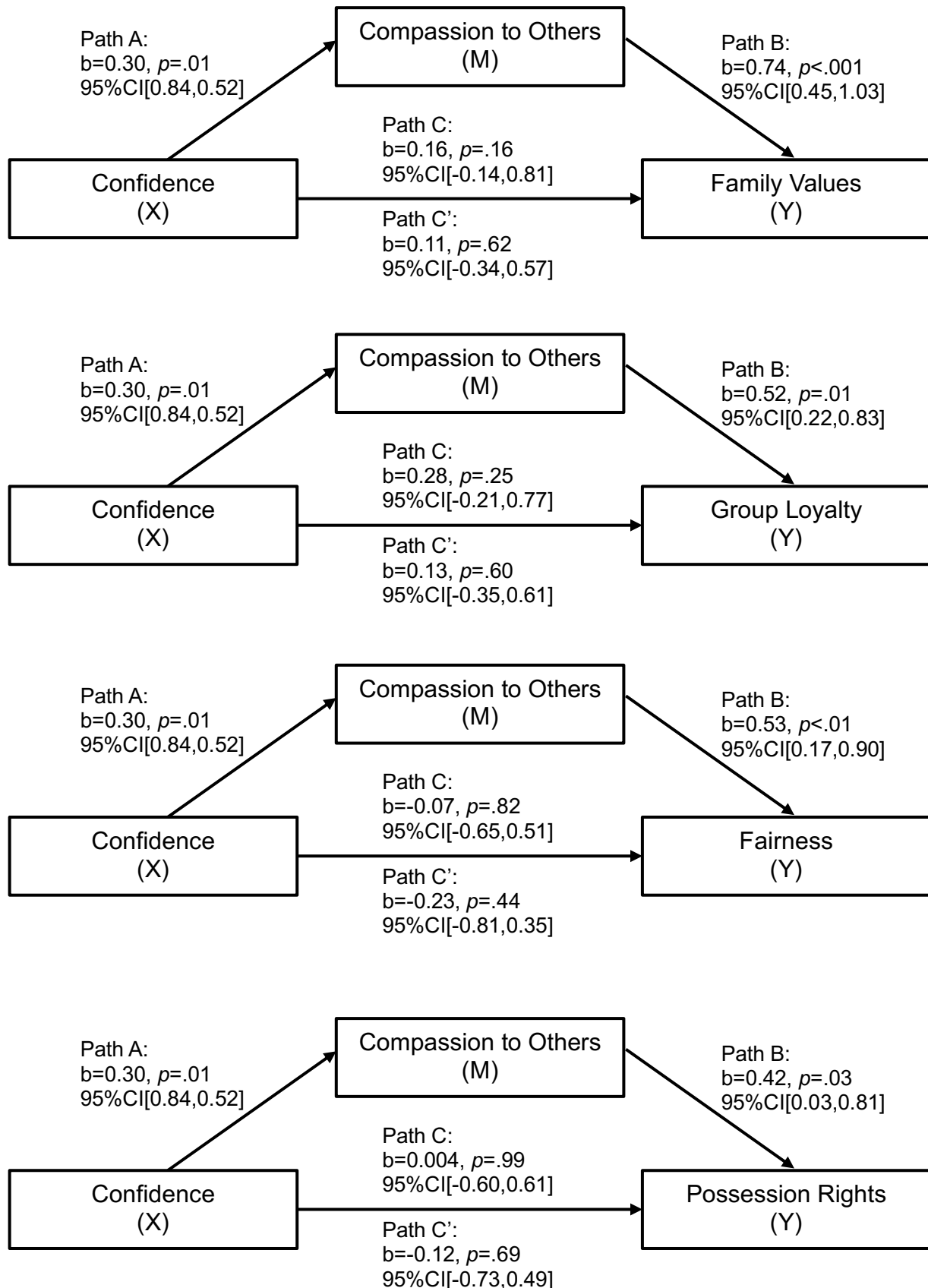
The results revealed a full mediation effect of Compassion to Others on the relationships between Confidence and the MAC-R domains: Family Values, Group Loyalty, Fairness, and Possession Rights (see Figure 2 for illustration of the mediation model including paths A, B, C, and C'). Full mediation describes when there is a significant total indirect effect, but a non-significant direct effect. For each of the models, the total effect (Path C) between the predictor and the outcome variables was not significant. The mediator is thus considered to fully explain the relationships between the predictor and outcome variable (Baron & Kenny, 1986).

- Compassion to Others produced a significant indirect effect on the relationship between Confidence and Family Values, 0.12, 95%CI[0.02,0.50].

- Compassion to Others produced a significant indirect effect on the relationship between Confidence and Group Loyalty, 0.16, 95%CI[0.01,0.37].
- Compassion to Others produced a significant indirect effect on the relationship between Confidence and Fairness, 0.16, 95%CI[0.01,0.36].
- Compassion to Others produced a significant indirect effect on the relationship between Confidence and Fairness, 0.13, 95%CI[0.003, 0.29].

As the bootstrapped CI on the indirect effect contained zero for Reciprocity, Heroism, and Deference, it can be rejected that Compassion to Others mediates relationships between these MAC-R domains and Confidence.

**Figure 2. Mediation Pathway Models for the Significant Indirect Effects between Confidence and Four Morality as Cooperation Relevance Domains Through Compassion to Others as a Mediator.**



### 3.7. RQ5: Does Compassion to Others Explain via Mediation a Relationship Between Insecure-Anxious Attachment and MAC-R?

Considering RQ4 demonstrated full mediation relationships between secure attachment (defined by Confidence in self and others) and MAC-R domains along the indirect pathway of Compassion to Others, the final research question was concerned with whether Compassion to Others could also explain any relationships between Insecure-Anxious attachment and MAC-R domains. Previous research has demonstrated that Insecure-Anxious individuals can exhibit many of the same moral judgement tendencies as those with a secure attachment, however that these tendencies may be mediated through more self-directed functions than compassion for others (Mikulincer et al., 2005; Shaver & Mikulincer, 2012)

These analyses therefore drew upon a similar mediation model as in RQ4: Model Four (Hayes, 2018) mediation framework, based on 5000 bootstrap samples and 95% bias-corrected bootstrapped CIs. Values were probed at  $p < .10$  and conditioning values were selected at  $M \pm 1SD$ . Again, seven mediation models were run, for each of the MAC-R domains, whereby Insecure-Anxious attachment (from the two-factor model of the ASQ-SF) was the predictor variable (X), Compassion to Others was the mediator (M), and the MAC-R domains were the outcome variables (Y). As there are the same number of IVs, the power calculation based on this model remained at a minimum sample size of 68 (N=200).

Multicollinearity was checked using Pearson correlations, which confirmed an absence of multicollinearity, however this also suggested that there was no correlation relationship between the two IVs,  $r = .08$ ,  $p = .279$ . Nevertheless, Hayes (2018) reported that a significant indirect effect can still be present even if path C' (i.e., the path between the predictor and outcome variables) is not significant. Mahalanobis, Cook's, and Leverage's distance values were calculated to check for multivariate outliers. Across all distance values, eleven participants were outliers on one distance value, two participants were outliers on two, and one participant was an outlier on all three. Including the outliers, visual inspection of histogram and P-P plots supported a normal distribution and linearity of the data, and scatterplot analysis supported homogeneity of variance. Thus, as before, it was decided to

retain these outliers in the sample, following the previous steps of using bias-corrected bootstrapping (Steffener, 2021).

However, when the mediation models were run, the results showed there was no mediation effect of Compassion to Others between Insecure-Anxious attachment and any MAC-R domain. For the models containing the outcome variable of Family Values, Group Loyalty, Deference, Fairness, or Possession Rights, the path C' was significant, indicating a direct effect of Insecure-Anxious attachment. However, the mediation effect was ultimately not significant (i.e., the bootstrapped CI on the indirect effect contained zero), suggesting that Compassion to Others does not explain these pathways.

## 4.0 DISCUSSION

In this chapter I will briefly summarise the key findings before exploring these in more depth, drawing on existing literature and identifying how this research contributes to the understandings of the constructs and their relationships. Next, I highlight the key implications with regards to moral literature as well as clinical applications. This is followed by a discussion of the thesis' limitations and proposed directions for future research.

### 4.1. Summary of Results

This research explored the relationships between attachment, compassion, and morality predicated on the emergent theory of Morality-As-Cooperation.

The main findings can be summarised as below:

- Sex exerted a small unique influence on MAC-R domains; however, this influence does not amount to reliable differences between males and females in the relevance of MAC domains to moral decisions.
- Insecure-Anxious and Insecure-Avoidant attachment both exerted a moderate influence on relevance of MAC domains to a person's moral decisions.  
Specifically:
  - Insecure-Anxious attachment positively predicted the relevance of Family Values, Group Loyalty, Heroism, Deference, Fairness, and Possession Rights domains.
  - Insecure-Avoidant attachment positively predicted relevance of Reciprocity.
- When attachment is further delineated into five facets, there remained unique influences on relevance of MAC domains from Confidence, Discomfort with Closeness, view of Relationships as Secondary, and Preoccupation with Relationships, whilst their Need for Attachment only exerted a small unique influence. Specifically:

- Discomfort with Closeness positively predicted the relevance of Deference and Reciprocity.
  - Relationships as Secondary negatively predicted the relevance of Group Loyalty.
  - Need for Approval positively predicted the relevance of Family Values and Fairness.
  - Preoccupation with Relationships positively predicted the relevance of Group Loyalty and Heroism.
- Compassion to Self and Compassion from Others also exhibited a moderate unique influence on relevance of MAC domains, whilst Compassion to Others demonstrated a large unique influence on relevance of MAC domains.  
Specifically:
    - Compassion to Others positively predicted the relevance of Family Values, Group Loyalty, Fairness, and Possession Rights to moral decisions.
    - Compassion from Others positively predicted the relevance of Fairness to moral decisions.
- Compassion to Others acted as a full mediator in the relationships between Confidence (secure attachment) with Family Values, Group Loyalty, Fairness, and Possession Rights.
  - Compassion to Others does not explain the relationships between Insecure-Anxious attachment and any MAC-R domains.

#### **4.2. Sex, Morality, and Cooperation**

Following Atari et al.'s (2020) recommendation (see Section 1.3.2.2.), the current thesis utilised MAC to test for sex differences in moral judgements. However, although there was a trend for females to score higher on MAC-R domains, no significant differences were found between sexes. This result is limited though by a relatively small sample size, whereby female representation was triple the number of males, which may have impacted the statistical power and biased the results.

Nevertheless, it is consistent with previous literature that found although female-dominated groups tended to exhibit higher cooperation, there are no significant sex differences (Balliet et al., 2011; Spadaro et al., 2023). This might suggest that any differences in moral judgements and cooperation are the result of situational and societal contexts, rather than intrinsic differences between males and females.

### **4.3. Attachment and Morality**

There is a growing body of research that evidences relationships between attachment and morality, specifically to moral judgements. The present study is only the second to draw on a pluralistic model of morality to investigate how attachment types influence an individual's regard to specific moral values, and the first to use MAC. Previous research has primarily focused on defining morality through either a deontological framework (in which there is a 'right' and 'wrong' moral choice) or utilitarian (in which participants judge whether to save an individual or a group, at the expense of the other). Although providing insight into the relationship between attachment and moral judgements, this research cannot capture the underlying moral values which the individual draws upon to make their decisions.

Koleva et al. (2014) investigated the relationship between attachment and moral foundations (using MFT). They found a positive relationship between Insecure-Anxious attachment and concerns for Harm, Fairness, and Purity; but a negative relationship between Insecure-Avoidance attachment and Harm and Fairness. In other words, when making moral judgements, Insecure-Anxious individuals are more likely to consider minimising harm to others, fairness (through social equality), and self-discipline. Whereas Insecure-Avoidant individuals are less likely to consider the harm to others or fairness. However, of the six MFT foundations, only three had any association with attachment. In contrast, the current study demonstrated relationships between attachment with all seven MAC domains. Positive relationships were between Insecure-Anxious attachment and the majority of the cooperative domains (Family Values, Group Loyalty, Fairness, Heroism, Deference, Possession Rights), whilst Insecure-Avoidant attachment was positively related to the remaining domain, Reciprocity.



#### 4.3.1. Insecure-Avoidant Attachment and Morality

Similar to previous research, the current findings support the hypothesis of a 'tit-for-tat' morality present in people who value equality (i.e., returning 'like-for-like'; Danielson, 1986). However, unlike Koleva et al. (2014), the current findings suggest this is present in people with Insecure-Avoidant attachment (rather than Insecure-Anxious). This is evident in the positive relationship between Insecure-Avoidance and MAC domain of Reciprocity. Within the MAC framework, Reciprocity refers to the cooperative exchanges in which an individual adheres to norms based on the expectation of reciprocal behaviour to ensure mutual benefit (Curry et al, 2019a). Koleva and colleague (2014) proposed that tit-for-tat related to the relationship between Insecure-Anxious and the MFT Fairness domain. However, MAC Reciprocity greater aligns with Rai and Fiske's (2011) conception of Equality, which was based on a reciprocation of a partner's actions, and where Koleva et al. (2014) drew their rationale of a tit-for-tat model from. Given the criticism of the MFT domains' lack of theoretical basis and that the MFT Fairness domain more accurately reflects social equality (not equity in interactions), I therefore suggest that tit-for-tat morality actually represents an Insecure-Avoidant person's tendency to value potentially reciprocal interactions.

In this updated construction, the Insecure-Avoidant individual may subscribe to behaviour that benefits the other person, but at the expectation that this morally good behaviour will be reciprocated (i.e., tit-for-tat). Typically, a person who scores highly on Insecure-Avoidance has a need to reduce their perceived dependence on others, which is said to emerge due to the emotional unavailability of their primary caregiver (Mikulincer & Shaver, 2019). The lack of emotional caregiving teaches the infant to subsequently suppress their attachment needs, develop self-reliant coping techniques, and have a discomfort with closeness. Nonetheless, Insecure-Avoidant individuals can still display prosocial behaviour, though research suggests this may result from different motivations (e.g., to avoid punishment or obtain approval; Gross et al., 2017) and or values (e.g., lower deontological concerns meaning they are more consider harming one person in order to save five as morally good; Maranges et al., 2022). The current data suggests that Insecure-Avoidant individuals also value reciprocal interaction. As Richman et al. (2015) found that Insecure-Avoidant individuals are more likely to engage in prosocial behaviour if the potential emotional

cost is reduced, a tit-for-tat function of cooperation might be preferred by Insecure-Avoidant individuals as it reduces the emotional burden of exchange. For example, it maintains boundaries in the structure of the cooperation (e.g., entering the exchange with others who have shown they previously 'keep their promises'). Boystyn et al. (2013) highlighted how individuals prefer others who operate similar cooperative values, meaning Insecure-Avoidant individuals who value reciprocity may also be more likely to engage in cooperation with other Insecure-Avoidant individuals. From their perspective, this might not only promote the potential effectiveness of the exchange but also reduce the emotional burden.

