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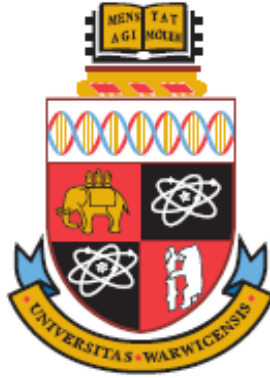
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Do As I Do And As I Say:
Social Influences on Moral Judgment

by

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Declarations

This thesis is submitted to the University of Warwick in support of the application for the degree of Doctor of Philosophy. I confirm that the thesis has not been submitted for a degree at another university. It has been composed by the author and has not been submitted in any previous application for any degree. One study of this dissertation has been published by the author: Alshaalan, H., & Gummerum, M. (2021). Conformity on moral, social conventional and decency issues in the United Kingdom and Kuwait. *International Journal of Psychology*.https://doi.org/10.1002/ijop.12808

Abstract

The main goal of this PhD research was to investigate social influences on moral judgment and factors that might moderate these effects. Specifically, this research explored (1) whether adults conform with others' moral opinions; (2) whether there are domain differences in moral conformity; (3) whether culture and gender moderate the effects of social influences on moral judgment; (4) whether normative and informational influences affect moral conformity; and (5) how others' moral reasons affect individuals' own moral judgments. These questions were examined in four empirical studies.

Chapter 2 reports on two studies that combined theories of moral judgment and social conformity. Chapter 3 reports on two studies investigating whether there are differences in UK and Kuwaiti adults when making ethical risky decisions and decisions in other risk domains (i.e., the health/safety, social, and recreational risk domains). The study reported in Chapter 4 investigated the role of normative and informational influences on moral conformity across five moral foundations (i.e., the harm, justice, ingroup, authority, and purity foundations). While the previous studies assessed whether simply being presented with others' opinions affected more judgment, the study reported in Chapter 5 investigated how others' moral reasons influenced individuals' moral judgments.

Overall, the findings of this research show that others' opinions do influence adults' moral judgments across domains, cultures, genders and when different conformity tasks are used. Others' moral reasons and moral emotions, however, exert a weaker influence on individuals' moral judgments. Social influences, and particularly moral conformity, should be considered in further detail to strengthen theories of moral decision-making and moral intervention programmes.

Chapter 1

Introduction

When pondering a decision, people often rely on others' opinions. This is the case for everyday decisions (e.g., which restaurant to choose for dinner), but also for decisions that could have wide-ranging and potentially strongly negative effects on oneself and others, such as moral decisions. As an extreme case, Gigerenzer (2008) cites the case of the men in Reserve Police Battalion 101 who, despite being given the opportunity to disobey the authority of their Major, engaged in the mass murder of Jews in a Polish village during the Second World War to not "break ranks". Nowadays, we find how individuals' moral opinions become influenced by others and even polarized into moral echo chambers on social networking sites (Brady et al., 2020; Nguyen & Vu, 2019).

Morality has been described as "interlocking sets of values, virtues, norms, practices, identities, institutions, technologies, and evolved psychological mechanism that work together to suppress or regulate selfishness and make social life possible." (Haidt & Kesebir, 2010, p. 800). But how do we decide what actions are right and wrong? That is, how do we make moral judgments and moral decisions? These questions have been discussed by philosophers, psychologists, and educators for centuries and a number of different answers have been provided. The overall goal of this thesis is to investigate social influences on moral decisions and opinions as well as to assess potential boundary conditions of these effects.

This introductory chapter is structured as follows: I will first discuss major psychological theories of morality, and how these theories evaluated social influences on moral judgments and moral decisions. I will then discuss one major source of social influence, namely conformity. I have studied conformity effects on morally-relevant judgments and decisions in the empirical chapters of this thesis. Finally, I will give an

overview of the remainder of this thesis and how the empirical studies reported here might answer the question as to the social influences on moral judgments.

1.1 What is Morality?

At least in western society, morally acceptable behaviours are those that do not violate other people's rights (Locke, 1960). However, some actions might still be considered as immoral even though they might not cause harm or a violation of individuals' rights. This conflict draws the attention to the boundaries of what constitutes morality. The moral domain can be defined as the domain that contains the rules that adjust the individual's or others' rights or welfare such as justice towards others (Bukatko & Daehler, 1998) and to give behaviour guidelines (Royal & Baker, 2005). In principle, moral ideas extend to cover social, religious, and political fields. Kochanska and Aksan (2006) suggest that morality contains three different interrelated components: moral reasoning (cognition), moral emotions (affect), and moral conduct (behavioural). Psychological theories of morality differ in the way they emphasize, describe, and explain these different components of morality and also how they hypothesize social processes to influence these components.

1.1.1 Learning Theories

Learning theories see morality as a process of gradual development of suitable behaviours and conformity with the rules of society (Aronfreed, 1976). These theories conceptualize morality as a person learning and complying with socially defined morally acceptable behaviour (Aronfreed, 1976). Others' rewards and punishments, and the actions and verbalizations of others, solely form a person's (moral) conduct (Bukatko & Daehler, 2004). Various factors affect people's disposition to transgress (i.e., showing of immoral behaviour), for example when left alone in a room with forbidden toy after punishment. First, as predicted by learning theory, the timing of punishment affects moral behaviour. If it closely follows the undesirable behaviour, then punishment will be effective. Second, giving

a verbal clarification of why an action is forbidden affects immoral behaviour. For example, if parents tell children that a forbidden toy might fall to pieces if it is held, children's transgression is less frequent. According to learning theorists, verbalizations smooth the internalization of morally acceptable and unacceptable actions (Aronfreed, 1976). Listening to and watching other people are important in learning new behaviours (Bukatko & Daehler, 2004).

Bandura's (1986) social learning theory (1986) gives a large role to cognitive processes in the emergence of moral values. Social learning theorists suggest that people encode and process observations and choose whether and when to act on certain observed behaviours based on cognitive skills and motivational factors. Based on this view, people internalize conduct criteria and cognitive moral representations from the observation of others and use them in moral behaviour explanation process. Therefore, people tend to behave consistently with these representations and observations (Grusec & Goodnow, 1994). For example, a child is more likely to remove harmful objects from the street if s/he sees his/her father do it for several times.

According to Bandura (1965), language, social and moral customs cannot be transmitted to next generations through operant and classical conditioning. Bandura (1965) believed that important learning happens through observing and imitating another person, a model. In this case, moral behaviours are learned as any other behaviour is (Bukatko & Daehler, 1998). Models can affect whether a person engages in (moral) transgressions or not. Those who observe a model carry out a forbidden behaviour are more likely to carry out the same behaviour themselves, while those observing a model that fights forbidden behaviour will commit fewer transgressions (Rosenkoetter, 1973).

In sum, learning theories of morality suggest that social factors, such as reinforcement and punishment by others or observing others moral behaviour, strongly influences individuals' own moral behaviours and judgments.

1.1.2 Cognitive-structural Theories

In the mid-20th century a number of influential moral (developmental) theories emerged. These cognitive-structural theories were mainly interested in how people reason or think about morality, how reasoning influences moral judgment, and how the structure of moral reasoning changes over the course of development. While the influence of social factors on moral judgment was not at the heart of these theories, they nevertheless discuss how social influences affect the development of moral reasoning and how, conversely, moral reasons can be used to convince others in social discussions.

The beginnings of the cognitive-structural theories to morality are usually traced back to Piaget's (1932) work on moral judgments in children. Piaget investigated children's notions of morality by giving them moral scenarios and observing their moral behaviours in children's game playing interactions. According to Piaget (1932), morality can be defined as a system of rules. Examining how children actually play and think about rule-based games (such as the game of marbles) can therefore tell us something about rule-based morality and how they practice rules. According to Piaget (1932), morality develops over the course of childhood and early adolescence, and this development can be classified into two distinct developmental phases, heteronomous and autonomous morality. The interesting point about Piaget's theory, particularly from the point of view of this dissertation research, is that he assumed that the impetus for developmental change in children's morality comes from the social relationships that feature prominently in their lives. That is, Piaget suggested that moral development is based on social interactions and the features, especially the power

structures, of these relationships. He proposed that heteronomous and autonomous morality is closely tied to parent-child and peer relationships, respectively.

In the first developmental phase, heteronomous morality, preschool and young elementary-school children see morality as heteronomous and engage in moral realism. This means that children see all rules as having been forced upon them by outsiders, mostly adults. As a consequence, children obey these rules without judgment or reasoning and regard these rules are sacred. The rules are unbreakable and perpetual, not changeable, and have continuously been the same as they are now. Children at this stage accept the fact that all rules are created by authority figures (e.g., families, educators, or God). All rules must be followed, and once they are broken, the child will receive severe and prompt punishment. Piaget (1932) believed that the type of social connections among adults and children underlies this heteronomous morality: adults have superior knowledge over children and control of the (moral) rules; these rules are given to children without explanation or discussion. Obviously, for youngsters, these are the principles that grown-ups force upon them. Heteronomous morality is therefore a morality that originates from a one-sided regard – that is to say, the regard children owe to their guardians, teachers, and other adults. With development, children establish more varied relationships, notably with their peers, which are associated with changes in their moral understanding.

Autonomous morality starts roughly during the middle or end of the elementary-school years and continues through adolescence. Here, children recognize that morality is based on the intentions behind an action rather than the negative consequences of a violation. Children understand that rules, including all rules in society, their family and games, are shaped by discussion and common assent between equals, namely their peers. These discussions and the decisions that lead to an adoption or a change in rules are based on the principles of fairness or justice reasons. Because these discussions necessitate taking the

viewpoint of others, perspective taking (i.e., differentiating between one's own point of view and that of others) lies at the heart of autonomous morality. Children comprehend that rules do not originate from a powerful authority. Individuals can suggest standards and rules and individuals can improve them, so they are changeable rules. Thus, children start to see rules of morality as socially-agreed-upon rules intended to promote cooperation.

Lawrence Kohlberg (1958) expanded upon and modified Piaget's (1932) theory of moral development. While Kohlberg, like Piaget, believed that perspective-taking and perspective-coordination underlies the development of moral reasoning and judgment, his theory put less emphasis on the role of different relationships (and social factors) for moral development. However, what makes Kohlberg's (1984) theory interesting for this dissertation is the assumption (and empirical evidence) that the exchange and discussion of moral reasons can change others' moral mindsets and actually support moral development.