*4.3.1.1. Discomfort with Closeness:* This hypothesis is supported by the specific positive relationship found between ASQ Discomfort with Closeness and MAC Reciprocity. The discomfort domain of the ASQ is considered one of the two factors (in the five-factor model) encompassed by Insecure-Avoidant attachment (Feeney et al., 1994). An individual who experiences discomfort with closeness may be more inclined to engage in reciprocal exchange as a means of maintaining a sense of control and self-protection. As this discomfort often stems from fear of vulnerability or past experiences of rejection (Collins & Feeney, 2004), by adhering to rules of reciprocity and considering another person's historical behaviour, the Insecure-Avoidant individual may feel that they have established boundaries that minimise the risk of being emotionally hurt or exploited in relationships. Additionally, valuing reciprocity may enable them to feel a sense of equality in their interactions that mitigates the need for deeper emotional engagement or dependency on others.

Discomfort with Closeness was also positively related to the MAC domain of Deference, which is the recognition of authority and the desire to maintain social order and stability (Curry et al., 2019a). Although it may appear counterintuitive for someone who wishes to reject social intimacy to consider deference to authority as morally relevant, the value placed on social structures might also serve as a boundary that the individual feels reduces their risk of being emotionally hurt. By deferring to others, this might contribute to a sense of maintaining relationships as superficial, and thus avoid the discomfort associated with emotional closeness.

*4.3.1.2. Relationships as Secondary:* The second Insecure-Avoidant factor of the ASQ, Relationships As Secondary, was found to have a negative relationship to MAC Group Loyalty. In other words, the higher a person's belief that relationships are secondary to achievement, the less likely they are to consider benefit to the community as part of their moral judgements. The Relationships as Secondary domain reflects an individual's prioritisation of achievement and independence over maintaining relationships with others (Feeney et al., 1994), and so it seems logical that they would consider group loyalty as less morally relevant. Interestingly, this was the only negative relationship found and Relationships as Secondary was not related to any other MAC domains.

In summary, these findings underscore how early experiences (of emotional unavailability from caregivers) shape individuals' tendencies towards reciprocity, deference, and the prioritisation of achievement over relationships. It also lends evidence for the theorising of Insecure-Avoidant attachment as being predicated on negative models of others (Feeney et al., 1994), with a disposition towards creating emotional distance between the self and harmful others. The relationships to moral relevance domains reveal insights into how Insecure-Avoidant individuals might navigate social interactions, particularly in problems of cooperation, by valuing the establishment of boundaries to mitigate emotional risks. As Reciprocity was also not found to have a relationship to other attachment types, this might also suggest why Insecure-Avoidant values are typically conceived of as different to Insecure-Anxious and secure attachments.

#### 4.3.2. Insecure-Anxious Attachment and Morality

Insecure-Anxious attachment was found to have a positive relationship to six of the MAC domains (Family Values, Group Loyalty, Heroism, Deference, Fairness, Possession Rights). Meaning, individuals scoring highly on Insecure-Anxious attachment consider multiple forms of cooperation as relevant to moral judgments. This aligns with previous research that found individuals high in Insecure-Anxious attachment can demonstrate prosocial behaviour (Kogut & Kogut, 2013), but the findings also support the proposition that Insecure-Anxious individuals are preoccupied with their position within social groups (Rom & Mikulincer, 2003). It suggests a tendency to weigh multiple cooperative strategies before selecting the

most advantageous one – a hypothesis supported by research demonstrating Insecure-Anxious attachment's association with social comparison and pursuit of group closeness (Rom & Mikulincer, 2003; Smith LeBeau & Buckingham, 2008).

*4.3.2.1. Preoccupation with Relationships:* This suggestion is further supported by the positive relationship between Preoccupation with Relationships (one of the two factors comprising Insecure-Anxious attachment; Feeney et al., 1994) and Group Loyalty. The ASQ Preoccupation domain reflects an individual's strong desire for interpersonal closeness and validation from others, thus individuals who score high on this factor may view group loyalty as a means of fostering a sense of belonging. Additionally, valuing group loyalty may provide them with a sense of identity and purpose, further reinforcing their attachment to their group membership. Interestingly, although a relationship was found between Preoccupation and Group Loyalty, no specific relationship was demonstrated to the relevance of MAC Family Values in moral decisions.

Preoccupation with Relationships was also positively related to MAC Heroism. Heroism has long been used as a moral benchmark, often promoting those who exhibit heroic acts to an elevated social status (Franco et al., 2011). For individuals preoccupied with relationships, this may represent an idealised goal of their own group status, to counteract their negative self-image, which consequently motivates them to value people perceived as heroic.

*4.3.2.2. Need for Approval:* The second factor contained within Insecure-Anxious attachment is Need for Approval, which reflects an individual's tendency to seek external validation to alleviate their underlying feelings of insecurity and anxiety (Feeney et al., 1994). Subsequently, they may prioritise acceptance and approval from others at the expense of their own needs or values. ASQ Need for Approval was related to Family Values. When caregivers are emotionally inconsistent, providing intermittent warmth and support alongside periods of neglect or rejections, infants may feel that their self-worth is contingent on others' approval and validation (Luxton, 2002). As a result, they may perceive families as an idealised moral standard (from which they need to gain approval), which could explain the importance of family to their moral decisions.

Need for Approval was also related to MAC Fairness. As need for approval can stem from a deep-seated fear of rejection (Feeney et al., 1994), fairness as a moral principle might align with the individual's desire for equitable treatment and acceptance from others. By promoting fairness as a cooperative strategy, these individuals might hope to enhance their own likelihood of being perceived positively and to avoid conflict. Koleva et al. (2014) delineated fairness into three distinct aspects (Equity, Equality, Retribution), finding that Insecure-Anxious attachment was solely and positively related to the role of equity. The MAC construction of Fairness addresses the equitable distribution of resources, in contrast to MFT Fairness which is conceptualised as the equal treatment of individuals in a society (Graham et al., 2013). This further supports the idea that MAC is a more theoretically sound model of morality as it better conceptualises relationships found in previous research; namely, the relationship between Insecure-Anxious attachment and equitable resource sharing. Hence, these findings lend support to the notion that it is an individual's need for approval that drives the relevance of fairness to their moral deliberations.

In summary, these findings are consistent with the theory that early experiences of emotional inconsistency from caregivers shape individuals' valuing of family and group loyalty, equitable fairness, and valuing heroism. Support is also given for the modelling of Insecure-Anxious attachment as being predicted on a negative view of the self (Feeney et al., 1994) through the relevance of cooperation strategies that improve their self-identity (and to be more positively perceived by others). The relationships to moral relevance domains highlight how Insecure-Anxious individuals consider multiple strategies in social dilemmas in order to develop relationships and promote their social status. The differences in the relationships shown between Need for Approval and Preoccupation with Relationships with MAC domains further highlights how an internal conflict might occur when attempting to choose the strategy with the highest chance of 'success'.

When compared to the relationships found for Insecure-Avoidant people, this supports the potential origin of moral diversity being rooted in people's early experiences, particularly of attachment and social relationships (Koleva et al., 2014).

MAC posits that morality developed as a collection of biological and cultural solutions to the recurrent problems of cooperation in human social life thus, in order to successfully function in groups, the abilities for group members to take on different roles is integral (Curry, 2016). Therefore, it could be suggested, that it is important for individuals across the two insecure attachment styles to take on the different forms of cooperation. This hypothesis might also be supported by the fact that, despite demonstrating a moderate unique influence on the moral relevance domains, secure attachment (derived by ASQ Confidence in Relationships; Feeney et al., 1994) did not predict any specific relationships to MAC-R. This finding might suggest that people who are more securely attached are not tied to specific cooperative domains, but more able to adaptively consider the moral relevance as the need arises. This is important to note regarding the debate of using the term 'morality'. As discussed throughout this thesis, historically morality has been used to identify whether someone is 'good' or 'bad', however these results suggest that 'morality' is valued in different ways and depends on how early experiences have shaped an individual's interpersonal relationships.

#### **4.4. Compassion and Morality**

This thesis also addressed how compassion and morality related to one another. Research has highlighted links between morality and compassion (e.g., Batson, 2011; Cameron & Payne, 2012; Goetz et al., 2010) but no previous research has drawn together MAC and compassion. Gilbert's (2009) conceptualisation of compassion comprises three 'flows' that elucidate an individual's engagement with, and motivation to act on, distress through Compassion to Self, Compassion to Others, and Compassion from Others. Most research exploring the relationships between compassion (including through the related construct of empathic concern) and moral judgements have typically focused on judgements of the individual's own moral behaviour (e.g., Wang et al., 2017; Yang et al., 2020). This research therefore contributes to the field by exploring the effect on moral judgements of a subjective third person (i.e., the use of "someone" in the MACQ questions). Interestingly, in this study, although self-compassion exhibited an overall influence on MAC, there were no strong specific relationships to the domains.

#### 4.4.1. Compassion from Others and Morality

Compassion from Others reflects the sensitivity to compassion from people around us (Gilbert et al., 2017). The current findings revealed a positive relationship to MAC Fairness. As far as I am aware, this is the first study which has documented a relationship between morality and compassion from others. The quality of care an infant receives from their caregiver has been demonstrated to prime their later capacity for accepting compassion from others, and positively impacts on mental wellbeing and prosocial behaviour (Mikulincer et al., 2005). Subsequently, the current results suggest that when individuals perceive higher levels of compassion from others, they are more likely to value fairness in cooperative exchanges to ensure equitable treatment.

This might be particularly true for individuals with a secure attachment, who are generally more likely to perceive others as sources of soothing and security, be open to compassion from others, and engage in support-seeking when distressed (Gilbert et al., 2011). In contrast, individuals with an insecure attachment might be more wary of compassion from others (Gilbert et al., 2011; Mikulincer & Florian, 1995), and might even experience feelings of grief when wanting, but not receiving, care from others (Gilbert, 2010). In such cases, compassion from others could be experienced as threatening. However, this might also lead to the greater relevance of fairness in moral judgements, as the individual pays more attention to their share of resource equity.

#### 4.4.2. Compassion to Others and Morality

Overall, Compassion to Others emerged as the most influential compassion factor on MAC-R domains. This is in-line with previous research that posits compassion to others as the fundamental base of the broader construction of *compassion* (Gilbert et al., 2017) and the largest influence across multiple facets of morality (Narvaez, 2017). In addition to Compassion from Others, Compassion to Others was also positively related to Fairness. Previous research has highlighted how compassion to others leads to more altruistic, cooperative behaviour (DeSteno, 2015), particularly with a focus on helping and equity (Leiberg et al., 2011; Weng et al., 2015). This supports the presence of a relationship between MAC's definition of *fairness as equity* with compassion. One feature of compassion is perspective-taking (Gilbert,

2015), and higher compassion to others relates to higher capacity to understand and empathise with others' experiences. As a result, an individual would be more motivated to engage with fairness, to ensure that another person is not hurt by inequitable treatment, as they can empathise with the other's experience (Weng et al., 2015).

Compassion to Others was also positively related to MAC Family Values and Group Loyalty. Although distinct moral domains, it is interesting that both demonstrated a relationship to Compassion to Others. Perhaps, this reflects the importance of prosocial group membership to human evolutionary success and how the evolutionary biological and cultural mechanisms that developed to ensure compassionate care within communities extended beyond kin/familial relationships (Hrdy, 1999). Curry et al. (2022) proposed that Family Values and Group Loyalty can be combined to form a moral 'molecule' of Fraternity, which equates to extending kinship obligations/relationships to others within a larger community. This form of 'fictive kinship' has been well-documented throughout history, such as in the ideas of blood brotherhood (Abou-Abdallah et al., 2016; Jones, 2000), and highlights how compassion might similarly relate to both family and group.

Finally, Compassion to Others was also positively linked to Possession Rights. This domain of the MAC-R refers to the relevance of a person's rights over their property (Curry et al., 2019a). As far as I am aware, no previous research has investigated the influence of compassion on the moral valuing of ownership or possession rights. This finding suggests that individuals who feel higher compassion to others also consider the relevance of respecting others' possessions as a part of maintaining prosocial relationships, and that violations of possession rights are morally bad.

In summary, these results have shed light on the intricate relationships between compassion and morality. Self-compassion plays a role in moral decision-making but compassion to and from others emerged as significant predictors of several moral domains. This reflects the importance of social support, and responding to distress, in shaping moral considerations. In particular, the relationships between Compassion to Others with the relevance of family and group in moral judgements emphasises the evolutionary significance of compassion in promoting cooperation within groups.



Furthermore, the relationship with fairness was revealed to comprise a two-way 'flow' of compassion between the individual and others (to/from), which might suggest important implications for understanding social responsibility to equity. As people with a secure attachment are more sensitive to compassion (Mikulincer et al., 2005), this suggests that the relationship between compassion and moral judgements may be most evident among for individuals with a secure attachment.

#### **4.5. Compassion as a Mediator Between Attachment and Morality**

Consequently, to build upon an understanding of the underlying mechanisms driving moral behaviour across different attachment styles, a series of mediation analyses were conducted. These focused on investigating whether compassion mediated any relationships between secure attachment and the relevance of moral domains, contrasted to Insecure-Anxious attachment. This was predicated on previous research that highlighted the differential function of morality between secure and Insecure-Anxious attachments (Gillath et al., 2005b; Shaver & Mikulincer, 2012). In particular, this thesis focused on Compassion to Others as the mediating variable due to its presently found strong relationships to the MAC domains, its theoretical connection to empathic concern (which has previously been demonstrated as a mediating variable between attachment and morality; Koleva et al., 2014; Maranges et al., 2022), and its conception as the fundamental base of *compassion* (Gilbert et al., 2017). As Insecure-Avoidant attachment is typically modelled differently in relation to moral judgements, with a narrower pool of moral strategies, avoidance of emotional closeness, and reduced empathy/compassion (Kogut & Kogut, 2013; Maranges et al., 2022; Mikulincer et al., 2005; Robinson et al., 2015), the exploration of a relationship to compassion was not investigated further here.

Accordingly, the findings suggest that whilst compassion mediates the relationships between secure attachment and moral judgements (specifically in the relevance of considering family, group, fairness, and possession rights), compassion does not mediate any relationships between Insecure-Anxious attachment and moral judgements. In fact, Insecure-Anxious attachment did not correlate with Compassion to Others. These results suggest that there are differences in the function of moral behaviour between secure versus Insecure-Anxious attachment. Specifically, it

supports previous research that proposes Insecure-Anxious individuals' morality is defensively employed and motivated by a personal need (e.g., for group approval; Shaver & Mikulincer, 2012). In contrast, securely attached individuals value cooperative behaviour from a genuine desire to aid others that stems from being sensitively attuned to the suffering of others (Gilbert et al., 2017; Monteoliva et al., 2018). Mikulincer et al. (2005) proposed that a securely attached individual's capacity to engage in moral/caring behaviour is due to the satisfaction of their need for protection through the attachment systems, which then enables them to direct resources to other systems (e.g., the caregiving system). On the other hand, it is suggested that the tendency for Insecure-Anxious individuals to draw on multiple cooperative strategies to inform their moral judgements is driven by other factors, such as a need to belong (Robinson et al., 2015; Shaver & Mikulincer, 2012).

These findings may seem somewhat contrasting to previous research which found a mediative effect of empathic concern between insecure attachment and moral judgements (Koleva et al., 2014). However, firstly, empathic concern and compassion differ on one key aspect: commitment to action. Whilst empathic concern primarily entails the emotional aspect of empathy, compassion encompasses not only empathising with others' emotions and experiences but also taking action to alleviate their suffering or support their wellbeing (Gilbert, 2017). Secondly, there are theoretical differences in the conceptions of the MFT versus MAC domains. For instance, the MFT Fairness domain is concerned with social equality (e.g., "Whether or not some people were treated differently than others"; Graham et al., 2011, p.21) whilst the MAC Fairness domain is concerned with equitable division of shares (e.g., "Whether or not someone kept the best part for themselves"; Curry et al., 2019, p. 121). Therefore these results may illustrate distinctly different pathways in moral judgements.

In the mediation model, there was no direct relationship between secure attachment to any of the moral domains. However, this supports the findings that Compassion to Others fully explained the relationships between secure attachment and the relevance of MAC Family Values, Group Loyalty, Fairness, and Possession Rights. In other words, when making a moral judgement, a securely-attached individual is more likely to consider the benefits to their family and community, whether their

actions are fair, and previous ownership, *due* to their increased compassion towards other people. This has far-reaching implications at both an individual and group level. For instance, individually, in the understanding of motivations for prosocial behaviour and social support as well as reducing moral disengagement. Plus, at a group level, there are potential implications for the promotion of social cohesion, prosocial behaviour, ethical leadership, conflict resolution, and societal wellbeing

#### **4.6. Implications for Moral Literature**

This thesis adds to the ongoing discourse surrounding morality and supports the MAC framework as a valuable avenue for further exploration. The findings presented here, particularly the differential associations between MAC domains with attachment and compassion, align with the theoretical underpinnings of MAC and attend to the influence of social and individual factors on moral decision-making. That the MAC domains were distinctly associated with Insecure-Avoidant and Insecure-Anxious attachment lends support to its theoretical basis, as the two attachment types entail different emotional approaches to social relationships and moral decisions (Maranges et al., 2022). This aligns with the MAC prediction that variation in moral values will reflect variation in the value placed on cooperation under different conditions (i.e., because there are many types of cooperation, there will be many types of morality; Curry et al., 2019b). Using robust research methods and comparisons with well-established psychological constructs further contributes to the trend of using scientific procedures within MAC literature (Li et al., 2023). Lei et al. also highlighted the pressure MAC places on the development of moral literature (typically grounded in philosophical ethics), and commended that MAC offers valuable, testable insights into the formation of moral behaviour, considering individual character alongside external influences.

DeScioli et al. (2014) found that, in a game where resources could be divided according to equal shares or proportionally to effort, players were more likely to favour the rule that benefitted themselves (i.e., opting for equal shares if they had contributed less effort, or proportionality if they had contributed more). In Curry et al.'s (2019b) paper, Smith and Kurzban described this study as an argument against the idea of cooperation being inherently morally valued, however Curry's response

stated that cooperation as an evolutionary strategy is inherently disposed to 'selfish' tendencies (as evolutionary success classically equates to reproductive success; Gleicher & Barad, 2006) and that moral behaviour can still entail negative consequences. I wonder whether the current finding that Insecure-Anxious individuals are not driven to moral judgements through compassion also contributes to Curry's argument in support of MAC. In other words, whilst 'morality' reflects acts of cooperation, these acts might not be driven by what is typically considered as 'morally good' motivations. Although humans may have an evolutionary disposition to cooperation, they are inevitably influenced by their contexts and the evolutionary drive to survive (Shackelford & Liddle, 2014). This argument also brings together literature regarding moral disengagement (Bandura, 1999), in which humans can act in ways that go against their own or society's moral standards in order to achieve an outcome. Nevertheless, as attachment security increases, moral disengagement decreases (Chugh et al., 2014). Perhaps, this supports the hypothesis that securely attached individuals are better able to adaptively value cooperation according to the context, meaning there is reduced conflict between their moral values and behaviour.

This thesis also contributes to the moral literature by supporting the hypothesis, initially posited in MFT, that there is an evolutionary-driven draft of the moral mind that is refined by experience and culture (Graham et al., 2013). Curry et al.' (2022) work first endorsed the extension of this concept into the MAC framework. They discussed the degree to which moral predictions are inherent versus learned, and whether moral preferences are universally applicable or culturally contingent. Their paper argued that the seven MAC domains represent intrinsic and universal elements, which cultivate into culturally-specific moral 'molecules' (e.g., Fraternity, Patriotism). Essentially, whilst the MAC domains are innate mechanisms rooted in evolution, the moral building blocks are shaped by cultural and personal factors. Accordingly, the present findings suggest that the early experiences shaping attachment styles are one form of contextual variables that shape moral considerations.

The current study also further highlights the importance of compassion to moral decision-making. Although compassion has long been considered integral to morality (Goetz et al., 2010), these findings particularly highlight its role to moral judgements

in the normative development of secure attachment. However, as the three compassion ‘flows’ also yielded unique influences on the MAC domains, this posits compassion as another contextual variable which shapes morality. The role of compassion to moral judgements in insecure attachment is perhaps more complex and further research needed. Importantly, this thesis is the first to empirically link attachment, compassion, and moral judgements.

#### **4.7. Implications for Clinical Practice**

As discussed in the Introduction chapter, previous research has established empirical connections between secure attachment and increased compassion with improved mental and social wellbeing (particularly see Sections 1.4.1. and 1.5.); including access to social support mechanisms and improved life satisfaction (Deniz & Yıldırım Kurtuluş, 2023; Ognibene & Collins, 1998; Raque-Bogdan et al., 2011; Wei et al., 2011). On the other hand, insecure attachment and reduced compassion can have negative implications on wellbeing (Ferrari et al., 2019; Palitsky et al., 2013; Zhang et al., 2022). Therefore, attachment and compassion are both important therapeutic targets for clinical intervention (Gilbert, 2009; Navarro-Gil et al., 2020).

The current findings suggest an Insecure-Anxious individual’s tendencies to consider specific moral domains might reflect their need for approval or preoccupation with relationships (i.e., a negative model of the self; Feeney et al., 1994). This perspective is supported by previous research that established Insecure-Anxious individuals engage in prosocial behaviour due to self-enhancing motivations (Gillath et al., 2005a; Gillath et al., 2005b; Shaver & Mikulincer, 2012). As compassion-focused interventions have been demonstrated to have a positive impact on self-esteem (Thomason & Moghaddam, 2021), this further supports the proposition of compassion as an important target for therapeutic intervention for Insecure-Anxious individuals. Since compassion inherently focuses on others (feeling *with*), interventions aimed at enhancing compassion may also facilitate a more prosocial approach to cooperation – which has also been demonstrated to have a positive link to wellbeing (Helliwell et al., 2017; Lauri & Calleja, 2019; Rosli & Perveen, 2021). Moreover, as compassion was found to have a mediative role in the presence of secure attachment, this aligns with Baldwin et al. (2020) who suggested that

therapeutic work would have the most efficacy when first focusing on increasing attachment security before supplementing with compassion-based therapies.

For individuals with Insecure-Avoidant attachment styles, this study further offers valuable insights into their interpersonal attitudes. Namely, the importance of reciprocal interactions as well as deference when experiencing discomfort with closeness and a diminished sense of connection to the community amongst those who prioritise achievement over relationships. These findings carry important implications for therapeutic settings. Skourteli and Lennie (2011) highlighted that Insecure-Avoidant individuals tend to mistrust their therapist, yet also displayed a conflictive desire for emotional closeness whilst being uncertain over their capacity to establish and maintain supportive relationships. In light of the current findings of an association between Insecure-Avoidance with reciprocity, this fits Skourteli and Lennie's recommendations that therapists establish bounded and reciprocal interactions to foster a sense of consistency in the therapeutic relationship. Therapeutic work might also focus on a graded exposure approach to engaging Insecure-Avoidant individuals in prosocial behaviour (e.g., by starting with more emotionally-distanced behaviours). This proposal is supported by themes that emerged from qualitative interviews with therapists regarding their approach to working with Insecure-Avoidant clients (Daly & Mallinckrodt, 2009). Furthermore, promoting engagement in prosocial behaviour can be an important therapeutic outcome, due to its positive link with mental wellbeing (Helliwell et al., 2017). Therefore, there are implications for the establishment of therapeutic engagement as well as intervention targets.

Another area of clinical relevance is in addressing moral dilemmas, particularly when confronted with moral injury. Clients may encounter situations requiring them to navigate conflicting values. In such cases, therapists could assist clients to explore these dilemmas within the MAC framework to identify the most pertinent domains for the client. This would enable therapists to examine with the client the specific conflicts in their values and consider alternative perspectives through exploring the other domains relevant to the moral challenge they face. This may enable the client to develop moral resilience (i.e., the ability to respond positively and uphold moral values in the face of challenges or adversity; Rushton, 2017) and reduce moral

disengagement (Bandura, 1999) by learning to adaptively draw on the moral domains as appropriate, rather than being constrained to specific strategies. This approach could also help to reduce moral conflict with another person, for example, by highlighting shared goals whilst acknowledging the different cooperative attempts to achieve them. Therapeutic interventions could therefore use MAC to focus on building coping strategies and moral reasoning skills to navigate morally complex situations effectively.

In essence, utilising the MACQ as a therapeutic tool can contribute to the clinical formulation, by identifying the individual's moral values and the relevance of the cooperative domains. Furthermore, understanding the empirical relationships found in this study might provide insights appropriate for client-centred formulations, that could help to establish therapeutic goals and understand barriers to achieving the goals.

## **4.8. Limitations**

### **4.8.1. Internet-Based Research**

Internet-based research provides several advantages compared to laboratory-based studies with regards to data collection from large and diverse groups across wide geographical areas (Nosek et al., 2002) and can offer greater speed and accuracy in data collection and scoring (Naglieri et al., 2004). However, online research presents ethical concerns, particularly regarding informed consent and the underrepresentation of certain age and socio-economic groups (e.g., older adults with limited internet access). The absence of an experimenter can also increase the risk of participant misunderstanding, potentially leading to study discontinuation or completion errors (Nosek et al., 2002), and participants are less likely to ask questions via email, making it challenging to detect when instructions are not understood (Naglieri et al., 2004). Furthermore, as participants can simply exit an online platform without explanation, it can be challenging to understand the reasons for their discontinuation from the study. This is especially pertinent to the current research as a number of participants dropped out after starting the study, but the reasons for their departure are unknown.

#### 4.8.2. Sample Generalisability

Although an advantage of internet-based research is the ability to recruit larger and more diverse samples than in-person strategies, these samples may not be representative of a general population, which limits the generalisability of the findings (Naglieri et al., 2004). For example, internet-based studies are restricted to those who have access to internet-capable devices, as well as the knowledge of how to use them. In the current sample, generalisability should be interpreted with caution particularly due to the skewed age and gender representation. Previous research has found age effects in moral judgements, with McNair et al.'s (2019) finding that older adults make more deontological moral decisions. They found this was partly explained by older adults exhibiting more negative affective reactions to moral dilemma scenarios and having more morally idealistic beliefs. Age differences have also been found in attachment anxiety, with older adults less likely to exhibit Insecure-Anxious attachment (Chopik et al., 2013; Segal et al., 2009). As our sample was skewed to working-age, the generalisability of the findings beyond those age brackets is limited.

Similarly, the planned gender difference analyses were not undertaken due to the limited diversity of gender identities in the sample. And, whilst sex difference analyses were conducted, the over-representation of females may have biased the results and limited the statistical power to ascertain difference. Furthermore, given that attachment styles had differential relationships to the MAC domains, and previous research has found sex differences in attachment styles (specifically, males tended to score higher in Insecure-Avoidance whilst females higher in Insecure-Anxious; del Giudice, 2019), the current study did not assess sex differences in attachment styles to see if this also influenced our results.

Additionally, our sample was highly educated, with over 86% holding at least an undergraduate degree (or equivalent), compared to 48.40% of the adult population in the United Kingdom (GOV.UK, 2023). Previous research has established that education level has an influence on moral judgements, specifically through supporting the cognitive and affective mechanisms that promote moral reasoning skills (Doyle & O'Flaherty, 2013).



Moreover, it is important to note our sample was largely from a White background (White-British and other White backgrounds). This further limited its generalisability and means nuances in cultural differences towards MAC could not be explored. The sample recruitment strategies largely relied upon opportunity and convenience sampling from online forums including survey swap websites as well as the researchers' personal and professional networks. This likely impacted the limited generalisability of the sample as the potential participants in these pools are skewed towards particular demographics. For instance, participants from survey swap websites are also likely to be completing their own research – whereby completion of another's study results in gaining participants for their own study. Additionally, the two co-researchers are cis-gendered, White, University-education, young working-age females and share many of these characteristics with individuals in their personal and professional networks who then took part in the study after seeing its advertisement.

Therefore, although this thesis presents some interesting findings and initial discussions, it is important to be cautious in the generalising of the present findings. The results can most accurately be interpreted within a cis-gendered female, White, University-educated, young working-age population.

#### 4.8.3. Theoretical Limitations

As a central framework to the research, the study is inherently limited by the theoretical constraints of MAC. Firstly, although the moral significance of the seven MAC domains have been indicated in over 60 societies (Curry et al., 2019b) and initial evidence suggests cross-cultural applicability in non-Western contexts (Yilmaz et al., 2021), further empirical research is needed to establish cross-cultural stability. Curry et al. (2019a) recognised there are limitations to the MACQ question phrasing, which could potentially lead to ambiguity or conflict in how items representing specific domains are perceived by participants. In addition, they acknowledged there could be other cooperative domains that operate under the MAC framework which are currently unidentified.