Kohlberg measured people's moral reasoning by presenting them with moral dilemma stories, in which two moral values conflict with each other. The Heinz dilemma is the one of the most famous of Kohlberg's moral dilemmas, and it deals with the dilemma of either complying with the law or saving a life. In the cover story, Heinz's wife has cancer and there is just one drug, discovered by a local chemist, that could save her life. The chemist sells the drug for $2,000 per dose, even though it costs him just $200 per dose, which is 10 times less. $2,000 is more than Heinz's budget. After his friends and family help him, Heinz raises $1,000 to buy the drug, which is only half the price. He attempts to negotiate with the chemist to give him the drug for half the price, or to allow Heinz to give the chemist the rest of the money later, but the chemist refuses these offers. He then steals the treatment from the chemist to save his wife's life. Kohlberg then asks the participants: "Should the husband have done that?" (Kohlberg, 1963, p.19). Kohlberg was not necessarily interested in the choices people make in these moral dilemmas, but how they reasoned about their choices. Open-

ended interviews were conducted on the dilemma topics, and participants' responses were coded according to Kohlberg's levels and stages (Kohlberg & Hersh, 1977).

Kohlberg's (1984) theory proposed that the reasons people give as part of these moral dilemmas can be coded according to three primary levels of moral development, pre-conventional, conventional, and post-conventional (Kohlberg, 1976, 1981). Each of these levels has two different stages that are hierarchical, and their direction of progress is irreversible. Kohlberg confirmed that moral development is not related to genetic blueprints or conscious moral teaching. Instead, it is a process that develops from thinking about issues related to morality.

The first level of morality is pre-conventional. People reasoning on this level, mostly children, have little thought about morality, and they also show little concern for people. Their reasoning depends on the action and its physical consequences. This level is divided into two stages. At Stage 1 (obedience and punishment), children avoid being punished by obeying the rules, and any behaviour that is punishable is considered wrong. This obedience occurs because of the use of threat or punishment. Obeying authority works to minimise a child's punishment and increase their reward. According to Kohlberg, children regard moral rules as fixed and absolute. Stage 2 (individualism and exchange) can be characterized by the statement "what's in it for me?". At this stage, children account for individual viewpoints and they judge actions depending on how they satisfy an individual's needs. Reciprocity at this level is possible, but only if reciprocity serves the interests of individual; one seeks to fill one's own needs, and in exchange, recognizes the needs of others.

The second level is the conventional level, which roughly begins in early adolescence. Here, people start to internalise the moral standards of esteemed role models. Their reasoning depends on the norms of the groups that they belong to. Morality at this level is concerned with the functioning of these groups and society at large in judging the actions of a person's

morality. People learn about authority and societal roles and about the conventions that influence their behaviour and teach them to obey. Stage 3 (good interpersonal relationships) is often referred to as the 'good boy-good girl' morality. Participants' answers relate to the approval of significant others from their personal networks. That is, people consider how their moral choices will impact their personal relationships. They strive to please others and maintain harmonious personal relationships by being seen as being 'nice'. At Stage 4 (maintaining the social order), people become aware of their wider societal roles, as members of a society who have to oblige and respect laws and rules. The focus is on maintaining societal laws and respecting authority, as well as carrying out a person's duties. At this stage, people believe that morality is what holds the social order together.

Kohlberg (1981) believed that many people's moral reasoning does not reach the final level of moral development, post-conventional morality. Here, a person's moral reasoning is based on universal principles that any rational person can agree on. People who reach this level can criticise social norms because they have their own moral perspectives, regardless of what others believe. At Stage 5 (social contracts and individual rights) of post-conventional morality, people become aware of universal rules, with a real interest in others' welfare. They start to account for the different thoughts and views of others and believe that such viewpoints ought to be commonly respected as being unique to the individual and the society. Rules of law are imperative for the preservation of society, but individuals of the society ought to agree with these standards. At this stage, morality takes priority over specific laws and is characterized by achieving the greatest good for the greatest number of people. In cases where majority and minority interests conflict, the interests of the majority ("the greatest number of people") prevail. At Stage 6 (universal principles), individuals create their own set of moral rules, which might or might not coincide with the law. The individual will act to defend universal standards (rights and justice), and in the event that this goes against

the rest of society, it might result in disapproval. Even if people find clashes between rules and laws, they will follow justice and universal principles. An individual considers that all moral standards should be universally accepted and should apply to all moral agents. This stage is based upon respect for universal principles and demands on a person's conscience. In cases where majority and minority interests conflict, the interests of the minority should be respected if this upholds and protects the minority's universal rights.

As stated above, an interesting facet of Kohlberg's theory is his believe in the power of moral reasons to convince others and to foster moral development. Indeed, some of the intervention programmes based on the Kohlbergian approach are based on group discussions of and exchange of arguments concerning (real-life) moral dilemmas. Kohlberg himself in 1975 developed Just Community Schools, an experiment in school democracy. In Just Community Schools, a schools' governance, policies, and conflicts are discussed and solved democratically and cooperatively by the whole school through school assemblies that include students, teachers, and other staff. Students in these schools have an important role to play in building norms and policies of the school. They discuss many issues that emerge as part of the school community, and these discussions enhance their moral development. All school staff and students meet weekly in so-called Town Halls to discuss any issue related to and relevant to the life in school and make a democratic decision and how to deal with this issue. Participation of all is at the centre of this approach. Furthermore, student discuss moral dilemmas in the school, and listening to different opinions stimulates cognitive conflict and moral growth (Higgins, 1980; Power et al, 2008).

Lind and Althof (1992) trained teachers in three different schools in Germany to utilize the just community methods for about three years. Most of the students were evaluated with pretest and posttest on moral reasoning and the moral atmosphere in the schools. Results of the pre- and posttest comparisons showed increased level of moral and democratic

reasoning and competence. Importantly, the results did not differ by school type and level. Students in lower and higher levels of education displayed obvious gains in reasoning competence.

A slightly less radical intervention are moral dilemma discussions (see Lind, 2002). Based on original studies and methods by Blatt and Kohlberg (1975) students discuss moral dilemmas, such as the Heinz Dilemma, but also more real-life dilemmas in their classrooms. Lind believed that moral dilemma discussions, and particularly conflicting views and people's reasoning behind their views provide group members the opportunity for taking roles and empathy. Thus, what fosters moral development is the experience of cognitive and moral conflict (Haste, 2002). According to Lind (2002) such moral dilemma discussion affect subsequent moral reasoning levels with effect sizes of around $r = .40$ reported. One original innovation of the Blatt-Kohlberg method of moral dilemma discussions was the "+1 convention": Teachers, who act as facilitators of the discussions, consistently present arguments and justification one stage above the arguments used by students. This should lead to optimal cognitive conflict and thus foster moral reasoning. Empirically, Walker (1983) showed that mere counter-arguments were just as effective as +1 arguments to stimulate students' moral reasoning and judgment. Thus, what is important in moral dilemma discussions is the experience of opinions different to one's own.

In sum, while cognitive-structural theories of morality emphasize the importance of cognitive factors, such as moral reasoning and perspective-taking for, social factors, such as the type of relationship or being confronted with differing opinions in a social setting, could additionally contribute to individuals' moral judgments and growth.

1.1.3 Domain Theory

Similar to cognitive-structural theories, domain theory of morality (Smetana, 1995; Turiel, 1996; Turiel, Killen, & Helwig, 1987) is interested in how people of different ages

reason about moral issues. One of the main contributions of domain theory, and what makes it particularly relevant for this dissertation, is that morality only constitutes one domain of how people classify interpersonal events, transgressions, and social knowledge more generally. Turiel (1996, 2008; Smetana, 2006) suggests that interpersonal events fall into three domains, which are differentiated early in life: the moral domain, the social-conventional domain, and the personal domain.

Moral interactions are characterized by concern for others' welfare, avoidance of harm, and upholding rights and justice. Importantly, these concerns can be generalised; they are compulsory, and not dependent on people's personal preferences or the rules operating in a social organization. For example, a moral norm, such as "do not steal", can be generalized to everybody, independent of historical time and culture, is compulsory for every moral agent, does not depend on one's personal preferences towards stealing, or rules allowing stealing in one's organization (Turiel, 1996).

In contrast, social conventions concern how to deal with others to make interpersonal interactions run smoothly. The definition of 'conventions', according to Turiel (1983), is that they are consensually decided uniformities, anticipations, or rules that arrange people's interactions inside a distinct social system. Therefore, social conventions can differ in different cultures. Social norms, cultures, standards and values play a critical part in deciding the meaning of a specific activity within a particular social context. Social conventions depend on particular rules or specialist commands, and they are changeable (Killen & Smetana, 2013).

The third domain described by domain theory is the personal domain. This domain concerns issues that are related to special aspects of personal life, that is, personal preferences (e.g., the act of choosing between two countries when planning a holiday). It is not related to right or wrong choices but opinions that are viewed as being up to the person making the

decision. This kind of domain is "outside the realm of societal regulation and moral concern" (Nucci, 1981, p. 114) and it is dependent on individuals' priorities or tastes. "Prudential issues' pertain to individual safety, harm to the self, comfort, and personal health" (Smetana, 2006, p. 211) and this concept is part of the personal domain. Prudential behaviour has harmful consequences to a person – more so than the consequences caused by (im)moral behaviour. However, in adults such prudential acts are then seen as an individual choice (Smetana, 2011).

Sometimes, the distinction between moral, social conventional, and personal concepts is not as clear-cut. People translate and attribute importance to complex social events and circumstances from their specific single viewpoint of a situation. For example, the question of what colour of clothes to wear to a funeral can be seen as a moral issue (wearing clothes that do not offend the sensibility of the mourners), a social conventional issues (in this society one wears clothes of a specific colour to a funeral), or a personal issue (it is up to the person what to wear). Such multifaceted issues can occur quite regularly in multicultural contexts where the understanding of what are the right or wrong things to do in a situation is sometimes not clear-cut or can even lead to conflicts. While proponents of domain theory claim that the distinction between the three social domains is universal across cultures (see Helwig & Turiel, 2011), probably one of the strongest criticism of domain theory concerns the definitions of the content of the three domains. For example, based on empirical research in India and the USA, Shweder et al. (1997) proposed that merely focusing on avoiding harm and upholding rights and justice might define the moral domain too narrowly and might not adequately reflect moral considerations of people in non-western societies. Conversely, issues that people in western society might regard as social-conventional or even personal (e.g., eating a specific kind of food or wearing specific clothes) can get "moralized" in non-western societies.