Furthermore, there is also ongoing debate over the comprehensiveness of MAC in representing morality. For instance, whilst concerns related to care and purity have

traditionally been intertwined with moral considerations, MAC does not treat them as distinct domains. Curry et al. (2019a) argued this is due to care and purity actually representing underlying psychological that function to enable cooperative problem-solving solutions mechanisms (such as sympathy and disgust). Still, critics argue that MAC is a reductionistic theory of morality that overlooks the complexity and multidimensionality of moral decision-making and does not adequately account for cultural variations in moral values and norms (Gellner et al., 2020). Nevertheless, MAC is an emergent theory that is developing and attempting to draw together fields such as evolutionary psychology, anthropology, and game theory.

There are also criticisms of attachment theory, many of which are predicated on its inherent bias to a WEIRD population as well its inability to capture sub-cultural within-culture differences (Maranges et al., 2022). For example, Rothbaum et al. (2005) highlighted that attachment measures typically focus on Western ideals of parent-child interactions, such as the child's response to reunion following separation. They stated that parental sensitivity and the idea of a secure base do not translate into (for example) Japanese parental values, and therefore the fundamental attachment theory tenets are not universal. Furthermore, efforts to cross-culturally validate attachment measures, such as the ASQ in a Malaysian population (Ng et al., 2005), have shown mixed results, indicating issues with content validity and reliability. This illustrates the problems of using standard measures across diverse cultural settings. The present thesis aimed to recruit participants through online platforms, however demographic analysis revealed a predominantly British sample. Whilst this limits the generalisability of our findings, it does suggest some applicability of the attachment measure within this specific cultural context. Nonetheless, future research should strive for greater cultural sensitivity to account for variations in attachment dynamics across different cultural settings.

#### 4.8.4. Effect Sizes

The effects found in this research were mainly small, which suggests the relationships between the variables are minimal. However, as Koleva et al. (2014) highlighted, attachment tends to be most strongly associated with outcomes related to close relationships, meaning analyses tend to result in only small effects when the other included variables are not proximal relational outcomes (e.g., partner

responsiveness; la Guardia & Patrick, 2008). Based on the findings of their meta-analysis exploring parent-child attachment research, Schuengel et al. (2021) proposed, that effect size benchmarks should be recalibrated to reflect the literature more accurately. They suggested revisions better aligned with Funder and Ozer (2019), in which small effects should be noted around  $r=.10$ , medium effects around  $r=.20$ , and large effects around  $r=.30$ . This would have implications for the interpretation of some of the present results. Furthermore, if the current findings were reinterpreted in-line with Funder and Ozer's (2019) suggestions, this would place limitations on the robustness of the research, due to the relatively small sample size.

#### 4.9. Future Research

In suggested by Curry et al. (2019a), further development of MAC measures should take place to capture the moral valence of its domains. Following the approach taken by Selterman and Koleva (2015), future studies could aim to differentiate the impact of attachment styles or demographic factors in relation to the moral value or *wrongness* assigned to the MAC domains. This could offer further insights into moral functioning where there is insecure attachment, in particular to address the utility or preferences for different solutions to cooperation/'being moral'. Translating the MACQ questions into moral dilemma scenarios would also be an interesting area for exploration, especially regarding the impact of emotional closeness on moral judgment. Further research is also necessary to elucidate how the MAC domains manifest into specific actions.

Although dependable sex differences were not found in this data, the evidence of trends across the MAC-R domains (whereby females typically scored higher than males) suggest the need for larger-scale investigations. Such studies could delve into potential differences based on sex (or gender), especially how socialisation experiences linked to gender roles (Cerbara et al., 2022) might influence moral perceptions (e.g., the implicit social messaging given to boys to be 'strong', akin to Heroism, versus for girls to be 'kind', akin to Deference or Fairness). Further exploration into demographic variations (e.g., age) on the MAC domains is also needed, particularly due to the earlier exploration of the impact of elder age on moral

judgements (see Section 4.8.2.). Importantly, future investigation into the relationships between the constructs of attachment, compassion, and MAC should be addressed in diverse cultural samples and using more culturally-sensitive attachment measures.

Investigating potential mediators between insecure attachment and MAC domains is another recommended area for research. The current findings support a model in which individuals high in Insecure-Anxious attachment are driven to cooperate by a self-focused goal to promote social status, whilst individuals high in Insecure-Avoidant attachment are motivated by an other-focused goal of maintaining emotional distance. The four insecure attachment factors of the ASQ (Preoccupation with Relationships, Need for Approval, Discomfort with Closeness, Relationships as Secondary) represent good contenders for possible mediators, in-line with research from Robinson et al. (2015) and Maranges et al. (2022). Disorganised attachment (Howe et al., 1999) is relatively less researched, and so future research could also include this attachment style in its modelling. Additionally, previous research has demonstrated the experimental impact of attachment security priming on moral decisions (e.g., Mikulincer et al., 2005), given the relevance of compassion found in this study, future experimental studies might also explore the impact of compassion priming. This might also provide valuable insights into clinical implications.

Perhaps there is also scope to further investigate how the three flows of compassion relate to MAC. This might draw on research variables to include other transdiagnostic measures of psychological distress and wellbeing (e.g., shame, low mood). As issues of morality are often linked to experiences of shame (Tangney et al., 2007), it would also be interesting to consider how early experiences of shame shape an individual's moral judgements using the MAC. This would also build on our understanding of how early contextual experiences shape morality.

#### **4.10. Conclusion**

In conclusion, this thesis has provided important contributions to the field of morality. It also offers evidence in support of the theory of MAC through demonstrating unique

relationships between MAC and the well-established theories of attachment and compassion. The data suggests that while compassion frames the moral decisions of securely attached individuals, it does not mediate the moral judgements of people reporting Insecure-Anxious attachment. This underscores the complexity of moral decision-making and the subtle yet significant contextual influences of attachment and compassion on the relevance of moral decisions. This thesis highlights that morality is composed not just from the inherent, evolutionary-guided, disposition to cooperation but shaped through an individual's early experiences. Moving forward, these findings pave the way for further exploration into the mechanisms underlying moral decision-making and the potential therapeutic implications for individuals with different attachment orientations. Such research will deepen our knowledge of morality, its multifaceted nature, and the intricate interplay of the self and other relationships within the realm of human values and behaviour.

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## APPENDICES

### APPENDIX A: Search Terms for Scoping Review

The scope of the literature review was defined as (Booth et al., 2012):

1. Who = morally developed adults in the general population.
2. What = morality, attachment, compassion.
3. How (will the study impact on the who) = situate the current study within previous research by identifying literature that explores relationships or interactions between morality, attachment, and compassion in human adults.

The search string used was: moral\* AND attach\* AND (compass\* OR empath\*)

Databases searched: PsychInfo, Academic Search Ultimate, CINAHL Complete, Scopus – plus Grey Literature and Reference/Citations lists

Limiters included:

- English language only.
- Adults only (18+ years).
- Human only.
- Keyword search included “morality”.

## APPENDIX B: Ethics Application



### UNIVERSITY OF EAST LONDON School of Psychology

### APPLICATION FOR RESEARCH ETHICS APPROVAL FOR RESEARCH INVOLVING HUMAN PARTICIPANTS (Updated October 2021)

FOR BSc RESEARCH;  
MSc/MA RESEARCH;  
PROFESSIONAL DOCTORATE RESEARCH IN CLINICAL, COUNSELLING &  
EDUCATIONAL PSYCHOLOGY

## Section 1 – Guidance on Completing the Application Form (please read carefully)

1.1	<p>Before completing this application, please familiarise yourself with:</p> <ul style="list-style-type: none"> <li>▪ British Psychological Society’s Code of Ethics and Conduct</li> <li>▪ UEL’s Code of Practice for Research Ethics</li> <li>▪ UEL’s Research Data Management Policy</li> <li>▪ UEL’s Data Backup Policy</li> </ul>
1.2	<p>Email your supervisor the completed application and all attachments as ONE WORD DOCUMENT. Your supervisor will look over your application and provide feedback.</p>
1.3	<p>When your application demonstrates a sound ethical protocol, your supervisor will submit it for review.</p>
1.4	<p>Your supervisor will let you know the outcome of your application. Recruitment and data collection must <b>NOT</b> commence until your ethics application has been approved, along with other approvals that may be necessary (see section 7).</p>
1.5	<p>Research in the NHS:</p> <ul style="list-style-type: none"> <li>▪ If your research involves patients or service users of the NHS, their relatives or carers, as well as those in receipt of services provided under contract to the NHS, you will need to apply for HRA approval/NHS permission (through IRAS). You DO NOT need to apply to the School of Psychology for ethical clearance.</li> </ul>

	<ul style="list-style-type: none"> <li>▪ Useful websites:  <a href="https://www.myresearchproject.org.uk/Signin.aspx">https://www.myresearchproject.org.uk/Signin.aspx</a>  <a href="https://www.hra.nhs.uk/approvals-amendments/what-approvals-do-i-need/hra-approval/">https://www.hra.nhs.uk/approvals-amendments/what-approvals-do-i-need/hra-approval/</a> </li> <li>▪ If recruitment involves NHS staff via the NHS, an application will need to be submitted to the HRA in order to obtain R&amp;D approval. This is in addition to separate approval via the R&amp;D department of the NHS Trust involved in the research. UEL ethical approval will also be required.</li> <li>▪ HRA/R&amp;D approval is not required for research when NHS employees are not recruited directly through NHS lines of communication (UEL ethical approval is required). This means that NHS staff can participate in research without HRA approval when a student recruits via their own social/professional networks or through a professional body such as the BPS, for example.</li> <li>▪ The School strongly discourages BSc and MSc/MA students from designing research that requires HRA approval for research involving the NHS, as this can be a very demanding and lengthy process.</li> </ul>
1.6	<p>If you require Disclosure Barring Service (DBS) clearance (see section 6), please request a DBS clearance form from the Hub, complete it fully, and return it to applicantchecks@uel.ac.uk. Once the form has been approved, you will be registered with GBG Online Disclosures and a registration email will be sent to you. Guidance for completing the online form is provided on the GBG website:  <a href="https://fadv.onlinedisclosures.co.uk/Authentication/Login">https://fadv.onlinedisclosures.co.uk/Authentication/Login</a>  You may also find the following website to be a useful resource:  <a href="https://www.gov.uk/government/organisations/disclosure-and-barring-service">https://www.gov.uk/government/organisations/disclosure-and-barring-service</a></p>
1.7	<p>Checklist, the following attachments should be included if appropriate:</p> <ul style="list-style-type: none"> <li>▪ Study advertisement</li> <li>▪ Participant Information Sheet (PIS)</li> <li>▪ Participant Consent Form</li> <li>▪ Participant Debrief Sheet</li> <li>▪ Risk Assessment Form/Country-Specific Risk Assessment Form (see section 5)</li> <li>▪ Permission from an external organisation (see section 7)</li> <li>▪ Original and/or pre-existing questionnaire(s) and test(s) you intend to use</li> <li>▪ Interview guide for qualitative studies</li> <li>▪ Visual material(s) you intend showing participants</li> </ul>

## Section 2 – Your Details

2.1	<b>Your name:</b>	Megan Waterman Sarah Turner
2.2	<b>Your supervisor's name:</b>	Dr Matthew Jones Chesters
2.3		Dr Trishna Patel

	<b>Name(s) of additional UEL supervisors:</b>	
2.4	<b>Title of your programme:</b>	Professional Doctorate of Clinical Psychology
2.5	<b>UEL assignment submission date:</b>	May 2024 July 2024

## Section 3 – Project Details

Please give as much detail as necessary for a reviewer to be able to fully understand the nature and purpose of your research.

3.1	<p><b>Study title:</b>  <u>Please note</u> - If your study requires registration, the title inserted here must be <u>the same</u> as that on PhD Manager</p>	<p>The good, the bad, or the cooperative: Morality-as-Cooperation and its relationships with attachment, early memories, compassion, wellbeing, and distress.</p>
3.2	<p><b>Summary of study background and aims (using lay language):</b></p>	<p>The conceptualisation of morality has been widely debated across the last century. Recently, theorists have come to understand it from an evolutionary perspective, highlighting how cooperation with the social group realises mutual benefit, helping to sustain and advance the group. These ideas underpin the Morality as Cooperation (MAC) theory (Curry, 2016), describing seven domains of morality, which can be measured via the Moral as Cooperation Questionnaire (MAC-Q) (Curry, Chesters &amp; Lissa, 2018).</p> <p>Morality has been linked to many concepts related to mental health, such as distress. Moral identity predicts mental health and wellbeing (Hardy et al, 2012), with meta-analyses portraying how moral distress is reliably related to poorer mental health outcomes (McEwen, Alisic, &amp; Jobson, 2021). Regardless of diagnosis, common concerns for those with mental health difficulties have also been linked to morality.</p> <p>Morality has also been linked to transdiagnostic concepts, such as shame (Nazarov et al, 2015). Shame is understood as a self-conscious emotion, impacting one's sense of self and is</p>

		<p>associated with vulnerability to psychopathology (Gilbert, 1998; Kim et al, 2011), as well as interpersonal problems (Matos, Pinto-Gouveia &amp; Gilbert, 2013). It is considered a moral emotion due to its self-conscious nature (Tangney, Stuewig &amp; Mashek, 2007).</p> <p>Another emotion key to morality is compassion, referring to kindness, warmth and empathy to others, as it encompasses our urge to look after others (Spikins, 2015). Compassion towards the self moderates the relationship between moral conflict and mental distress, such as post-traumatic stress and depression (Forkus, Brienes &amp; Weiss, 2019). Self compassion has also been associated with ethical behaviour (Yang, Guo &amp; Kuo, 2020). Compassion towards others is also notable, which is considered an evolutionary mechanism to support the group (Gilbert, 2019) and has been related to moral reasoning (Loewenstein &amp; Small, 2007).</p> <p>Finally, another important aspect of how we treat others is attachment. Attachment theory concerns patterns learnt in childhood, determining how individuals relate to one another throughout their lives (Bowlby, 1969), and is thus prominent in understandings of mental distress. Secure attachment has been linked to moral and ethical behaviour (Chugh, Kern, Zhu &amp; Lee, 2014). Whilst attachment anxiety and avoidance are related to differential moral concerns (Koleva, Selterman &amp; Graham, 2013)</p> <p>Yet to be examined is the relationship between MAC and such concepts.</p>
3.3	<b>Research question(s):</b>	<ol style="list-style-type: none"> <li>1. Are there relationships between MAC with attachment, early shame, early warmth, compassion, and wellbeing and distress?</li> <li>2. How do the seven MAC domains relate to or predict the included constructs?</li> </ol>



		3. Are these relationships influenced by other constructs or demographics included in the study?
3.4	<b>Research design:</b>	This study proposes a cross-sectional correlation model (whereby, the predictor variable is MAC; the dependent variables are attachment, early shame, early warmth, compassion, wellbeing, distress) from a critical realist perspective.
3.5	<b>Participants:</b> Include all relevant information including inclusion and exclusion criteria	A priori power calculation is not possible as population standard deviations are unknown. However, an accepted calculation (Green, 1991) suggests $N > 104$ plus the number of predictor variables ( $N > 104 + m$ ) with power = .8 and $\alpha = .05$ , meaning the study requires 110 participants. Participants will be recruited from various online spaces, such as Instagram, Facebook, and online mental health forums. Researchers aim to access a range of responses, so the only inclusion criteria will be sufficient English language and aged 18+. Demographic information will be recorded at the end of the survey, including age, sex, years of education, and a short statement of psychological symptoms.
3.6	<b>Recruitment strategy:</b> Provide as much detail as possible and include a backup plan if relevant	Advertisements for the study will be placed in various online, open forums (e.g., social media, mental health forums, and crowdsourcing websites). The online advertisement will direct potential participants to the study, where they can read the study information sheet for further information regarding the process. Should they wish to be involved, they will then indicate their consent using the consent form. It is not expected that a back-up plan is needed as the recruitment strategy should gain the necessary participant numbers, and the online advertisement can be placed in many online forums.
3.7	<b>Measures, materials or equipment:</b> Provide detailed information, e.g., for measures, include scoring	The study will require access to Qualtrics survey software online and the scales identified here. Administration instructions and scoring instructions will be required. An application to

<p>instructions, psychometric properties, if freely available, permissions required, etc.</p>	<p>UEL will be made, in line with Trainee budgets, to access £100 for a voucher to be used for the raffle. Scales required include:</p> <ul style="list-style-type: none"> <li>● Morality as Cooperation Questionnaire (Curry, Chesters &amp; Lissa, 2018). The MAC-Q is split into two subscales: a 57-item scale around morality judgement (internal consistency 0.53-0.83, test re-test reliability 0.66-0.87) and a 97-item scale measuring the moral relevance of domains (internal consistency 0.76-0.86, test re-test reliability 0.79-0.89).</li> <li>● Compassion and Engagement and Actions Scale (Gilbert et al, 2017): three subsections assess compassion we experience for others, from others, and self-compassion (each comprising an 8 item subscale and 5 item subscale), including attention checks. The authors demonstrate test-retest reliability (<math>r=0.74-0.88</math>). It was not possible to calculate internal consistency.</li> <li>● Attachment Style Questionnaire (short-form) (Alexander, Feeney, Hohaus &amp; Noller (2001): a 29-item measure of anxious and avoidant attachment tendencies, with good internal consistency (<math>\alpha=.83-.85</math>) and test re-test reliability (<math>r=.74-.80</math>) between subscales.</li> <li>● Early Memories of Warmth and Safeness Scale (Richter, Gilbert, &amp; McEwan, 2009). This is a 21-item scale designed to measure recall of feeling warm, safe and cared for in childhood.</li> <li>● ● The Shame Experiences Interview (SEI; Matos &amp; Pinto-Gouveia, 2006) is a semi-structured interview designed to assess the phenomenology of shame experiences from childhood or adolescence. This interview has been previously adapted for online questionnaires and permission has been obtained from the author to use a streamlined version. This will include shame memory description and impact of shame memory</li> </ul>
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		(part 1), coping (part 3), others responses (part 4) and frequency (part 6). (See appendix).	
3.8	<b>Data collection:</b> Provide information on how data will be collected from the point of consent to debrief	Data will be collected via an online survey/questionnaire on Qualtrics (held by the UEL account). The information sheet will be presented on the first page of the online survey. On the second page, participants will need to fill the consent form. These will outline the study purpose and ethical procedures as well as reminding participants of their right to withdraw. Participants will be able to fill the questionnaires only if they give consent. They will then answer the questionnaires on the following pages. If participants do not provide consent, they will be taken to the final page of the study. The debrief form will be presented on the last page of the online survey. Please see the Appendices for the information sheet, consent form and the debrief sheet.	
3.9	<b>Will you be engaging in deception?</b>	<b>YES</b> <input type="checkbox"/>	<b>NO</b> X
	If yes, what will participants be told about the nature of the research, and how/when will you inform them about its real nature?	n/a	
3.1 0	<b>Will participants be reimbursed?</b>	<b>YES</b> <input type="checkbox"/>	<b>NO</b> X
	If yes, please detail why it is necessary.	n/a	
	How much will you offer? <u>Please note</u> - This must be in the form of vouchers, <u>not cash</u> .	n/a	
3.1 1	<b>Data analysis:</b>	A quantitative approach will be taken, using SPSS software. Regression analyses will examine the relationship between morality (measured by the MAC-Q) and the transdiagnostic concepts described above. The individual domains within the MAC-Q will also be investigated using regression in relation to the transdiagnostic concepts. An exploratory factor analysis will also	

	examine the dimensions within the measures used. If necessary and useful, a moderation or mediation may be undertaken.
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## Section 4 – Confidentiality, Security and Data Retention

It is vital that data are handled carefully, particularly the details about participants. For information in this area, please see the UEL guidance on data protection, and also the UK government guide to data protection regulations.

If a Research Data Management Plan (RDMP) has been completed and reviewed, information from this document can be inserted here.

4.1	<b>Will the participants be anonymised at source?</b>	<b>YES</b> X	<b>NO</b> <input type="checkbox"/>
	If yes, please provide details of how the data will be anonymised.	Participants will not be asked to provide their name or other identifying details when completing the survey. They will be given a participant ID which will allow them to withdraw their data from the study if they wish to do so. This participant ID will enable the researcher to identify their data and delete it easily.	
4.2	<b>Are participants' responses anonymised or are an anonymised sample?</b>	<b>YES</b> X	<b>NO</b> <input type="checkbox"/>
	If yes, please provide details of how data will be anonymised (e.g., all identifying information will be removed during transcription, pseudonyms used, etc.).	Participants will not be asked to provide their name or other identifying details when completing the survey. Participants will be assigned a unique participant ID number. Consent forms will be stored away from questionnaire responses.	
4.3	<b>How will you ensure participant details will be kept confidential?</b>	Any personal data that is collected will be held securely and processed in accordance with the UK GDPR and the Data Protection Act 2018. Participants will not be identified by the data collected, on any material resulting from the data collected, or in any write-up of the research. The only personal information that will be retained will be information willingly given by the participant if they opt-in to the raffle (held as thanks for their participation). Email addresses will be securely stored in a password-protected file which is only accessible to the researchers and supervisors and will be anonymised as	

		reasonably possible. Researchers will contact the winners via email to gain further personal information required to receive the voucher. It will then be destroyed once the data collection has ended, and the raffle winners chosen.	
4.4	<b>How will data be securely stored and backed up during the research?</b> Please include details of how you will manage access, sharing and security	The data will be stored on my UEL's password protected OneDrive account in a folder that is not synchronised on any devices. Data will be sent to the supervisor as a backup during the study and stored on the supervisor's OneDrive account.	
4.5	<b>Who will have access to the data and in what form?</b> (e.g., raw data, anonymised data)	The two project researchers and our supervisors will have access to the raw data (which is anonymous). Examiners may also have access to the data if requested.	
4.6	<b>Which data are of long-term value and will be retained?</b> (e.g., anonymised interview transcripts, anonymised databases)	The anonymised dataset is of long-term value.	
4.7	<b>What is the long-term retention plan for this data?</b>	Anonymised research data will be securely stored on my supervisor's UEL's password-protected OneDrive account for a maximum of 3 years, following which all data will be deleted.	
4.8	<b>Will anonymised data be made available for use in future research by other researchers?</b>	<b>YES</b> <input checked="" type="checkbox"/>	<b>NO</b> <input type="checkbox"/>
	If yes, have participants been informed of this?	<b>YES</b> <input checked="" type="checkbox"/>	<b>NO</b> <input type="checkbox"/>
4.9	<b>Will personal contact details be retained to contact participants in the future for other research studies?</b>	<b>YES</b> <input type="checkbox"/>	<b>NO</b> <input checked="" type="checkbox"/>
	If yes, have participants been informed of this?	<input type="checkbox"/>	<b>N/A</b> <input checked="" type="checkbox"/>

## Section 5 – Risk Assessment

If you have serious concerns about the safety of a participant, or others, during the course of your research please speak with your supervisor as soon as possible. If there is any unexpected occurrence while you are collecting your data (e.g., a participant or the researcher injures themselves), please report this to your supervisor as soon as possible.

5.1	<p><b>Are there any potential physical or psychological risks to participants related to taking part?</b> (e.g., potential adverse effects, pain, discomfort, emotional distress, intrusion, etc.)</p>	<p><b>YES</b> X</p>	<p><b>NO</b> <input type="checkbox"/></p>	
	<p>If yes, what are these, and how will they be minimised?</p>	<p>Due to the sensitive topics discussed in the questionnaires, some participants may experience psychological distress. To minimise this risk, Participants will be given a brief overview of the nature of the questionnaires in the study information sheet and consent forms prior to commencing the study. This will enable participants to make an informed choice as to whether they wish to proceed. Signposting information for supporting agencies and wellbeing services will be provided at the end of the study in the debrief form. Furthermore, contact details of the researchers and the project supervisors will be included in the debrief form in case the participants want an in-person debrief meeting.</p>		
5.2	<p><b>Are there any potential physical or psychological risks to you as a researcher?</b></p>	<p><b>YES</b> <input type="checkbox"/></p>	<p><b>NO</b> X</p>	
	<p><b>If yes, what are these, and how will they be minimised?</b></p>	<p>Any communication with your participants will be using UEL email accounts. For questionnaires, there are usually no potential physical or psychological risks for the researcher except for the risk to the researcher's online identity.</p>		
5.3	<p><b>If you answered yes to either 5.1 and/or 5.2, you will need to complete and include a General Risk Assessment (GRA) form (signed by your supervisor). Please confirm that you have attached a GRA form as an appendix:</b></p>	<p><b>YES</b> X</p>		
5.4	<p><b>If necessary, have appropriate support services been</b></p>	<p><b>YES</b> X</p>	<p><b>NO</b> <input type="checkbox"/></p>	<p><b>N/A</b> <input type="checkbox"/></p>

	<b>identified in material provided to participants?</b>			
5.5	<b>Does the research take place outside the UEL campus?</b>	<b>YES</b> X		<b>NO</b> <input type="checkbox"/>
	If yes, where?	Online		
5.6	<b>Does the research take place outside the UK?</b>	<b>YES</b> X		<b>NO</b> X
	If yes, where?	Online - country-specific risk assessment not required		
	If yes, in addition to the General Risk Assessment form, a Country-Specific Risk Assessment form must also be completed and included (available in the Ethics folder in the Psychology Noticeboard). Please confirm a Country-Specific Risk Assessment form has been attached as an appendix. <u>Please note</u> - A Country-Specific Risk Assessment form is not needed if the research is online only (e.g., Qualtrics survey), regardless of the location of the researcher or the participants.		<b>N/A</b> X	
5.7	<b>Additional guidance:</b> <ul style="list-style-type: none"> <li>▪ For assistance in completing the risk assessment, please use the AIG Travel Guard website to ascertain risk levels. Click on 'sign in' and then 'register here' using policy # 0015865161. Please also consult the Foreign Office travel advice website for further guidance.</li> <li>▪ For on campus students, once the ethics application has been approved by a reviewer, all risk assessments for research abroad must then be signed by the Director of Impact and Innovation, Professor Ian Tucker (who may escalate it up to the Vice Chancellor).</li> <li>▪ For distance learning students conducting research abroad in the country where they currently reside, a risk assessment must also be carried out. To minimise risk, it is recommended that such students only conduct data collection online. If the project is deemed low risk, then it is not necessary for the risk assessment to be signed by the Director of Impact and Innovation.</li> </ul>			

	<p>However, if not deemed low risk, it must be signed by the Director of Impact and Innovation (or potentially the Vice Chancellor).</p> <ul style="list-style-type: none"> <li>Undergraduate and M-level students are not explicitly prohibited from conducting research abroad. However, it is discouraged because of the inexperience of the students and the time constraints they have to complete their degree.</li> </ul>
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## Section 6 – Disclosure and Barring Service (DBS) Clearance

6.1	<p><b>Does your research involve working with children (aged 16 or under) or vulnerable adults (*see below for definition)?</b></p> <p>If yes, you will require Disclosure Barring Service (DBS) or equivalent (for those residing in countries outside of the UK) clearance to conduct the research project</p>	<p><b>YES</b></p> <input type="checkbox"/>	<p><b>NO</b></p> <p>X</p>
<p>* You are required to have DBS or equivalent clearance if your participant group involves:</p> <p>(1) Children and young people who are 16 years of age or under, or</p> <p>(2) ‘Vulnerable’ people aged 16 and over with particular psychiatric diagnoses, cognitive difficulties, receiving domestic care, in nursing homes, in palliative care, living in institutions or sheltered accommodation, or involved in the criminal justice system, for example. Vulnerable people are understood to be persons who are not necessarily able to freely consent to participating in your research, or who may find it difficult to withhold consent. If in doubt about the extent of the vulnerability of your intended participant group, speak with your supervisor. Methods that maximise the understanding and ability of vulnerable people to give consent should be used whenever possible.</p>			
6.2	<p><b>Do you have DBS or equivalent (for those residing in countries outside of the UK) clearance to conduct the research project?</b></p>	<input type="checkbox"/>	<p><b>N/A</b></p> <p>X</p>
6.3	<p><b>Is your DBS or equivalent (for those residing in countries outside of the UK) clearance valid for the duration of the research project?</b></p>	<input type="checkbox"/>	<p><b>N/A</b></p> <p>X</p>



6.4	<b>If you have current DBS clearance, please provide your DBS certificate number:</b>	N/A
	If residing outside of the UK, please detail the type of clearance and/or provide certificate number.	Please provide details of the type of clearance, including any identification information such as a certificate number
6.5	<b>Additional guidance:</b> <ul style="list-style-type: none"> <li>▪ If participants are aged 16 or under, you will need two separate information sheets, consent forms, and debrief forms (one for the participant, and one for their parent/guardian).</li> <li>▪ For younger participants, their information sheets, consent form, and debrief form need to be written in age-appropriate language.</li> </ul>	

## Section 7 – Other Permissions

7.1	<b>Does the research involve other organisations (e.g., a school, charity, workplace, local authority, care home, etc.)?</b>	<b>YES</b> <input type="checkbox"/>	<b>NO</b> <input checked="" type="checkbox"/>
	If yes, please provide their details.	Please provide details of organisation	
	If yes, written permission is needed from such organisations (i.e., if they are helping you with recruitment and/or data collection, if you are collecting data on their premises, or if you are using any material owned by the institution/organisation). Please confirm that you have attached written permission as an appendix.	<b>N/A</b> <input checked="" type="checkbox"/>	
7.2	<b>Additional guidance:</b> <ul style="list-style-type: none"> <li>▪ Before the research commences, once your ethics application has been approved, please ensure that you provide the organisation with a copy of the final, approved ethics application or approval letter. Please then prepare a version of the consent form for the organisation themselves to sign. You can adapt it by replacing words such as ‘my’ or ‘I’ with ‘our organisation’ or with the title of the organisation. This organisational consent form must be signed before the research can commence.</li> </ul>		

- If the organisation has their own ethics committee and review process, a SREC application and approval is still required. Ethics approval from SREC can be gained before approval from another research ethics committee is obtained. However, recruitment and data collection are NOT to commence until your research has been approved by the School and other ethics committee/s.