Rozin et al. (1999) therefore broadened the moral domain and devised a moral taxonomy called ''the big three'' which can co-exist in different cultures but with different levels of emphasis. The ethics of autonomy considers the individual as the source of moral authority. It is based on individuals' rights to follow their needs and on fairness and justice (Haidt, Koller, & Dias, 1993). The most important moral concepts in the ethics of autonomy are equality of rights between individuals, independence, freedom of choice, and personal well-being (Jensen, 2004). Rozin et al. (1999) suggest that the ethics of autonomy is the predominant ethics in western societies, such as the USA or the UK. The ethics of community relies on loyalty, duty, honour, respect, self-control, obedience to authority, and actions consistent with one's own social roles. Individuals are seen as having social responsibilities in families or nations, which are considered a moral duty (Miller, 2001; Shweder, 2003). According to Rozin et al. (1999) the ethics of community is common in cultures like Japan. The ethics of divinity defines individuals as spiritual entities. The central values are based on the concepts of divine or natural law which is based on religious authorities and texts, obligation, punishments, and rewards (Arnett et al. 2001; Jensen, 1995). The ethics of divinity is most common in cultures that emphasize scriptural authority like Hindu communities (Jensen, 2011).

Haidt and Graham (2007) expanded this "big three" approach in their moral foundations theory, according to which human morality encompasses five moral concerns or foundations (Graham et al., 2009, 2011): The harm/care foundation is related to disapproval of, avoiding, and ameliorating pain and misery in others and is based on sympathy, friendliness, and nurturance (Koleva et al., 2012). The fairness/reciprocity foundation is related to equality and justice and seeks that these principles not be violated. The ingroup/loyalty foundation is based on people's relation to important ingroups (e.g., one's family, home country) and seeks to promote the group's cohesion and well-being. The authority/respect foundation is related to

status differences between people and within societies. Subordinates are supposed to follow authorities' norms and rules, but authorities also have a duty to support the well-being of subordinates. The purity/sanctity foundation is related to the emotion of disgust that is associated with avoiding biological and social contaminants (Koleva et al., 2012).

In sum, domain theory suggests that the moral, social-conventional, and personal domains can be distinguished by different concerns with the social-conventional domain particularly subject to the influence of social norms, standard, rules, and uniformities. However, people in non-western societies might not differentiate as clearly between these three domains and might conceptualize the moral domain more widely than suggested by domain theory.

1.1.4 Social-intuitionist Approach

Many of the previous theories discussed so far, most notably cognitive-structural theories, assume that people's (individual) moral judgments are based on cognitive processes, such as moral reasoning. In his social-intuitionist approach to morality. Haidt (2001) questions the importance of moral reasoning as a cause of individual's moral judgments. Rather, Haidt (2001) assumes, individuals' moral judgments are based on heuristic and intuitive processes, such as emotions or dominant social norms, and if people engage in moral reasoning, it is after they have made a judgment. As such, moral reasoning is employed to justify moral judgments or moral behaviours post-hoc. These processes are displayed in Figure 1.1, which depicts Haidt's (2001) social intuitionist model of moral judgment. Specifically, the intuitive judgment link (1) posits that people's moral judgments are based on their intuitions. Moral reasoning rarely influences moral judgment and is only used post-hoc to justified already made moral judgments (i.e. post hoc reasoning link 2).

Empirical evidence for these two processes comes from Haidt's (2001; Hadit et al., 1993) research on moral dumbfounding. Moral dumbfounding happens when people hold strong moral convictions or intuitions but have no (rational) justifications for these

convictions and, consequently, their moral judgments. Moral dumbfounding has been

investigated by giving people stories that depict emotionally disgusting behaviours. However,

the depicted behaviours do not lead to harm and therefore are not immoral. One often

depicted story is the following: "Julie and Mark are brother and sister. They are traveling

Figure 1.1

The Social-Intuitionist Model of Moral Judgment (Adapted From Haidt, 2001).
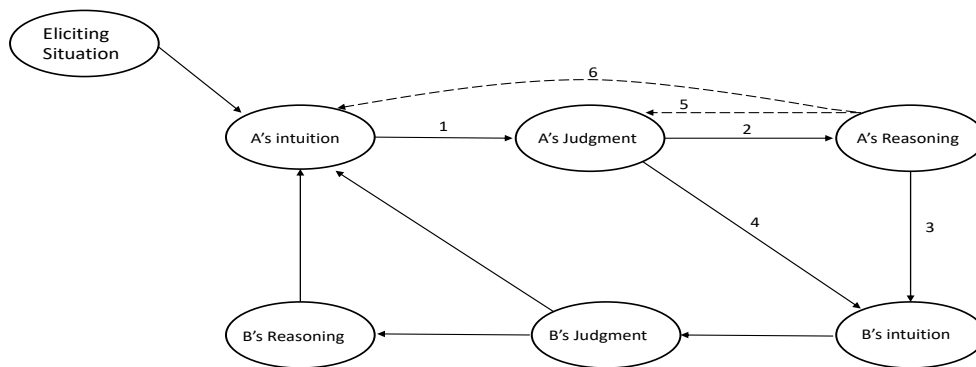
Note. 1= the intuitive judgment link; 2= the post-hoc reasoning link; 3= the reasoned persuasion link; 4= the social persuasion link 5= the reasoned judgment link and 6= the private reflection link.

together in France on summer vacation from college. One night they are staying alone in a

cabin near the beach. They decide that it would be interesting and fun if they tried making

love. At very least it would be a new experience for each of them. Julie was already taking

birth control pills, but Mark uses a condom too, just to be safe. They both enjoy making love,

but they decide not to do it again. They keep that night as a special secret, which makes them

feel even closer to each other. What do you think about that, was it OK for them to make

love?" (Haidt, p. 814). Most people have a very strong negative emotional reaction to this case, which informs their moral judgment of not considering this action as morally okay. However, when quizzed about their moral judgment, they cannot justify it by referring to moral reasons. Many state "it's just wrong". Thus, according to Haidt (2001), participants did not use reasoning to make their judgments, they used their intuitions instead.

As can be seen in Figure 1.1, intuitions are not the only processes that shape moral judgment. With the social persuasion (4) and reasoned judgment link (5), Haidt (2001) proposes that others' moral reasoning or simply others' moral judgments affect individuals' own moral intuitions and therefore their moral judgment. These social links are clearly relevant considering the goal of the current research. The empirical studies conducted for this dissertation focused on both of these links. Specifically, I investigated moral conformity, namely how learning about others' moral judgments affects an individual's own moral intuition and moral judgment. I also investigated how moral arguments and reasons put forward by another person affect an individual's own moral reasoning, judgment, and the emotions associated with these.

1.1.5 Summary

The previous sections defined morality and discussed different psychological theories on how people make moral decisions with a particular focus on the role of social influences on people's decisions, as described in these theories. As we have seen, the role of social influences ranges from substantial (in learning theories and the social intuitionist approach) to more marginal in cognitive-structural theories of morality. However, the moral opinions and reasoning of others play a role in all of these accounts of morality. In my research, I mainly studied one type of social influence on morality, namely conformity processes. In the following, I will review the substantial literature on conformity (mostly for non-moral

judgments and behaviours), the processes believed to be underlying conformity, and moderating variables.

1.2 Conformity

Imagine you go with friends to see a film. You did not think that the film was that good, but all your friends thought that it was brilliant. In this situation, you might be tempted to agree with your friends' evaluation of the film rather than state your real opinion (Eysenck, 2004). Many of us have experienced a similarly situation: we go with others' opinions and actions and change our overt behaviour and opinions, even though we might not agree with them or even believe they are wrong. This phenomenon is called "conformity" (Eysenck, 2004), and conformity has been a mainstay of social psychological research for decades.

Individuals in conformity situations change their behaviours, actions, or beliefs to match and fit in with others, to become like them or to follow societal desires (Breckler, Olson, & Wiggins, 2006). The change in individuals' behaviour and beliefs could be a response to real or imagined group pressure or can happen without any overt pressure by others (Aronson, 1988; Zimbardo & Liepe, 1991). Importantly, conformity can lead to a lasting change in individuals' beliefs or behaviour, independent of others' presence (i.e., informational social influence) or an individual can only overtly conform to the opinion or behaviour of the group, but internally keep their original beliefs (i.e., normative social influence). According to Drexhage (2015), conforming to others can a be positive process, especially in situations that are novel. For example, when visiting a foreign country for the first time, following what others are doing in public life can help an individual navigate these new social situations. However, most of social psychological research has focused on situations where individuals conform with a majority, even though they know the majority is incorrect.

Asch's (1951) series of experiments have been used as a benchmark for research on this topic ever since. The empirical conformity experiments reported in Chapters 2, 3, and 4 are closely modelled on Asch's (1951) original experimental set-up. Asch (1951) asked participants to judge the length of lines. In the original series of experiments, all participants were male students and were told that they were participating in a visual abilities test. One "real" participant was always put in a group with seven confederates, and the study aimed to explore the degree to which social pressure from a consistent, but incorrect, majority group influenced the conformity of the real participant, the minority.

Asch's (1951) line judgment task contained two cards, one on the left and one on the right. The left card showed one vertical line, the right card showed three vertical lines of different lengths. The length of the line on the left card clearly matched the length of one of the lines on the right card. The task of the group was to identify the line on the right card that matched in length the line on the left card. This was repeated for 18 trials. In the first two trials, the seven confederates all chose the correct line on the right card, that is, the line that matched in length the line on the left card. However, from the third trial, on 12 of the 18 trials (i.e., the "critical trials"), all confederates consistently gave the wrong answer. The real participant was always the last one to answer and did not know that the confederates were briefed by the experimenter to give the wrong answer. The results of Asch's studies showed that 75% of participants conformed in at least one trial, while 37% of participants conformed in all critical trials. Conformity here means that participants followed the consistent majority and picked the line from the right card that did not match the length of the line on the left card.