## Section 8 – Declarations

8.1	<b>Declaration by student. I confirm that I have discussed the ethics and feasibility of this research proposal with my supervisor:</b>	<b>YES</b> X
8.2	<b>Student's name:</b> (Typed name acts as a signature)	Megan Waterman Sarah Turner
8.3	<b>Student's number:</b>	u2195644 u2195639
8.4	<b>Date: 28 April 2023</b>	<b>28 April 2023</b>
<b><i>Supervisor's declaration of support is given upon their electronic submission of the application</i></b>		

## APPENDIX C: Ethics Approval



University of  
East London

## School of Psychology Ethics Committee

### NOTICE OF ETHICS REVIEW DECISION LETTER

For research involving human participants

BSc/MSc/MA/Professional Doctorates in Clinical, Counselling and Educational  
Psychology

**Reviewer:** Please complete sections in **blue** | **Student:** Please complete/read sections in **orange**

### Details

<b>Reviewer:</b>	Please type your full name <b>Deborah Lee</b>
<b>Supervisor:</b>	Please type supervisor's full name <b>Matthew Jones Chesters</b>
<b>Student:</b>	Please type student's full name <b>Megan Waterman &amp; Sarah Turner</b>
<b>Course:</b>	Please type course name <b>Clinical doctorate</b>
<b>Title of proposed study:</b>	Please type title of proposed study

### Checklist

(Optional)

	YES	NO	N/A
Concerns regarding study aims (e.g., ethically/morally questionable, unsuitable topic area for level of study, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detailed account of participants, including inclusion and exclusion criteria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Concerns regarding participants/target sample	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Detailed account of recruitment strategy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Concerns regarding recruitment strategy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All relevant study materials attached (e.g., freely available questionnaires, interview schedules, tests, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Study materials (e.g., questionnaires, tests, etc.) are appropriate for target sample	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clear and detailed outline of data collection	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Data collection appropriate for target sample	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If deception being used, rationale provided, and appropriate steps followed to communicate study aims at a later point	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If data collection is not anonymous, appropriate steps taken at later stages to ensure participant anonymity (e.g., data analysis, dissemination, etc.) – anonymisation, pseudonymisation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Concerns regarding data storage (e.g., location, type of data, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Concerns regarding data sharing (e.g., who will have access and how)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Concerns regarding data retention (e.g., unspecified length of time, unclear why data will be retained/who will have access/where stored)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If required, General Risk Assessment form attached	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Any physical/psychological risks/burdens to participants have been sufficiently considered and appropriate attempts will be made to minimise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Any physical/psychological risks to the researcher have been sufficiently considered and appropriate attempts will be made to minimise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If required, Country-Specific Risk Assessment form attached	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If required, a DBS or equivalent certificate number/information provided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If required, permissions from recruiting organisations attached (e.g., school, charity organisation, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All relevant information included in the participant information sheet (PIS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information in the PIS is study specific	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Language used in the PIS is appropriate for the target audience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All issues specific to the study are covered in the consent form	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Language used in the consent form is appropriate for the target audience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All necessary information included in the participant debrief sheet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Language used in the debrief sheet is appropriate for the target audience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Study advertisement included	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Content of study advertisement is appropriate (e.g., researcher's personal contact details are not shared, appropriate language/visual material used, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Decision options

<b>APPROVED</b>	Ethics approval for the above-named research study has been granted from the date of approval (see end of this notice), to the date it is submitted for assessment.
<b>APPROVED - BUT MINOR AMENDMENTS ARE REQUIRED BEFORE THE RESEARCH COMMENCES</b>	In this circumstance, the student must confirm with their supervisor that all minor amendments have been made <b>before</b> the research commences. Students are to do this by filling in the confirmation box at the end of this form once all amendments have been attended to and emailing a copy of

	<p>this decision notice to the supervisor. The supervisor will then forward the student's confirmation to the School for its records.</p> <p><b>Minor amendments guidance:</b> typically involve clarifying/amending information presented to participants (e.g., in the PIS, instructions), further detailing of how data will be securely handled/stored, and/or ensuring consistency in information presented across materials.</p>
<p><b>NOT APPROVED - MAJOR AMENDMENTS AND RE-SUBMISSION REQUIRED</b></p>	<p>In this circumstance, a revised ethics application <b>must</b> be submitted and approved <b>before</b> any research takes place. The revised application will be reviewed by the same reviewer. If in doubt, students should ask their supervisor for support in revising their ethics application.</p> <p><b>Major amendments guidance:</b> typically insufficient information has been provided, insufficient consideration given to several key aspects, there are serious concerns regarding any aspect of the project, and/or serious concerns in the candidate's ability to ethically, safely and sensitively execute the study.</p>

## Decision on the above-named proposed research study

<p>Please indicate the decision:</p>	<p style="color: red; text-align: center;"><b>APPROVED - MINOR AMENDMENTS ARE REQUIRED BEFORE THE RESEARCH COMMENCES</b></p>
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## Minor amendments

Please clearly detail the amendments the student is required to make

1. **Participant information sheet page 16. Make it clearer that withdrawing 'at any time' means during the research, not after it, as after it there is a clear time limit after which withdrawing is not available, so to say 'at any time' is both confusing and incorrect. (I appreciate this is an error in the template.)**
2. **5.2 You will be reading about a series of difficult events for respondents – I would suggest that being more aware of the impact on you as researchers will be wise, rather than ticking the 'no' box for potential risks for you. I would expect to see some reflection on this ahead of the research taking place.**
3. **I don't follow how 'we don't expect any distress to be caused' by people recalling 'difficult thoughts and feelings', especially looking at what the respondents are being asked to recall. I think this needs more thought and some more detail added for respondents so they can be more certain if it is a study that they wish to risk undertaking. I also think that asking people to 'speak to friends and family' when some of what they recall may well be about at least their families, and offering them only Mind, Samaritans, mindfulness exercises, and a search for NHS therapy is problematic, page 16 participant information sheet. It feels like opening up some very sensitive areas and then offering some very generalised, and overstretched and limited, services. Can this be rethought to hold more in mind the nature of what is being asked? If these are the only services that feel appropriate, I'd look for more in the participant details of what is being asked of them.**

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## Major amendments

Please clearly detail the amendments the student is required to make

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## Assessment of risk to researcher

<b>Has an adequate risk assessment been offered in the application form?</b>	<b>YES</b> <input type="checkbox"/>	<b>NO</b> <input type="checkbox"/>
	If no, please request resubmission with an <b><u>adequate risk assessment</u></b> .	
<b>If the proposed research could expose the <u>researcher</u> to any kind of emotional, physical or health and safety hazard, please rate the degree of risk:</b>		
<b>HIGH</b>	Please <b>do not approve a high-risk</b> application. Travel to countries/provinces/areas deemed to be high risk should not be permitted and an application not be approved on this basis. If unsure, please refer to the Chair of Ethics.	<input type="checkbox"/>
<b>MEDIUM</b>	Approve but include appropriate recommendations in the below box.	<input type="checkbox"/>
<b>LOW</b>	Approve and if necessary, include any recommendations in the below box.	<input type="checkbox"/>

<b>Reviewer recommendations in relation to risk (if any):</b>	Please insert any recommendations
---	-----------------------------------

## Reviewer's signature

<b>Reviewer:</b> (Typed name to act as signature)	<b>Deborah Lee</b>
<b>Date:</b>	<b>18/07/2023</b>

***This reviewer has assessed the ethics application for the named research study on behalf of the School of Psychology Ethics Committee***

### RESEARCHER PLEASE NOTE

For the researcher and participants involved in the above-named study to be covered by UEL's Insurance, prior ethics approval from the School of Psychology (acting on behalf of the UEL Ethics Committee), and confirmation from students where minor amendments were required, must be obtained before any research takes place.

For a copy of UEL's Personal Accident & Travel Insurance Policy, please see the Ethics Folder in the Psychology Noticeboard.

## Confirmation of minor amendments

(Student to complete)

**I have noted and made all the required minor amendments, as stated above, before starting my research and collecting data**

<b>Student name:</b> (Typed name to act as signature)	<b>Megan Waterman</b> <b>Sarah Turner</b>
<b>Student number:</b>	<b>u2195644</b> <b>u2195639</b>
<b>Date:</b>	<b>20/07/2023</b>

***Please submit a copy of this decision letter to your supervisor with this box completed if minor amendments to your ethics application are required***

## APPENDIX D: Change of Title Approval Form



University of  
East London

### School of Psychology Ethics Committee

#### REQUEST FOR TITLE CHANGE TO AN ETHICS APPLICATION

For BSc, MSc/MA and taught Professional Doctorate students

**Please complete this form if you are requesting approval for a proposed title change to an ethics application that has been approved by the School of Psychology**

By applying for a change of title request, you confirm that in doing so, the process by which you have collected your data/conducted your research has not changed or deviated from your original ethics approval. If either of these have changed, then you are required to complete an 'Ethics Application Amendment Form'.

### How to complete and submit the request

1	Complete the request form electronically.
2	Type your name in the 'student's signature' section (page 2).
3	Using your UEL email address, email the completed request form along with associated documents to Dr J�r�my Lemoine (School Ethics Committee Member): <a href="mailto:j.lemoine@uel.ac.uk">j.lemoine@uel.ac.uk</a>
4	Your request form will be returned to you via your UEL email address with the reviewer's decision box completed. Keep a copy of the approval to submit with your dissertation.

### Required documents

A copy of the approval of your initial ethics application.	<b>YES</b> <input checked="" type="checkbox"/>
--	---

### Details

<b>Name of applicant:</b>	Megan Waterman
<b>Programme of study:</b>	Doctorate of Clinical Psychology



<b>Title of research:</b>	The good, the bad, or the cooperative: Morality-as-Cooperation and its relationships with attachment, early memories, compassion, wellbeing, and distress.
<b>Name of supervisor:</b>	<b>Dr Matthew Jones Chesters</b>

## Proposed title change

Briefly outline the nature of your proposed title change in the boxes below

<b>Old title:</b>	The good, the bad, or the cooperative: Morality-as-Cooperation and its relationships with attachment, early memories, compassion, wellbeing, and distress.
<b>New title:</b>	The good, the bad, or the cooperative - a new approach to morality: Investigating the relationships between attachment, compassion, and Morality-As-Cooperation.
<b>Rationale:</b>	The previous title does not accurately capture the contents of the thesis due to the previous ethics submission being submitted as part of a joint research project.

## Confirmation

<b>Is your supervisor aware of your proposed change of title and in agreement with it?</b>	<b>YES</b> <input checked="" type="checkbox"/>	<b>NO</b> <input type="checkbox"/>
<b>Does your change of title impact the process of how you collected your data/conducted your research?</b>	<b>YES</b> <input type="checkbox"/>	<b>NO</b> <input checked="" type="checkbox"/>

## Student's signature

<b>Student:</b> (Typed name to act as signature)	<b>Megan Waterman</b>
<b>Date:</b>	<b>09/04/2024</b>

## Reviewer's decision

<b>Title change approved:</b>	<b>YES</b> <input checked="" type="checkbox"/>	<b>NO</b> <input type="checkbox"/>
<b>Comments:</b>	The new title reflects better the research study and will not impact the process of how the data are collected or how the research is conducted.	
<b>Reviewer:</b> (Typed name to act as signature)	<b>Dr Jérémy Lemoine</b>	

<b>Date:</b>	<b>10/04/2024</b>
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## APPENDIX E: Participant Information Sheet

Version: 1

Date: 17/04/2023



### PARTICIPANT INFORMATION SHEET

#### **The good, the bad, or the cooperative: Morality-as-Cooperation and its relationships with attachment, early memories, compassion, wellbeing, and distress**

**Contact:** Megan Waterman (u2195644@uel.ac.uk) or Sarah Turner (u2195639@uel.ac.uk)

You are being invited to participate in a research study. Before you decide whether to take part or not, please carefully read through the following information which outlines what your participation would involve. Feel free to talk with others about the study (e.g., friends, family, etc.) before making your decision. If anything is unclear or you have any questions, please do not hesitate to contact us on the above email.

#### **Who am I?**

Our names are Megan and Sarah. We are Doctoral students in the School of Psychology at the University of East London (UEL) and are studying to be Clinical Psychologists. As part of our studies, we are conducting the research that you are being invited to participate in.

#### **What is the purpose of the research?**

We are investigating a new theory called 'Morality as Cooperation' which proposes the idea that morality does not mean whether someone is 'good' or 'bad' but rather how someone values different behaviour within social groups. It is a new theory proposing that morality is based on how we cooperate with each-other socially. We want to look

into how these aspects of morality map onto different concepts within mental health (such as shame, compassion, attachment, and general wellbeing).

We hope that this will provide increased understanding of our mental health and have implications for treatment and social support.

### **Why have I been invited to take part?**

To address the study aims, we are inviting adults aged 18+ who can read and write in English to take part in our research. We are keen to get a wide range of people from all different walks of life.

It is entirely up to you whether you take part or not, participation is voluntary.

### **What will I be asked to do if I agree to take part?**

If you agree to this, you will be taken through a series of questionnaires which should take around 20-30 minutes of your time. We will start by taking your demographic details including age, gender, years of education and mental health diagnoses. Most of these questionnaires will require checking a multiple-choice question, however a few may require some written text answers too. The questionnaires will ask you questions about your thoughts and experiences in relation to morality, shame, compassion, attachment, and general wellbeing. On the next page, you will be asked to confirm if you wish to proceed.