1.2.1 Why do People Conform?

People can conform for different reasons. They can conform with others because they do not know the correct answers, especially in ambiguous situations (see Jenness, 1932;

Sherif, 1935) or they can conform with the judgments of others even though they know that the majority's opinion is incorrect (Asch, 1951). Deutsch and Gerrard (1955) called these two types of conformity informational and normative social influence and regarded them as the primary reasons why people conform. They defined normative social influence as "an influence to conform with the positive expectations of another," and defined informational social influence as "an influence to accept information obtained from another as evidence about reality"(p. 629).

Asch's conformity studies (1951) can be seen as an example of normative social influence. In this research, the individual minority member seeks to match the view of the majority in the group. Normative social influence is the ability of the majority to control the minority by pressing them to follow and conform to their opinions. The individual minority member tends to conform because they are afraid of rejection by others and needs to feel acknowledged and to have companionship and association with other individuals. Normative conformity is associated with compliance, where the individual accepts different views in public but rejects them in private. Normative influence stems from a desire to avoid punishments and gain rewards, for example, through conforming with other students in the class even if they answer wrongly. The effect of normative influence has been found in many empirical studies, replicating Asch's original findings (e.g., Göckeritz et al., 2010; Nolan, Schultz, Cialdini, Goldstein,& Griskevicius, 2008; Reis, 2012; Schultz, Khazian, & Zaleski, 2008).

Informational social influence happens when individuals alter their behaviour in ambiguous situations. Individuals often lack of knowledge and seek for information from others that they perceive as more knowledgeable. The auto-kinetic effect experiment by Sherif (1935) is considered an early example of an informational social influence study. This study example how informational uncertainty influences individuals in circumstances when

they do not know and cannot check the correct answer (see also Burnkrant & Cousineau, 1975; Cohen and Golden, 1972; Kaplan & Miller, 1987).

According to Kelman (1958) there might be other reasons why people conform, namely compliance, identification, and internalization. Kelman (1958), for example, argue that compliance is associated with public conformity and can be defined as "when an individual accepts influence because he hopes to achieve a favorable reaction from another person or group. He adopts the induced behavior because "he expects to gain specific rewards or approval and avoid specific punishment or disapproval by conformity" (Kelman, 1985, p. 53). As such, Asch's (1952) experimental findings could be classified as compliance (i.e., normative influence). The process is simple in compliance: as soon as there is pressure from the group, compliance happens. Therefore, compliance is associated with short-term change depending on the pressure of the group. Compliance is the consequence of normative social influence. People comply to avoid punishment or gain rewards, both material and social.

The second type of conformity is identification which happens "when an individual accepts influence because he wants to establish or maintain a satisfying self-defining relationship to another person or group" (Kelman, 1958, p. 53). Thus, people conform to social role beliefs in society. Similar to compliance, people's private opinion is not accompanied by an actual change, what is changing is their public opinion or behavior. An example of identification is Zimbardo and colleagues' (1973) Stanford prison experiment, in which, over time, participants took on the behaviour associated with the social roles of prison guards and prisoners.

The other reason why people conform is internalisation, which happens "when an individual accepts influence because the content of the induced behavior - the ideas and actions of which it is composed - is intrinsically rewarding. He adopts the induced behavior because it is congruent [consistent] with his value system" (Kelman, 1958, p. 53). This level

of conformity contains both public conformity and private conformity, which means that individuals change their behaviour, convictions, and belief, and conform privately and publicly. Internalisation is the deepest level of conformity because the group's beliefs match individuals' own belief system. Internalization effects are the most permanent because they are based on informational social influence and do not depend on group surveillance or continued esteem. The main motivation of internalisation is a desire to be right or to do the right thing.

1.2.2 Factors Influencing Conformity

1.2.2.1 Gender and Conformity. Asch's (1951) original series of conformity experiments drew on an exclusively male sample. Subsequent research investigated whether there were gender differences in conformity and, indeed, empirical evidence indicated that females conform more than males (Allen & Crutchfield, 1963; Asch, 1956; Crowne, Liverant, 1963; Eagly, 1987; Endler, 1966; Endler, Wiesenthal, Coward, Edwards & Geller, 1975; Janis & Field, 1959; Julian, Regula, & Hollander, 1968; Nord, 1969; Tuddenham, 1958; Zikmund, Sciglimpaglia, Lundstrom, & Cowell, 1984). The role of gender for conformity can also be found when comparing experiments: The higher the percentage of females in a study, the higher the levels of conformity (Bond & Smith, 1996). Furthermore, these gender differences in conformity were not only found among adults, but also among children in some studies (Berenda, 1950; Carrigan & Julian, 1966; Hamm & Hoving, 1969; Mock & Tuddenham 1971; Tuddenham, 1961, but see Bishop & Beckman, 1971).

Hollander, Julian and Haaland (1965) utilised Crutchfield's (1955) methodology, where participants are not physically in the same room, but members were placed in individual booths with electronic display boards to show others' decisions and partition walls to prevent participants from seeing each other. Participants then make decisions on different stimuli, which are presented to them on the wall (or a computer screen), and they respond

using the electronic board. Each participant in the experiment believes that they are the last one to answer. All participants' responses are shown on the electronic response panels which each participant supposedly knowing each others' answers. In reality, the experimenter manipulates and controls participants' answers from a main control station. Therefore, what participants see on their own electronic boards were the answers chosen by the experimenter, not the real answers by the other participants/group members. As in Asch's original study, conformity is measured by the number of times members would agree with others' wrong answers on critical trials.

In Hollander et al.'s (1965) study, all participants first responded in 20 trials believing that they were first to respond (i.e., their responses were not affected by the other group members), and for the next 20 trials participants believed they responded last (i.e., after learning about all other group members' choices). There were four conditions: (1) uniform agreement where the other group members agreed with the participants in 100% in both the first and the second round of 20 trials; (2) a condition where the other group members agreed 100% in the first 20 trials, 70% (14 out of 20 trials) in the second round; (3) 100% support in the first round, 50% (10 out of 20 trials) in the second round; (4) a control condition where participants received no feedback about the responses of the other group members. The authors found that females conformed more than males, particularly in conditions 2 and 3.

Several researchers have conducted meta-analysis on conformity in females and males (e.g., Bond & Smith, 1996; Cooper, 1979; Eagly, 1987; Eagly & Carli, 1981). The results of Eagly and Carli's (1981) meta-analysis of 148 studies show that females are more persuasible and conforming than males, independent of whether participants' responses were known to other group members or not. Interestingly, male researchers were more likely to find gender differences in conformity (with females conforming more than males) than female

researchers. Since 79% of the study included in the meta-analysis were conducted by male researchers, this might overestimate the levels of conformity in females compared to males.

Eagly's (1987) meta-analysis found that contextual features, such as the materials used or types of decisions made, as well as role system and cultural networks (which are not under a researcher's control) affect these gender differences. One major determinant affecting the size of gender differences was the historical period of whether the research was carried out before (females conform more) or after 1970 (no gender difference). Furthermore, gender differences in conformity correlated with size of the majority (Cooper, 1979; Eagly, Wood & Fishbaugh, 1981; Maccoby & Jacklin, 1974) The larger the (unanimous) majority, the larger the gender differences.

Another moderating variable was the gender composition of the group. Females in mixed-gender groups conformed more than males, while males conformed more in all-male groups (Tuddenham et al., 1958). Potentially, cultural gender stereotypes and gender roles might underlie these differences. (Eagly, 1987; Eagly, 2013; McDavid, Sistrunk, 1964; Middlebrook, 1974; Johnson & MacDonnell, 1973). Females might be concerned about connecting with others, and males about seeming to have a high status and not being impacted by others' opinions. This means that males might think that they can show their status by acting freely from others' opinions, which means that they conform less than females. Males prefer to behave independently whereas females attempt to stop social disagreements and conform to others (Carli, 2001). Indeed, Worchel and Cooper (1976) mentioned that, 'the difference in conformity rates is consistent and may be due to the socialization processes that teach men to be "independent thinkers" and to "stand on their own two feet", while these values are seldom seriously suggested as suitable for women' (p. 335).

Content of the conformity stimuli was another moderating variable that might underlie gender differences in conformity. Sistrunk and McDavid (1971) suggested that some of the tasks that were used in conformity experiments were more pertinent to one gender than the other. They found that for masculine content, females were more likely to conform, while for feminine content, males were more likely to conform. However, there was no difference between males and females for neutral content. Lee (2003) carried out a study on conformity on two different topics, one on sport and the other on fashion, and found that females were more conforming than males when it came to questions of sport. These results replicated other findings (Cacioppo & Petty, 1980; Carli, 2017; Goldberg, 1974; Javornisky, 1979; Maupin & Fisher, 1989). People with more information on a given topic may be less likely to conform, as they are more likely to know that the majority answer is wrong. Additionally, they are more likely to be more certain about their response, and consequently are less likely to conform.

Finally, it should be noted that gender differences in conformity might interact with other variables affecting conformity, such as age and culture (Eagly & Chravala, 1986; Pasupathi, 1999). How these variables affect conformity is discussed in the sections below.

1.2.2.2 Culture and Conformity. There is some evidence that conformity is more prominent within some societies than others. A meta-analysis of 133 studies (Bond & Smith, 1996) drew on studies from more than 16 countries which used Asch's line experiment as a measure of conformity. The authors found differences in conformity between countries with collectivistic and individualistic cultures, with participants from collectivist societies generally conforming more. Collectivist cultures emphasize the aims of the family or other important ingroups over personal needs, while individualist cultures prioritize the needs of individuals above group goals. As such, individualistic cultures should discourage conformity to others and should encourage autonomy (Cialdini et al. 1999; Ng, 2003; Triandis et al.

1988). Additionally, self-perception studies found cultural differences that might be indirectly related to conformity. For example, participants from East Asian countries consider themselves to be like others (Markus & Kitayama, 1991), and resembling others is viewed as attractive and positive. As such, participants from these cultures might conform, because they want to resemble others. Kim and Markus (1999) were interested in uniqueness and conformity among participants from the United States and Korea. They found that uniqueness was positively associated with independence and freedom, while conformity was associated with societal oppression in US participants. However, among Korean participants, conformity was negatively associated with deviance but positively with harmony.

It is not necessarily the case that participants from all collectivistic countries are intrinsically inclined to conform more than participants from individualistic countries (Oyserman et al., 2002) – the context matters. Kitayama et al. (2006) claim that cross-cultural differences in conformity may have developed as a result of selective patterns in human settlement migration. Similarly, Cohen (2001) underscores that ecological and/or economic factors may play a role in cross-cultural differences. For example, Berry (1979) proposes that social norms and socialisation practices associated with specific subsistence forms may be linked to levels of conformity. Berry (1967) utilised experiences of conformity from two different countries (people from Sierra Leone; Inuit from Canada) to study the association between social norms and subsistence practices and conformity. The results indicated that participants from Sierra Leone, with a largely agricultural economy, had a higher level of conformity than Canadian Inuit. This result can be ascribed to the agrarian way of life, which is structured around child-raising practices, and is also subject to participation in terms of cultivating, which mean people depend on cooperation and interdependence. The Canadian Inuit are hunters and have the ability to make decisions individually, with less support or external impact, thus making them independent. Their child-rearing norms also emphasise

self-reliance, which is often required inside this culture. This may explain why Inuit displayed lower levels of conformity than those who live in Sierra Leone.

These cultural differences in conformity were moderated by a number of factors. One such factor might be the identity of the majority. For example, Triandis et al. (1988) found that Japanese participants conformed more when they are confronted with a majority of members of their in-groups with whom they strongly identified, such as family and friends. However, when they interacted with a group of strangers they conform less. Similarly, cultural differences change depending on whether a conformity study was conducted face-to-face or over the computer/online (see below). Cinnirella and Green (2007) conducted experimental research on conformity in real (face-to-face) and internet (computer-mediated) conditions. They replicated the effect that participants from collectivistic cultures conformed more than those from individualistic cultures, but the authors found this cultural difference in conformity in the real, but not the internet condition. Moreover, it should be noted that most of the cross-cultural studies on conformity used Asch's line task to study conformity. Cross-cultural differences are less clear when other tasks, for example moral conventional, or risky tasks, are employed. This is addressed in this dissertation.

Repeating conformity experiments within a specific society at different historical times can generate different outcomes. For example, Larsen (1974, 1990; Larsen, Triplett, Brant, & Langenber, 1979) conducted the Asch experiment at different times with US American participants and found fluctuating conformity levels according to socio-political changes. The level of conformity during the first experiment in 1974 was low; however, in 1979, the level of conformity was higher than in the first replication, mirroring the decrease in activism and a higher orientation towards career-building. Furthermore, one of the criticisms of Asch's original conformity task was that it is a reflection of 1950s US culture, which was rather conservative. According to Perrin and Spencer (1980), the Asch experiment

is a "child of its time" (Perrin & Spencer, 1980, p. 405). They contend that changes in US culture have occurred which affected how cultural values are linked to conformity.

1.2.2.3 Age and Conformity. Empirical research has found mixed patterns regarding age differences in conformity. While some research indicates that children conform more when they become older, other studies showed the opposite effect. A majority of children show conformity in the preschool years (around the ages of two to three), and conformity continues to increase into adulthood (Corriveau & Harris, 2010; Haun, Rekers & Tomasello, 2012, 2014). Children are particularly susceptible to the influence of other children (Ceci & Bruck, 1993).

Preschool children frequently show conformity, such as copying the behaviour of the majority (Flynn & Whiten, 2010; Haun, Rekers & Tomasello, 2012; Turner, Nielsen & Collier-Baker, 2014; Wilks, Collier-Baker & Nielsen, 2015). However, this research also shows that children do not copy others or conform to others indiscriminately. That is, even young children might conform to others who have been shown to be more knowledgeable or reliable in the past (Wood et al., 2014).

Walker and Andrede (1996) replicated the Asch line experiment with children and adolescents in Australia (3- to 5-year-olds; 6- to 8-year-olds, 9- to 11-year-olds, 12- to 14-year-olds, 15- to 17-year-olds). Each participant completed six trials, a practice trial, three neutral trials, and two experimental trials. In the practice and neutral trials, the majority gave the correct response, in the experimental trials the majority gave consistently the wrong answer. Conformity within the youngest age group was higher than in the other age groups. In the late adolescent age group, conformity was lowest, indicating that conformity decreased with age. Across ages, the conformity was 85%. In the experimental trials.

In a study by DiYanni, Corriveau, Kurkul, Nasrini and Nini (2015) only 33% of children of the same ages as those investigated in Walker and Andrede's study conformed to

adult informants. Walker and Andrede (1996) note two fundamental preconditions for young children to show high level of conformity, namely the methodology of the research and children's cognitive development. Children might imitate the response of others when they do not understand the task. This is particularly the case in pre-operational children. For children of that age, their world comprehension usually comes from adults, so it is not surprising that young children in particular show a tendency to conform to others, particularly adults.

In two studies, Corriveau and Harris (2010) examined conformity in three- and 4-year-old children. The overall rate of conformity was 20% in the first study and 26% in the second study. This is less than noted in Asch (1956), where 33% of college students conformed. Caucasian-American children were found to conform less than Asian-American children in Corriveau and Harris (2010). These cultural effects in conformity are similar to those found by Bond and Smith (1996) for adults.

In a child-friendly adaptation of Asch's experimental procedure, Haun and Tomasello (2011) found strong conformity among pre-school children when confronted with a consistent majority of incorrect peers. The level of conformity in this study matches those in Asch's original research. Additionally, Haun and Tomasello (2011) found that children only changed the public expression of their opinions; in private settings, where the influence of the majority does not operate, children still produced the correct answer. Thus, already for preschool children, conformity was based on the normative influence of the majority.

Zhang, Zhang, Mu and Liu (2017) examined conformity among Chinese children and adolescents aged between nine and 15 years, employing a paradigm similar to that of Asch with both public and anonymous conditions. In the public condition, all participants' answers were shown so that everybody knew each others' decisions. In the anonymous condition, participants were able to know others' choice but others would not know their final decision.

The authors noticed no age differences in the anonymous condition. However, in the public condition, older children and adolescents showed higher levels of conformity (in contrast to similar research in western societies). Thus, age effects in conformity might also be culturally driven.

Given the rather mixed age patterns regarding conformity from childhood to young adulthood research tried to identify moderating variables that might account for these mixed findings. Variables associated with a decrease in conformity are education, status (Tuddenham, 1959), competence (Crutchfield, 1955), task difficulty or ambiguity (Morgan, Laland & Harris, 2015), socialization process (Costanzo & Shaw, 1966), conformity object (e.g. parents or peers) (pdt, 1979; Costanzo, 1970; Rosen, 1955; Utech & Hoving, 1969), and culture (Iscoe, Williams & Harvey, 1964; Kagan, 1974). Older children tend to be more confident and have more highly-developed cognitive abilities, compared to their younger counterparts. Additionally, when peers were present, children changed their behaviour more than when they were absent (Haun, Rekers, and Tomasello, 2014). Types of pressure, whether low or strong, indicate that children aged six experienced a high level of impact related to conformity (Sun & Yu, 2016). Morgan, Laland and Harris (2015) stated that older children above the age of seven conformed more when a task becomes difficult, despite these older children being more committed to their initial decisions.

Asch (1956) showed that when the correct answer becomes more ambiguous, conformity increases. Participants face conflict when stimuli are unambiguous and must make a choice between reality and the decisions of the majority. Ambiguity of stimuli is another factor that might explain the relationship between age and conformity. For unambiguous stimuli, studies indicate negative relationship between conformity and age, while for ambiguous stimuli conformity increases with age (Hoving, Hamm & Galvin, 1969).

Who constitutes the majority is another factor influencing conformity. Preschool children may be more involved in family interactions and, as a result, may more closely follow the guidance of parents, while older children may be influenced more by peers, especially as they transition from childhood into adolescence (Costanzo, 1970). Studies have shown that adolescents appear to exhibit a high level of susceptibility to peer influence (Sistrunk, Clement & Guenther, 1971; Klein, 1972; Iscoe, Williams & Harvey, 1963). Similarly, Iscoe, Williams and Harvey (1963) found the peak of conformity with peers among females at age 12 and among males at age 15. Relatedly, Ruggeri, Luan, Keller, and Gummerum (2018) showed that children were more likely to copy the fair and unfair behaviour of adults, whereas adolescents were more likely to copy the behaviour of peers.

Some studies also looked at the other end of the age spectrum investigating differences in conformity among younger and older adults. Adults tend to be less interested in the opinions of others about them as they age (Mueller, Johnson, Dandoy & Keller, 1992). This is particularly true for older adults (Borozdina & Molchanova, 1997; Reifman, Klein & Murphy, 1989). On the other hand, in old age, social activity diminishes (Giles, Fox, Harwood & Williams, 1994; Field & Minkler, 1988), and a decrease in self-esteem is observed, particularly around the time of retirement (Orth, Trzesniewski & Robins, 2010). This might have implications for conformity. Eagly and Chrvala (1986) examined the role of age, gender, and surveillance (envisioning one's responses being shared with others versus no sharing of responses) on conformity among 91 university students (both younger and older than 19). Their results indicate that gender and age both impact on conformity. Female participants older than 19 conformed more under surveillance, while those younger than 19 were not affected by surveillance conditions. Klein's (1972) findings support the idea that older people conform more than younger adults. Pasupathi (1999) examined differences in terms of age and conformity among female adults aged 18 to 35, and in a second group aged

63 to 85, using two stimuli: ambiguous geometric shapes, and facial emotional expressions. The study found that for emotional stimuli, younger adults conformed more than older adults when participants faced the pressure of conformity.

      1.2.2.4 Computer-mediated Conformity. More and more social interactions between individuals are happening online or over computers. The internet plays a vital role in people's social lives. According to the Office for National Statistics (2018), 90% of adults used the internet regularly, and this number increases to 99% among 16- to 34-year-olds. Thus, it is important to ask whether social processes, such as conformity, also operate when people interact and communicate online or over the computer.