Once you have completed the questionnaires, you have finished the study. However, there will be an opportunity to be entered into a raffle as thanks for your participation. We have 2 x £50 vouchers available. If you wish to enter, there is an option to leave your name and some contact details at the end of the study.

### **Can I change my mind?**

Yes, you can change your mind at any time and withdraw without explanation, disadvantage, or consequence. If you would like to withdraw from the survey, you can do so by closing the browser. If you withdraw, your data will not be used as part of the research.

Separately, you can also request to withdraw your data from being used even after you have taken part in the study, provided that this request is made within 3 weeks of the data being collected (after which point the data analysis will begin, and withdrawal will not be possible).

### **Are there any disadvantages to taking part?**

Whilst we don't expect significant distress to be caused, it is possible that the questionnaires may bring up difficult thoughts, feelings and memories. We have provided below a list of support services you can access if you wish to. We will also highlight these services at the end of the study.

- MIND - this is a charity offering information and support in relation to mental health: [Mind](#)
- Samaritans - a helpline open all hours of the day to support you. Call them on 116 123 or contact them in other ways: [Samaritans | Here to listen](#)
- Headspace - here you can access various Mindfulness exercises to help you switch off: [Headspace YouTube Videos](#)
- NHS Mental Health Services - use this website to find your local NHS therapy and crisis support: [Find Local NHS Mental Health Services](#)

We also encourage you to speak to family and friends if anything has affected you.

### **How will the information I provide be kept secure and confidential?**

Survey data will be collected by participants using the UEL software Qualtrics, licenced to the UEL School of Psychology. Qualtrics is an online survey tool that adheres to EU Data Protection acts. Whilst we will collect some demographic information, this will be anonymised and each participant will be assigned a unique participant ID number so they are not identifiable. Raw data will be held securely on a password-protected file only accessible to the researchers and the supervisors. Analysed data will be written up as theses and shared publicly. Once the study ends, the anonymised data will be kept in an open-access framework then deleted after 3 years.

If you wish to enter the raffle, the contact details we collect for your entry will be stored in a separate place away from all other data. If you win the raffle, we will then contact you to collect further personal details (including name, address, date of birth, and National Insurance number) so that we can send you the voucher.

For the purposes of data protection, the University of East London is the Data Controller for the personal information processed as part of this research project. The University processes this information under the 'public task' condition contained in the General Data Protection Regulation (GDPR). Where the University processes particularly sensitive data (known as 'special category data' in the GDPR), it does so because the processing is necessary for archiving purposes in the public interest, or scientific and historical research purposes or statistical purposes. The University will ensure that the personal data it processes is held securely and processed in accordance with the GDPR and the Data Protection Act 2018. For more information about how the University processes personal data please see [www.uel.ac.uk/about/about-uel/governance/information-assurance/data-protection](http://www.uel.ac.uk/about/about-uel/governance/information-assurance/data-protection)

**What will happen to the results of the research?**

The research will be written up as a thesis and submitted for assessment. The thesis will be publicly available on UEL's online Repository (Registry of Open Access Repositories, ROAR). Findings will also be disseminated to a range of audiences (e.g., academics, clinicians, public, etc.) through journal articles, conference presentations, talks, magazine articles, blogs (as appropriate). In all material produced, your identity will remain anonymous, in that, it will not be possible to identify you personally.

You will be given the option to receive a summary of the research findings once the study has been completed for which relevant contact details will need to be provided. We will ask for this at the end of the survey.

**Who has reviewed the research?**

My research has been approved by the School of Psychology Ethics Committee. This means that the Committee's evaluation of this ethics application has been guided by the standards of research ethics set by the British Psychological Society.

**Who can I contact if I have any questions/concerns?**

If you would like further information about my research or have any questions or concerns, please do not hesitate to contact us.

Megan Waterman (researcher): [u2195644@uel.ac.uk](mailto:u2195644@uel.ac.uk)

Sarah Turner (researcher): [u2195639@uel.ac.uk](mailto:u2195639@uel.ac.uk)

If you have any questions or concerns about how the research has been conducted, please contact my research supervisor Matthew Jones Chesters, School of Psychology, University of East London, Water Lane, London E15 4LZ,  
Email: [m.h.jones-chesters@uel.ac.uk](mailto:m.h.jones-chesters@uel.ac.uk)

**or**

Chair of School Ethics Committee: Dr Trishna Patel, School of Psychology, University of East London, Water Lane, London E15 4LZ.  
(Email: [t.patel@uel.ac.uk](mailto:t.patel@uel.ac.uk))

**Thank you for taking the time to read this information sheet**

## APPENDIX F: Consent Form



### CONSENT TO PARTICIPATE IN A RESEARCH STUDY

**The good, the bad, or the cooperative: Morality-as-Cooperation and its relationships with attachment, early memories, compassion, wellbeing, and distress**

**Contact:** Megan Waterman (u2195644@uel.ac.uk) or Sarah Turner (u2195639@uel.ac.uk)

	<b>Please initial</b>
I confirm that I have read the participant information sheet dated 17/04/2023 (version 1.0) for the above study and that I have been given a copy to keep.	
I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	
I understand that my participation in the study is voluntary and that I may withdraw at any time, without explanation or disadvantage.	
I understand that if I withdraw during the study, my data will not be used.	
I understand that I have 3 weeks from submitting my survey answers to withdraw my data from the study.	
I understand that my personal information and data from the research will be securely stored and remain confidential. Only the research team will have access to this information, to which I give my permission.	
It has been explained to me what will happen to the data once the research has been completed.	
I understand that anonymised data may be used in material such as conference presentations, reports, articles in academic journals resulting from the study and that these will not personally identify me.	

I would like to receive a summary of the research findings once the study has been completed and am willing to provide contact details for this to be sent to.	
I agree to take part in the above study.	

Participant's Name (BLOCK CAPITALS)

.....  
.....

Participant's Signature

.....  
.....

Researcher's Name (BLOCK CAPITALS)

.....  
.....

Researcher's Signature

.....  
.....

Date

.....  
.....



## APPENDIX G: Participant Debrief Sheet



### PARTICIPANT DEBRIEF SHEET

#### **The good, the bad, or the cooperative: Morality-as-Cooperation and its relationships with attachment, early memories, compassion, wellbeing, and distress**

Thank you for participating in my research study investigating the relationships between Morality-as-Cooperation and common aspects of mental health (early memories, attachment, compassion, and general wellbeing). This document offers information that may be relevant in light of you having now taken part.

#### **How will my data be managed?**

The University of East London is the Data Controller for the personal information processed as part of this research project. The University will ensure that the personal data it processes is held securely and processed in accordance with the GDPR and the Data Protection Act 2018. More detailed information is available in the Participant Information Sheet, which you received when you agreed to take part in the research.

#### **What will happen to the results of the research?**

The research will be written up as a thesis and submitted for assessment. The thesis will be publicly available on UEL's online Repository (Registry of Open Access Repositories, ROAR). Findings will also be disseminated to a range of audiences (e.g., academics, clinicians, public, etc.) through journal articles, conference presentations, talks, magazine articles, blogs (as appropriate). In all material produced, your identity will remain anonymous, in that, it will not be possible to identify you personally.

You will be given the option to receive a summary of the research findings once the study has been completed for which relevant contact details will need to be provided. We will ask for this at the end of the survey.

### **What if I been adversely affected by taking part?**

It is not anticipated that you will have been adversely affected by taking part in the research, and all reasonable steps have been taken to minimise distress or harm of any kind. Nevertheless, it is possible that your participation – or its after-effects – may have been challenging, distressing or uncomfortable in some way. If you have been affected in any of those ways, you may find the following resources/services helpful in relation to obtaining information and support:

- MIND - this is a charity offering information and support in relation to mental health: [Mind](#)
- Samaritans - a helpline open all hours of the day to support you. Call them on 116 123 or contact them in other ways: [Samaritans | Here to listen](#)
- Headspace - here you can access various Mindfulness exercises to help you switch off: [Headspace YouTube Videos](#)
- NHS Mental Health Services - use this website to find your local NHS therapy and crisis support: [Find Local NHS Mental Health Services](#)

We also encourage you to speak to family and friends if anything has affected you.

### **Who can I contact if I have any questions/concerns?**

If you would like further information about my research or have any questions or concerns, please do not hesitate to contact us:

Megan Waterman (researcher): [u2195644@uel.ac.uk](mailto:u2195644@uel.ac.uk)

Sarah Turner (researcher): [u2195639@uel.ac.uk](mailto:u2195639@uel.ac.uk)

If you have any questions or concerns about how the research has been conducted, please contact my research supervisor Matthew Jones Chesters, School of Psychology, University of East London, Water Lane, London E15 4LZ,  
Email: [m.h.jones-chesters@uel.ac.uk](mailto:m.h.jones-chesters@uel.ac.uk)

**or**

Chair of School Ethics Committee: Dr Trishna Patel, School of Psychology, University of East London, Water Lane, London E15 4LZ.  
(Email: [t.patel@uel.ac.uk](mailto:t.patel@uel.ac.uk))

**Thank you for taking part in my study**

## **APPENDIX H: Study Questionnaires**

### **Morality-as-Cooperation Questionnaire: Relevance (MAC-R)**

When you decide whether something is right or wrong, to what extent are the following considerations relevant to your thinking?

Scale:

0-100: not at all relevant, not very relevant, slightly relevant, somewhat relevant, very relevant, extremely relevant

#### **Family**

1. Whether or not someone acted to protect their family.
2. Whether or not someone helped a member of their family.
3. Whether or not someone's action showed love for their family.

#### **Group**

4. Whether or not someone acted in a way that helped their community.
5. Whether or not someone helped a member of their community.
6. Whether or not someone worked to unite a community.

#### **Reciprocity**

7. Whether or not someone did what they had agreed to do.
8. Whether or not someone kept their promise.
9. Whether or not someone proved that they could be trusted.

#### **Heroism**

10. Whether or not someone acted heroically.
11. Whether or not someone showed courage in the face of adversity.
12. Whether or not someone was brave.

#### **Deference**

13. Whether or not someone deferred to those in authority.
14. Whether or not someone disobeyed orders.
15. Whether or not someone showed respect for authority.

#### **Fairness**

16. Whether or not someone kept the best part for themselves.
17. Whether or not someone showed favouritism.
18. Whether or not someone took more than others.

#### **Property**

19. Whether or not someone vandalised another person's property.
20. Whether or not someone kept something that didn't belong to them.
21. Whether or not someone's property was damaged.

### **Morality-as-Cooperation Questionnaire: Judgment (MAC-J)**

To what extent do you agree with the following statements?

Scale:

0-100: strongly disagree, disagree, neither agree or disagree, agree, strongly agree

### **Family**

1. People should be willing to do anything to help a member of their family.
2. You should always be loyal to your family.
3. You should always put the interests of your family first.

### **Group**

4. People have an obligation to help members of their community.
5. It's important for individuals to play an active role in their communities.
6. You should try to be a useful member of society.

### **Reciprocity**

7. You have an obligation to help those who have helped you.
8. You should always make amends for the things you have done wrong.
9. You should always return a favour if you can.

### **Heroism**

10. Courage in the face of adversity is the most admirable trait.
11. Society should do more to honour its heroes.
12. To be willing to lay down your life for your country is the height of bravery.

### **Deference**

13. People should always defer to their superiors.
14. Society would be better if people were more obedient to authority.
15. You should respect people who are older than you.

### **Fairness**

16. Everyone should be treated the same.
17. Everyone's rights are equally important.
18. The current levels of inequality in society are unfair.

### **Property**

19. It's acceptable to steal food if you are starving. (R)
20. It's ok to keep valuable items that you find, rather than try to locate the rightful owner. (R)
21. Sometimes you are entitled to take things you need from other people. (R)

*Note: (R) = reverse coded*

## **Attachment Style Questionnaire-Short Form (ASQ-SF)**

Show how much you agree with each of the following items by rating them on this scale:

Scale:

- 1 = totally disagree  
 2 = strongly disagree  
 3 = slightly disagree  
 4 = slightly agree  
 5 = strongly agree  
 6 = totally agree

- |                |   |
|----------------|---|
| Confidence     | 1. I feel confident that people will be there for me when I need them.      |
| Discomfort     | 2. I prefer to depend on myself rather than other people.                   |
| Discomfort     | 3. I prefer to keep to myself.  |
| R as S         | 4. Achieving things is more important than building relationships.          |
| R as S         | 5. Doing your best is more important than getting on with others.           |
| R as S         | 6. If you've got a job to do, you should do it no matter who gets hurt.     |
| N for A        | 7. It's important to me that others like me.                                |
| N for A        | 8. I find it hard to make a decision unless I know what other people think. |
| R as S         | 9. My relationships with others are generally superficial.                  |
| N for A        | 10. Sometimes I think I am no good at all.                                  |
| Discomfort     | 11. I find it hard to trust other people.                                   |
| Discomfort     | 12. I find it difficult to depend on others.                                |
| Preoccupation  | 13. I find that others are reluctant to get as close as I would like.       |
| Confidence     | 14. I find it relatively easy to get close to other people.                 |
| Discomfort (R) | 15. I find it easy to trust others.   |
| Discomfort (R) | 16. I feel comfortable depending on other people.                           |
| Preoccupation  | 17. I worry that others won't care about me as much as I care about them.   |
| Discomfort     | 18. I worry about people getting too close.                                 |
| N for A        | 19. I worry that I won't measure up to other people.                        |
| Discomfort     | 20. I have mixed feelings about being close to others.                      |
| N for A        | 21. I wonder why people would want to be involved with me.                  |
| Preoccupation  | 22. I worry a lot about my relationships.                                   |
| Preoccupation  | 23. I wonder how I would cope without someone to love me.                   |
| Confidence     | 24. I feel confident about relating to others.                              |
| Preoccupation  | 25. I often feel left out or alone.   |
| Confidence (R) | 26. I often worry that I do not really fit in with other people.            |
| Discomfort     | 27. Other people have their own problems so I don't bother them with mine.  |
| Confidence     | 28. If something is bothering me, others are generally aware and concerned. |
| Confidence     | 29. I am confident that other people will like and respect me.              |

Note:

R as S = Relationships as Secondary

N for A = Need for Approval

Items marked (R) need to be reverse-scored.

## **The Compassionate Engagement and Action Scales (CEAS)**

### **Self-Compassion**

When things go wrong for us and we become distressed by setbacks, failures, disappointments or losses, we may cope with these in different ways. We are interested in the degree to which people can **be compassionate with themselves**. We define compassion as “a sensitivity to suffering in self and others with a commitment to try to alleviate and prevent it.” This means there are two aspects to compassion. The *first* is the ability to be motivated to engage with things/feelings that are difficult as opposed to trying to avoid or suppress them. The *second* aspect of compassion is the ability to focus on what is helpful to us. Just like a doctor with his/her patient. The first is to be motivated and able to pay attention to the pain and (learn how to) make sense of it. The second is to be able to take the action that will be helpful. Below is a series of questions that ask you about these two aspects of compassion. Therefore read each statement carefully and think about how it applies to you if you become distressed. Please rate the items using the following rating scale:

<b>Never</b>	1	2	3	4	5	6	7	8	9	<b>Always</b>

**Section 1 – These are questions that ask you about how motivated you are, and able to engage with distress when you experience it. So:**

**When I’m distressed or upset by things...**

1. I am *motivated* to engage and work with my distress when it arises.
2. I *notice*, and am *sensitive* to my distressed feelings when they arise in me.
3. I avoid thinking about my distress and try to distract myself and put it out of my mind. (r)
4. I am *emotionally moved* by my distressed feelings or situations.
5. I *tolerate* the various feelings that are part of my distress.
6. I *reflect on* and *make sense* of my feelings of distress.
7. I do not tolerate being distressed. (r)
8. I am *accepting, non-critical and non-judgemental* of my feelings of distress.

**Section 2 – These questions relate to how you actively cope in compassionate ways with emotions, thoughts and situations that distress you. So:**

**When I’m distressed or upset by things...**

1. I direct my attention to what is likely to be helpful to me.
2. I think about and come up with helpful ways to cope with my distress.

3. I don't know how to help myself. (r)
4. I take the actions and do the things that will be helpful to me.
5. I create inner feelings of support, helpfulness and encouragement.

### Compassion to Others

When things go wrong for other people and they become distressed by setbacks, failures, disappointments or losses, we may cope with their distress in different ways. We are interested in the degree to which people can be **compassionate to others**. We define compassion as "a sensitivity to suffering in self and others with a commitment to try to alleviate and prevent it." This means there are two aspects to compassion. The *first* is the ability to be motivated to engage with things/feelings that are difficult as opposed to trying to avoid or suppress them. The *second* aspect of compassion is the ability to focus on what is helpful. Just like a doctor with his/her patient. The first is to be motivated and able to pay attention to the pain and (learn how to) make sense of it. The second is to be able to take the action that will be helpful. Below is a series of questions that ask you about these two aspects of compassion. Therefore read each statement carefully and think about how it applies to you when **people in your life** become distressed. Please rate the items using the following rating scale:

<b>Never</b>										<b>Always</b>
1	2	3	4	5	6	7	8	9	10	

**Section 1 – These are questions that ask you about how motivated you are, and able to engage with other people's distress when they are experiencing it. So:**

**When others are distressed or upset by things...**

1. I am *motivated* to engage and work with other peoples' distress when it arises.
2. I *notice* and *am sensitive* to distress in others when it arises.
3. I avoid thinking about other peoples' distress, try to distract myself and put it out of my mind. (r)
4. I am *emotionally moved* by expressions of distress in others.
5. I *tolerate* the various feelings that are part of other people's distress.
6. I *reflect on* and *make sense* of other people's distress.
7. I do not tolerate other peoples' distress. (r)
8. I am *accepting, non-critical and non-judgemental* of other people's distress.

**Section 2 – These questions relate to how you actively respond in compassionate ways when other people are distressed. So:**

**When others are distressed or upset by things...**

1. I direct attention to what is likely to be helpful to others.
2. I *think about and come up* with helpful ways for them to cope with their distress.
3. I don't know how to help other people when they are distressed. (r)
4. I take the *actions* and *do the things* that will be helpful to others.

5. I express feelings of *support, helpfulness and encouragement* to others.

### Compassion from Others

When things go wrong for us and we become distressed by setbacks, failures, disappointments or losses, others may cope with our distress in different ways. We are interested in the degree to which you feel that **important people in your life can be compassionate to your distress**. We define compassion as “a sensitivity to suffering in self and others with a commitment to try to alleviate and prevent it.” This means there are two aspects to compassion. The *first* is the ability to be motivated to engage with things/feelings that are difficult as opposed to trying to avoid or suppress them. The *second* aspect of compassion is the ability to focus on what is helpful to us or others. Just like a doctor with his/her patient. The first is to be motivated and able to pay attention to the pain and (learn how to) make sense of it. The second is to be able to take the action that will be helpful. Below is a series of questions that ask you about these two aspects of compassion. Therefore read each statement carefully and think about how it applies to the **important people in your life** when you become distressed. Please rate the items using the following rating scale:

Never											Always
	1	2	3	4	5	6	7	8	9	10	

**Section 1 – These are questions that ask you about how motivated you think others are, and how much they engage with your distress when you experience it. So:**

**When I’m distressed or upset by things...**

1. Other people are actively *motivated* to engage and work with my distress when it arises.
2. Others *notice* and *are sensitive* to my distressed feelings when they arise in me.
3. Others avoid thinking about my distress, try to distract themselves and put it out of their mind. (r)
4. Others are *emotionally moved* by my distressed feelings.
5. Others *tolerate* my various feelings that are part of my distress.
6. Others *reflect on* and *make sense* of my feelings of distress.
7. Others do not tolerate my distress. (r)
8. Others are *accepting, non-critical and non-judgemental* of my feelings of distress.

**Section 2 – These questions relate to how others actively cope in compassionate ways with emotions and situations that distress you. So:**

**When I’m distressed or upset by things...**

1. Others direct their attention to what is likely to be helpful to me.
2. Others *think about* and come up with helpful ways for me to cope with my distress.
3. Others don’t know how to help me when I am distressed. (r)
4. Others take the *actions* and do the things that will be helpful to me.
5. Others treat me with feelings of *support, helpfulness and encouragement*.



Note:

The three scales – *Compassion for Others*, *Compassion from Others*, *Compassion for Self* are scored separately.

Reverse items (r) are not included in the scoring

### **The Short Warwick–Edinburgh Mental Well-being Scale (SWEMWBS)**

Below are some statements about feelings and thoughts.

Please tick the box that best describes your experience of each over the last 2 weeks

Scale:

1 = None of the time

2 = Rarely

3 = Some of the time

4 = Often

5 = All of the time

1. I've been feeling optimistic about the future
2. I've been feeling useful
3. I've been feeling relaxed
4. I've been dealing with problems well
5. I've been thinking clearly
6. I've been feeling close to other people
7. I've been able to make up my own mind about things

### **Depression Anxiety Stress Scale-21 (DASS-21)**

Please read each statement and circle a number 0, 1, 2 or 3 which indicates how much the statement applied to you **over the past week**. There are no right or wrong answers. Do not spend too much time on any statement.

Scale:

0 = Did not apply to me at all

1 = Applied to me to some degree, or some of the time

2 = Applied to me to a considerable degree or a good part of time

3 = Applied to me very much or most of the time

1. (s) I found it hard to wind down
2. (a) I was aware of dryness of my mouth
3. (d) I couldn't seem to experience any positive feeling at all

4. (a) I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)
5. (d) I found it difficult to work up the initiative to do things
6. (s) I tended to over-react to situations
7. (a) I experienced trembling (e.g. in the hands)
8. (s) I felt that I was using a lot of nervous energy
9. (a) I was worried about situations in which I might panic and make a fool of myself
10. (d) I felt that I had nothing to look forward to
11. (s) I found myself getting agitated
12. (s) I found it difficult to relax
13. (d) I felt down-hearted and blue
14. (s) I was intolerant of anything that kept me from getting on with what I was doing
15. (a) I felt I was close to panic
16. (d) I was unable to become enthusiastic about anything
17. (d) I felt I wasn't worth much as a person
18. (s) I felt that I was rather touchy
19. (a) I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat)
20. I felt scared without any good reason
21. (d) I felt that life was meaningless

Note:

(d) = Depression subscale

(a) = Anxiety subscale

(s) = Stress subscale

## APPENDIX I: Study Advert





# The good, the bad, or the cooperative?

INVESTIGATING THE LINKS BETWEEN MORALITY AS  
COOPERATION AND MENTAL HEALTH

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WE ARE TWO TRAINEE CLINICAL PSYCHOLOGISTS  
CONDUCTING A SURVEY BASED STUDY EXPLORING:

- A NEW THEORY PROPOSING THAT MORALITY IS BASED ON HOW WE COOPERATE WITH EACH OTHER SOCIALLY
- HOW THIS LINKS TO COMMON ASPECTS OF MENTAL HEALTH SUCH AS...
- COMPASSION, SHAME, ATTACHMENT AND WELLBEING
- TO ENHANCE UNDERSTANDING OF MENTAL HEALTH ISSUES

IF YOU ARE 18+ YOU CAN TAKE PART USING THE LINK  
BELOW! THANK YOU.



**APPENDIX J: General Linear Model Tests of Between-Subjects Effects For RQ2**

**Table Showing Tests of Between-Subjects Effects Between Attachment Style Questionnaire (ASQ) and Morality-As-Cooperation Relevance (MAC-R) Scales with Sex as a Fixed Factor.**

<b>ASQ x Sex</b>	<b>MAC-R Domain</b>	<b>F</b>	<b>p</b>	<b>Partial Eta Squared</b>
<b>ASQ Two Dimension Model</b>				
<b>Insecure-Avoidant</b>	Family Values	0.04	.85	.000
	Group Loyalty	0.36	.55	.002
	Reciprocity	8.34	<.01	.042
	Heroism	0.59	.45	.003
	Deference	3.48	.06	.018
	Fairness	0.90	.34	.005
	Possession Rights	0.09	.77	.000
<b>Insecure-Anxious</b>	Family Values	9.87	<.01	.050
	Group Loyalty	4.31	.04	.022
	Reciprocity	1.35	.25	.007
	Heroism	3.89	.05	.020
	Deference	4.35	.04	.023
	Fairness	8.72	<.01	.044
	Possession Rights	5.29	.02	.027
<b>Sex</b>				
	Family Values	0.32	.57	.002
	Group Loyalty	0.35	.56	.002
	Reciprocity	0.02	.88	.000
	Heroism	2.06	.15	.011
	Deference	0.06	.81	.000
	Fairness	0.50	.48	.003
	Possession Rights	0.63	.43	.003

Note: \* =  $p < .001$ . † = Relationship investigated further using linear regression due to effect size.

**Table Showing Tests of Between-Subjects Effects in General Linear Model Between Attachment Style Questionnaire (ASQ) using the Five-Factor Model and Morality-As-Cooperation Relevance (MAC-R) Scales.**

<b>ASQ Five-Factor Model</b>	<b>MAC-R Domain</b>	<b>F</b>	<b>p</b>	<b>Partial Eta Squared</b>
<b>Confidence</b>	Family Values	10.10	<.01	.049 <sup>†</sup>
	Group Loyalty	9.40	<.01	.046 <sup>†</sup>
	Reciprocity	6.21	.01	.031 <sup>†</sup>
	Heroism	3.38	.07	.017 <sup>†</sup>
	Deference	1.05	.31	.005
	Fairness	3.73	.06	.019 <sup>†</sup>
	Possession Rights	1.08	.30	.006
<b>Discomfort with Closeness</b>	Family Values	5.15	.02	.026 <sup>†</sup>
	Group Loyalty	8.41	<.01	.042 <sup>†</sup>
	Reciprocity	13.83	<.01*	.067 <sup>†</sup>
	Heroism	5.16	.02	.026 <sup>†</sup>
	Deference	2.97	.09	.015 <sup>†</sup>
	Fairness	4.38	.04	.022 <sup>†</sup>
	Possession Rights	0.82	.37	.004
<b>Relationships as Secondary</b>	Family Values	4.44	.04	.022 <sup>†</sup>
	Group Loyalty	17.73	<.01*	.084 <sup>†</sup>
	Reciprocity	0.28	.60	.001
	Heroism	0.57	.45	.003
	Deference	0.06	.80	.000
	Fairness	3.22	.07	.016 <sup>†</sup>
	Possession Rights	2.95	.09	.015 <sup>†</sup>
<b>Need for Approval</b>	Family Values	2.98	.09	.015 <sup>†</sup>
	Group Loyalty	1.12	.29	.006
	Reciprocity	0.00	.99	.000
	Heroism	0.60	.44	.003
	Deference	0.36	.55	.002
	Fairness	2.62	.11	.013 <sup>†</sup>
	Possession Rights	0.49	.49	.002
<b>Preoccupation with Relationships</b>	Family Values	1.13	.30	.006
	Group Loyalty	10.15	<.01	.050 <sup>†</sup>
	Reciprocity	0.60	.44	.003
	Heroism	4.60	.03	.023 <sup>†</sup>
	Deference	0.94	.34	.005
	Fairness	1.40	.24	.007
	Possession Rights	1.35	.25	.007

Note: \* =  $p < .001$ . <sup>†</sup> = Relationship investigated further using linear regression due to effect size.

**APPENDIX K: General Linear Model Tests of Between-Subjects Effects For RQ3**

**Table Showing Tests of Between-Subjects Effects in General Linear Model Between Compassionate Engagement and Action Scales (CEAS) and Morality-As-Cooperation Relevance (MAC-R) Scales.**

<b>CEAS</b>	<b>MAC-R Domain</b>	<b>F</b>	<b>p</b>	<b>Partial Eta Squared</b>
<b>Compassion to Self</b>	Family Values	3.83	.05	.019 <sup>†</sup>
	Group Loyalty	0.00	.97	.000
	Reciprocity	0.45	.51	.002
	Heroism	2.29	.13	.012 <sup>†</sup>
	Deference	0.71	.40	.004
	Fairness	0.44	.51	.002
	Possession Rights	0.33	.57	.002
<b>Compassion to Others</b>	Family Values	25.29	<.01*	.114 <sup>†</sup>
	Group Loyalty	11.17	<.01*	.054 <sup>†</sup>
	Reciprocity	0.67	.41	.003
	Heroism	0.23	.64	.001
	Deference	0.26	.61	.001
	Fairness	4.475	.03	.024 <sup>†</sup>
	Possession Rights	3.36	.07	.017 <sup>†</sup>
<b>Compassion from Others</b>	Family Values	1.42	.24	.007
	Group Loyalty	.002	.96	.000
	Reciprocity	2.49	.12	.013 <sup>†</sup>
	Heroism	0.21	.65	.001
	Deference	1.42	.24	.007
	Fairness	3.82	.05	.019 <sup>†</sup>
	Possession Rights	0.72	.40	.004

*Note: \* =  $p < .001$ . † = Relationship investigated further using linear regression due to effect size.*