      Computer-mediated (CM) and online interactions have some features that might impact on conformity: People are more anonymous and might therefore feel less pressure to conform and feel more egalitarian than in face-to-face interactions (Chapanis, 1975); they might be less inhibited and therefore less likely to reach an agreement (Hiltz, Johnson, & Turoff, 1985; Kiesler, Siegel, & McGuire, 1984), and feel less group belongingness (Smilowitz, Comptopn, & Flint, 1988). Indeed, electronic communication decreases the politeness and public self-awareness of people (Kiesler & Sproull, 1992; Matheson & Zanna, 1988). Some research suggests that individuals are conforming more and are more likely to change their opinion towards the majority in face-to-face than CM Interactions (Adrianson & Hjelmquist, 1991). One reason might be that the impersonality and remoteness of CM interactions allows participants to express their opinions more freely and encourages them to suggest new ideas (Hiltz, 1975).

      Another critical difference between CM and face-to-face interactions is that CM interactions lack visual cues and physical presence (Amichai-Hamburger, 2005; McKenna & Green, 2002). According to Kiesler, Siegel and McGuire (1984), this absence of nonverbal behaviour, such as group members speaking loudly and gesturing, might be considered as

one reason for the decrease in social influence. Furthermore, eye contact with others and hearing their voices affects the negotiation between people (Krauss, Apple, Morencz, Wenzel, & Winton, 1981). Smilowitz, Compton, and Flint (1988) utilized a computerized version of Asch's procedure to examine how the exclusion of contextual clues found in face-to-face interaction influences judgments made in CM versus face-to-face interactions. They found that in the CM condition, minority individuals were more likely to resist the impact of social pressure to conform to the majority than in the face-to-face condition. Specifically, minorities conformed in the critical trials at a rate of 0.17% in the CM and at a rate of 36.8% in the face-to-face condition. According to the authors, "it is easier for a deviant to persist in the CMC environment. Since the effect of the majority opinion is diminished, individuals with deviant opinions are more likely to hold out that to succumb" (p 320). This effect was mainly due to the lack of physical or social presence of the others in the CM condition diminished the influence of the majority and led to less conform. Similarly, Wallace (2001) replicated the classic Asch experiment online and found reduced conformity, which was attributed to the lack of physical presence of others.

Laporte, Nimwegen, and Uyttendaele (2010) concentrated on whether online conformity changed with different degrees of social presence and also depending on the task used. The first study included questions on visual perception (in line with Asch, 1951) and factual (knowledge) questions. The second study additionally included opinion questions about moral and political issues. In both studies, the majority was either represented by photos or with a live video. In the first study, under both photo and live-video conditions, the majority of participants' answers differed for the visual questions, which means there was no conformity. For the second study, there was no significant difference between the photo and live-video conditions, although there was more conformity in answers to moral and political

questions. The main findings showed that participants quizzed under photo-only conditions conformed less, likely because they were provided with fewer social cues.

Rosander and Eriksson (2012) surveyed conformity behaviour on the internet and the roles of gender and task difficulty for this behaviour. Participants were presented with an online survey that contained 26 questions, information, logic, and attitude questions. There were two groups in the experiment, a conformity group and a control group. For the conformity group, under each question the experimenters displayed the answer chosen by the majority in the participants' community or web forum (i.e., the social norm). The control participants simply answered the questions without the socially normative information. In the conformity condition more than half of the participants (52.6%) conformed at least once, that is chose the answer that was picked by the majority in their community. Mean conformity in this study was 13%, lower than in the study of Asch (36.8%). Additionally, men conformed more than women, and conformity increased with task difficulty.

As discussed above, some studies and meta-analyses have found cross-cultural differences in conformity (e.g., Bond & Smith, 1996). However, few studies examined cross-cultural differences in CM conformity. Cinnirella and Green (2006) studied the impacts of face-to-face and CM communication on conformity in individualistic and collectivist cultures. They utilized Asch's original line judgment task, but simply informed participants that a specific (incorrect) line was the most commonly chosen one by others in their society. Thus, this line can be considered as the normative response of the group. Cultural differences (with participants from collectivistic societies conforming more) were found in the face-to-face but not in the CM condition. In line length judgments, participants in both conditions conformed more highly than a control group that was not given any information about which (incorrect) line was chosen by the majority of people in their culture.

1.2.2.5 Group Size and Conformity. A large number of studies have investigated how group variables, such as the size of the majority, affect conformity. Group size and conformity is one of the most commonly discussed topics in the conformity literature; however, few studies have methodically examined groups of different sizes. Some research, for example, Latané and Wolf (1981) and Harkins and Petty (1981), is consistent with the suggestion that conformity ought to monotonically increase with group size. Latané (1981) reviewed the effect of group size on different social influence paradigms. In laboratory experiments, groups do not need to be large to lead to conformity. Yet, if we limit our review of conformity to situations where a single respondent faces a consistent majority, few investigations show the same results. Latané (1981) believed that the intensity of conformity depends on the size of the majority: the larger the size of the group, the larger the effect. In spite of the fact that conformity pressures increase as the size of the majority grows, according to a meta-analysis of studies employing the Asch Paradigm, conformity reaches its peak when the consistent majority numbers about four or five people (Bond & Smith, 1996).

In Asch's (1956) original research, the conformity of participants was impacted by group size: Participants conformed if there was only one confederate in just 3% of critical trials. When the majority consisted of two individuals, conformity increased to 13.6%, and with three or more, it was 31.8%. This is the same conformity rate as Asch's (1951) original experiment, in which there were seven confederates. Expanding the size of the group beyond three did not result in any increase in conformity levels (Asch, 1955). Asch concluded that it was the perception of consensus in decision-making that resulted in conformity and that a majority group of three is sufficient for this perception to emerge.

However, there are some problems in the reporting of the studies conducted by Asch (1951, 1955, 1956). It is astonishing to discover inconsistencies in the reports of the size of the majority group used. In the original study, it is reported as seven (Asch, 1951, p. 178), in

others, between six and eight (Asch, 1955, p. 22), or simply eight (Asch, 1951, p. 181), and sometimes even six, seven, or nine (Asch, 1955, p. 35). Similarly, the impact of group size changed in these experiments. In his experiments of 1951, several sizes of majority are mentioned (1,2,3,4,8, and 16). At the point at which that the paper was republished, a year later (1951b), the size of the majority had changed from 16 to 10–15. Although the results presented are for a majority of eight, which is the largest number of respondents in the Asch experiment (1951), no outcomes for a group size of eight are given in the later paper (1955), despite the fact that there are outcomes for majorities of seven and nine. Undeniably, it is hard to use Asch's results to evaluate the relationship between group size and conformity if the size of majority from which those results were obtained cannot be determined. In Gerard et al.'s study (1968), group size and gender have been confounded, as the respondents for even-numbered group sizes were all male and those for odd-numbered groups sizes were female. Tanford and Penrod (1984) and Latané and Wolf (1981) have disregarded this issue in their reanalyses. There is a conflict between the results of Gerard et al. (1968) and the original Asch (1951) study; the former used private responses (where decisions are made privately via computer or writing down the responses which others cannot know) while the latter used public ones. Giving responses privately will likely reduce others' normative influence substantially.

Tanford and Penrod (1984) conducted a meta-analysis on the topic of conformity that challenged previous conclusions. They tested the correlation between conformity and the size of the majority by contrasting a simple linear model of social impact with the S-shaped growth function inferred from their own social influence model (SIM). They discovered that the function from their social influence model was the best fit for the data. It has been suggested that individuals may suspect collusion if the size of the majority exceeds three or four (Baron & Byrne, 1997).

As discussed above, the Asch paradigm measures normative influence on conformity. Kumar (1983) investigated group size and informational influence using a dot estimation task (an ambiguous task). Public responses from a group of male participants aged between 9 and 20 years old, and another group aged 14 to 25 years old were elicited, for majority sizes of five and ten people. It was found that a majority of ten was more influential than a majority of five. Thus, in ambiguous situations, the larger the majority, the stronger the informational influence.

Various studies using the Crutchfield (1955) paradigm have concluded that there is a positive linear correlation between conformity and the size of the majority, but each one has had different sizes of the majority. For example, Gerard, Wilhelmy and Conolley (1968) had majorities between two and seven, with participants giving a private response. Nordholm (1975), and the first study by Stang (1976) used a majority size of between one and four, with participants giving a public response. Horowitz and Rothschild (1970) carried out experiments using public responses and employing the line judgment task and found that a majority size of four resulted in a greater conformity than a majority of two. Nikols (1965) used several tasks, including geometric figures and line judgements, and concluded that a majority size of three results in greater conformity than one in all tasks. Finally, Rosenberg (1961) found a curvilinear correlation between majority size and conformity, using majority sizes from one to four; for the last two group sizes, conformity was found to decrease.

To summarise, some studies have found that conformity increases with the size of the majority, but some have found a decrease for large majority sizes. Latané's (1981) theory of social impact (1981) suggests that social influence increases according to speed and group size. Be that as it may, as the number of people in the group grows, their effect on social influence diminish: the second individual has less impact than the first, and individual n has less impact than individual $n-1$. It seems that a consistent majority of three to four people in

Asch-type and Crutchfield-type experiments is enough to induce considerable amounts of conformity.

1.2.2.6 Summary. As discussed in the previous sections, individuals conforming to the opinion of a majority, even when they know the majority is wrong, is a robust phenomenon that might be due to normative or informational influences. A number of variables have been shown to moderate the prevalence of conformity, such as the gender and age of participants, cultural backgrounds, the decision tasks, and the size of the group. The goal of this PhD research was to apply this conformity to decisions in the moral domain.

1.3 Overview of this Dissertation

The main objective of this thesis was to examine social influences on adults' moral decision making. Specifically, I was interested in whether individuals take others' (moral) opinions into account when making a moral decision. As such, this research extended existing psychological theories of morality by particularly focusing on social processes. It also extended research on conformity to moral decisions. Overall, this dissertation addressed the following novel research questions:

Do adults conform with others' moral opinions? So far, surprisingly few studies (reviewed in Chapter 2) have investigated whether conformity processes affect people's moral decision-making similarly to other tasks used in the conformity literature (e.g., visual perception tasks). All empirical studies reported in this dissertation investigate whether adults follow the moral opinions of a majority, even if the majority's opinion is different to their own (Chapters 2 and 3), whether descriptive social norms regarding moral issues affect individuals' opinions about these issues (Chapter 4), or whether others' moral reasons influence individuals' moral judgments and reasoning (Chapter 5).

Are there domain differences in moral conformity? As discussed in section 1.1.3, people's social and moral life is multi-faceted, including concerns for harm, fairness, and

rights, social uniformities and rules, concerns for spiritual purity, and concerns for social hierarchies and relationships. In all empirical studies of this dissertation I investigated whether there are domain differences in the influence of others' opinions and reasons on individuals' conformity.

Are there cultural and gender differences in moral conformity? As I have shown in sections 1.2.2.1 and 1.2.2.2, previous meta-analyses have found significant gender and culture effects in conformity. Gender and culture effects in moral decision-making have also been discussed even though these effects tend to be less clear-cut (see Helwig, 2005; Snarey, 1985, Walker, 2005, for reviews). In Chapters 2 and 3, I investigated moral conformity processes in participants from the United Kingdom and Kuwait. To my knowledge, only one study has investigated cultural differences in conformity on morally-related issues, and this is the first time that moral conformity is investigated in a Middle Eastern culture. In fact, very little research on social pressure and conformity in Middle East countries exists, with only one study by Amir (1984) studying conformity in Kuwait. As discussed in Chapters 2 and 3, the moral domain is conceptualized more widely in Middle-Eastern than western societies. Furthermore, gender roles tend to be more traditional in Kuwait than the UK, which might differentially affect moral conformity in Kuwaiti females and males.

How do normative and informational influences affect moral conformity? People conforming to the opinions of an incorrect majority might be due to two types of influences (see section 1.2.1): Normative influences operate due to the person's desire to "fit in" with and be liked by the group and avoid punishment. Informational influences are prominent in decision situations that are ambiguous and individuals rely on the groups' knowledge to make a "correct" decision. Arguably, many moral decisions are characterized by at least some ambiguity as to what the right or wrong course of action might be, so informational influences might underlie moral conformity. Normative influences might also operate in

moral conformity situations, as individuals might want to fit in with the group's perceived moral preference. In Chapter 4, I present a study that manipulated and measured potential normative and informational influences on moral conformity thereby investigating whether these processes play a role for moral decisions.

How do others' moral reasons affect individuals' own moral judgments and reasoning? In his social-intuitionist model, Haidt (2001) suggests two social pathways that might affect individuals' moral judgments and intuitions (see section 1.1.4). According to the social persuasion pathway, simply being exposed to others' moral judgments affects individuals' moral intuitions. I empirically examined this pathway in the moral conformity studies reported in Chapters 2, 3, and 4. According to the and reasoned judgment link, others' moral reasoning affect individuals' moral intuitions and judgments. This reasoned judgment link was investigated in the empirical study presented in Chapter 5. Here I assessed the influence of moral reasons on others' moral judgments in two moral scenarios that either focused on a harm violation or a decency violation. I also investigated whether certain moral reasons are more likely to transmitted from person-to-person (i.e., are more morally "contagious") and are more influential for others' moral judgments.

Chapter 2

Chapter 2 reports on two studies focusing on whether adults conform to issues in the moral, social, conventional, and decency domain in the UK (Study 1) and Kuwait (Study 2) using an Asch-style conformity set-up. Participants had to rate moral, social conventional, and decency transgressions first individually and then (7 to 10 days later) as part of a group of four. On critical items, the other group members judged the transgression as more permissible than the average individual. This study allowed me to investigate domain differences in conformity as well as measure the effect of culture and gender on conformity in the moral, social-conventional, and decency domain.

Chapter 3

In chapter 3, I assessed the role of domain, cultural, and gender effects further. Moral transgressions often carry significant risks (e.g., getting caught and punished by others) but, if successful, can also incur significant benefits (e.g., saving money when cheating on one's taxes). In Chapter 3, I investigated whether such risky moral or ethical decision-making differed from risky decision-making in other risk domains, such as health and safety risks, social risks, or recreational risks. While previous research has shown domain and gender differences for individual risk-taking, it is unclear whether morally-relevant risky decisions are subject to similar domain and gender effects. Furthermore, I investigated possible conformity effects in moral risk-taking with UK and Kuwaiti participants.

Chapter 4

Chapter 4 assessed normative and informational influences on conformity in five moral domains/foundations among UK adults. Participants had to judge the acceptability of moral violations in the harm, justice, ingroup, authority, and decency moral foundations, but were also presented with a statistical descriptive norm of the percentage of previously tested individuals who had found these moral violations permissible or condemnable. Normative influences were manipulated by increasing or decreasing participants' feelings of social exclusion from the group, using the cyberball paradigm (Williams et al., 2000). Informational influences were measured by assessing people's moral convictions regarding the five moral foundations. I reasoned that people who showed strong moral convictions in a specific moral foundation should be more certain (i.e., less ambiguous) about whether the presented transgression was morally right or wrong.

Chapter 5

In chapter 5, I aimed to investigate social processes in the transmission of morally-relevant information in diffusion chains. This study is based on Jagiello and Hills (2018) who

investigated the social contagion of information high or low in dread risk through diffusion chains. Just like risky information, moral opinions are subject to social contagion (Kelly et al., 2017). This has been particularly reported in online environments where moral information gets transformed to fit a person's or group's particular world view (or echo chamber). I wanted to find out what type of information (rational vs. emotional) gets transmitted from one person to the next, and how the information received by another affects moral judgments. Kelly et al. (2017) showed that rational arguments were more influential than emotional ones in persuading others of one's moral opinion (contrary to laypeople's expectations that emotions might be more morally persuasive). I compared the transmission of information for two moral dilemmas or scenarios. In the "rational" scenario, the two norms of avoiding harm versus respecting property clash. The second moral scenario was a decency scenario, an affective story with disrespectful or disgusting actions that "feel" disgusting and wrong but are harmless.

Chapter 6

In Chapter 6, the General Discussion, I summarize the findings of this research, discuss how this research has contributed to answering my research questions and has contributed to our understanding of how social processes shape individuals' moral judgments and decisions.

Before I continue with presenting the first empirical studies in Chapter 2, I would like already address some caveats and limitations of this research. The COVID-19 pandemic and its associated lockdown of labs has also severely affected the possible designs I could employ for my research. Conformity studies, even those conducted over computers, are usually lab-based to increase internal validity and "believability" for participants. While I managed to collect some lab-based data for the studies reported in Chapters 2 and 3, data collection for UK participants was cut short by the first lockdown in March 2020. Furthermore, research

ideas I wanted to pursue originally (e.g., manipulating the effects of social presence or anonymity on moral conformity) could no longer be pursued. The studies presented in Chapters 4 and 5 were therefore developed as alternatives that could test some of my original research questions in an online format.

Chapter 2

Study 1: Conformity on Moral, Social Conventional, and Decency Issues in the United Kingdom and Kuwait

2.1 Introduction

How do people form moral opinions and make moral judgments? Moral judgments have been defined "as evaluations (good vs. bad) of the actions or character of a person" (Haidt, 2001, p. 817). Rationalist approaches in moral psychology have suggested that people's moral opinions and judgments are based on processes of reasoning or calculations of the beneficial and harmful consequences of actions (e.g., Cushman, 2013; Kohlberg, 1984; Turiel, 1983), which are often assumed to be private and individual. Other approaches, for example Haidt's (2001) social-intuitionist model of moral judgment, propose that social processes strongly affect individual moral judgments through two pathways: Based on the reasoned-persuasion link, one person's reasoning or arguments about a moral issue affects another's moral judgment. According to the social-persuasion link, merely knowing others' moral evaluations changes an individual's moral judgment in line with these opinions (Haidt, 2001). The current research further investigated this social-persuasion link. We drew on Asch's (1956) conformity paradigm and investigated whether individuals from the United Kingdom (UK) and Kuwait conform to others' moral opinions.

2.1.1 Conformity

Asch's (1956) classic research has served as a benchmark for research on conformity, the act of changing one's behaviour to correspond to those of others (Cialdini & Goldstein, 2004). The original experiments explored to which degree social pressure from a consistent, but incorrect, majority influences the conformity of a minority in a line judgment task. These studies showed that 75% of minority members conformed at least once, while 37% of participants conformed in all critical trials where the majority members consistently gave the wrong answers. Decades of research (e.g., Bond & Smith, 1996; Cialdini & Goldstein, 2004;

Crutchfield, 1955; Eagly & Carli, 1981) confirmed Asch's original findings, but found that conformity levels varied depending on the characteristics of the participants or methodology used. Eagly and Carli's (1981) meta-analysis found that females conformed more than males, but this gender effect was moderated by other variables, such as the content of the conformity stimuli, the gender composition of the group, or gender role expectations. Bond and Smith (1996) showed that people from collectivistic cultures conformed more than those from individualistic cultures. Unlike in Asch's studies, in the Crutchfield (1955) paradigm, participants were not physically in the same room, but members were placed in individual booths with electronic display boards showing others' decisions and partition walls preventing participants from seeing each other. In general, conformity was higher in face-to-face interactions than in situations where people do not interact in person, such as in the Crutchfield paradigm or in computerized versions of the Asch paradigm (Smilowitz et al., 1988).

2.1.2 Moral Conformity

Investigating whether people conform to the moral opinions of others is interesting as moral questions might not always have an obvious correct answer. Furthermore, assessing moral conformity is a test of the social-persuasion link in Haidt's (2001) social-intuitionist model. But what makes a particular issue a "moral" issue? Domain theory (Turiel, 1983) differentiates between judgments people make regarding moral issues and evaluations of social-conventional issues. The domain of morality encompasses concerns related to not harming others, fairness, rights, and justice. Social conventions are consensually decided uniformities, anticipations, or rules that arrange people's interactions inside a specific social system (e.g., how to greet a person; what clothes to wear at a funeral). Social conventions are more arbitrary than moral rules and can be changed by social agreement (Turiel, 1983).

Cross-cultural research (Haidt et al., 1993; Shweder et al., 1987) indicated that people's concerns with what is right and wrong also included issues pertaining to spiritual purity and degradation. For example, Haidt et al. (1993) presented adults and children in the US and Brazil with "decency violations", affective stories with disrespectful or disgusting actions that "feel" disgusting and wrong but are harmless. While participants strongly reject these decency violations, they could not produce reasons as to why these violations were wrong (nobody gets harmed), a phenomenon that Haidt (2001) calls moral dumbfounding. Thus, such decency violations put people's moral emotions (the action must be wrong because it is disgusting) and their moral reasoning (the actions is not harmful) in conflict.

A few studies have investigated whether people conform on moral, social-conventional, and decency issues. Kundu and Cummins (2013) used the Asch paradigm and asked participants' to verbally rate the permissibility of 12 moral dilemmas that differed in terms of how "permissible" the actions were. Participants were either tested individually (control condition) or in a group containing three confederates (experimental condition). In the experimental condition, confederates consistently gave atypical judgments compared to those observed in previous research (e.g., they judged a previously permissible item as highly impermissible and v.v.). Two additional items had received highly conflicting scores in past research (i.e., were either rated as permissible or impermissible by confederates). Participants' moral judgments were strongly impacted by social consensus: "Permissible" items were rated as more impermissible under social pressure and "impermissible" items as more permissible. For conflicting items participants also conformed with the groups' consensus.

Hornsey et al. (2003) investigated whether the strength of people's attitudes towards moral issues moderated whether they privately or publicly conformed with the majority opinion on these issues. Participants who were in favour of pro-gay legal rights (Study 1) or

for the government to provide an apology to Aborigines (Study 2) but who varied in the strength of their moral attitudes to these issues were presented with statistical information (i.e., the group norm) of others being either strongly in favour or strongly against participants' opinions on these issues. Participants were then asked how willing they would be to perform a number of activities supporting their opinion either privately (i.e., with others not knowing about these actions) or publicly (i.e., others know about these actions). Results across two studies showed that, in private, participants with weak moral attitudes were more likely to act in line with the group norm, but the norm did not affect the private conformity of people with a strong moral attitude. Concerning public actions, marginal moderation effects emerged: Participants with weak moral attitudes were not affected by the group norm, but those with strong moral attitudes were marginally more likely to act counter to the group norm. Thus, strength of moral attitude emerged as a moderator for public and private moral conformity.

Lisciandra et al. (2013) examined participants' conformity in responses to moral, social-conventional, and decency transgressions. Participants first rated moral, social-conventional, and decency transgressions in an online questionnaire individually about two weeks before the group experiment. In the group conditions, participants were confronted with three confederates who unanimously gave answers to the scenarios that were two scale points more extreme than the answer usually given to that scenario. In high social presence groups, participants were seated with the confederates and could see and hear each other. In low social presence groups, participants were seated in front of a computer in the same room, but could not see the others. In the control condition, participants rated the same items again individually. Results showed that in the high social presence group, participants conformed for all transgression types, but significantly more on social-conventional and decency than moral scenarios. Participants in the low social presence groups showed higher conformity for

moral and social transgressions but lower conformity for decency violations compared to the control group. Conformity to moral, social-conventional, and decency transgressions did not differ within the low social presence condition. Thus, the type of violation and the social distance between group members mattered for conformity.

Regarding moral issues Kelly et al. (2017) were interested in whether adults conformed with moral and decency violations online. In Study 1, participants saw statistical information about how often a particular response was chosen by others (i.e., the descriptive norm). Participants conformed with the presented statistical information both for moral and decency items. They judged actions as more acceptable when the descriptive social norm indicated that the majority of past raters also regarded the action as acceptable and vice versa. Study 2 additionally presented statements with either emotional or rational justifications for the descriptive norms. Participants were more likely to conform with others' ratings of the scenario when they presented a rational rather than an emotional justification.

To our knowledge, only one study has investigated cultural differences in conformity regarding morally issues. Enesco et al. (2016) tested pre-schoolers from China and Spain using a moral scenario in a peer-exclusion context where it was clear that the performed action was immoral and an ambiguous scenario where the action performed could be interpreted as immoral or not (i.e., the protagonist in the story could have been pushed intentionally or fallen accidentally). In a non-dissenter condition, participants watched a video of three teachers expressing a unanimous opinion on the scenarios. Participants accepted the opinion of the majority for the ambiguous scenario more than for the moral scenario. Additionally, children from China followed a unanimous majority more than those from Spain.

In sum, several studies have shown that adults (and children) conform to majorities on moral items. However, conformity depends on the domain (e.g., moral, social-conventional, decency) and other variables, such as social distance between group members or culture.

2.1.3 The Present Research

The main goal of the current research was to investigate adults' conformity with moral, social-conventional, and decency issues in Kuwait (Study 2). Since the methodology of the current research differed from earlier studies on moral conformity, we also included a sample of UK adults (Study 1) for comparison reasons. In both studies, participants interacted with other group members over the computer, similar to the online setting of Kelly et al. (2017). This situation is even lower in social presence than the one in Lisciandra et al. (2013) where group members sat in the same room. Kelly et al. (2017) showed that participants conformed to moral and decency issues even when only presented with the descriptive social norm. Therefore, we expected participants to conform to the majority for moral and decency issues.

Middle-Eastern societies, and Kuwait specifically, have been classified as collectivistic and hierarchical cultures (see www.hofstede.org). Given meta-analytic findings on the higher levels of conformity in collectivistic than individualistic societies (Bond & Smith, 1996) and higher conformity on moral issues among Chinese than Spanish children (Enesco et al., 2016), we expected adults from Kuwait to show high levels of conformity. However, no study has investigated conformity on moral, social, conventional, and decency issues in the Middle East. Cross-cultural research (e.g., Graham et al., 2011; Shweder et al., 1987) indicated that while adults in western societies differentiate between these domains in their judgments and behaviours, adults in non-western societies perceive moral, social-conventional, and decency violations as similarly blameworthy. Graham et al. (2011) propose therefore that adults in non-western societies conceptualize the moral domain more widely

than western participants, encompassing not just concerns for harm and rights, but also concerns related to group functioning, authority, and purity. Alqahtani et al. (2020) showed that Saudi participants exhibited similar moral judgments and behaviours across five different moral, social-conventional, and decency domains, whereas UK participants differentiated more sharply between judgments related to avoiding harm and promoting fairness on the one and judgments related to group loyalty, respecting authority, and purity on the other hand. Concerns relating to group loyalty, authority, and purity are often seen as social-conventional rather than moral concerns in western societies (Graham et al., 2011). Given that adults were more likely to conform to moral and decency than social-conventional concerns in the low social presence condition in Lisciandra et al.'s (2013) study, we expected both UK and Kuwaiti participants to be more likely to conform on moral and decency than social-conventional issues. However, since the moral domain is conceptualized more broadly in Middle Eastern societies, we might also see high levels of conformity in all three domains in Kuwaiti participants.

While previous meta-analyses (Eagly, 1987) indicated that females conform more than males, this gender effect was moderated by, among other things, domain, historical time, and cultural gender roles. Furthermore, conformity experiments conducted in online settings showed mixed effects of gender (Wijenayake et al., 2020). Gender differences might be more pronounced among Kuwaiti than UK participants given more traditional gender roles in Middle Eastern societies. Thus, we predicted that females would conform more than males, but that this gender effect would be more pronounced in Kuwait than the UK. Given that studies have reported mixed results concerning age differences in conformity across adulthood (Klein, 1972; Pasupathi, 1999), age effects were investigated exploratively.

2.2 Study 1: Moral Conformity in the United Kingdom

Study 1 investigated whether UK adults conformed with a majority's opinion regarding moral, social-conventional, and decency issues in a low social-presence situation.

2.2.1 Method

2.2.1.1 Participants. Kelly et al. (2017) found an effect of social information condition of $\eta^2 = .025$ (corresponding to $f = .17$) for the decency and an effect of social information condition of $\eta^2 = .029$ (corresponding to $f = .17$) for the moral dilemma. An a-priori power analysis with the program G*power (Faul et al., 2007) indicated that a total sample size of 58 would be necessary to detect an effect of $f = .17$ with a power of .80 and $\alpha = .05$.

UK participants were recruited through the participant pool of Plymouth University, which includes students and adults from the general population. Sixty-four participants were recruited. Out of these, 14 participants only took part in Part 1 of the study and were consequently deleted from the sample. The final sample contained 50 participants ($M_{Age} = 31.29$ years, $SD = 14.76$, 34 females, 16 males). While no information about ethnicity or social class was collected, over 90% of participants in the participant pool identify as middle-class and White-British. Participants received either course credit or money (£2/15 minutes) for taking part.

2.2.1.2 Measures. Moral, Decency, and Social-conventional Scenarios. Fifteen scenarios were taken from Lahat et al. (2012) and Lisciandra et al. (2013). Five scenarios represented moral, social-conventional, and decency violations, respectively (see Table 2.1). In both the individual online questionnaire (Part 1) and the group situation (Part 2), participants responded on a 7-point Likert scale from 1 (strongly disapprove) to 7 (strongly approve).

Filler Items. were taken from the domain-specific risk-taking scale (DOSPERT, Weber et al., 2002; Table 2.1). Participants responded, both in the individual and group

situations, using a 7-point Likert scale ranging from 1 (extremely unlikely) to 7 (extremely likely). Filler items were added to follow the design used in previous research on moral conformity (Lisciandra et al., 2013) and to reduce demand characteristics.

    2.2.1.3 Procedure. The study received ethical approval from the University of Plymouth Human Ethics Committee. Participants were briefed about the study and had to sign a consent form.

Table 2.1

Order of Scenarios in the Group Condition (Part 2). Items Depicted in Italics Display the Non-critical Items (Social Pressure = 0)

Order of scenarios		Domain	Social pressure	Confederates' opinions
1	Michael woke up and started getting ready for school. He decided to go over to his sister's closet. He saw a dress and he tore it.	Moral	0	0
2	Drinking heavily at a social function.	Filler	0	0
3	A man got a blood transfusion of 1 pint of disease-free, compatible blood from a convicted child molester.	Decency	0	0
4	*Walking home alone at night in an unsafe area of town.*	*Filler*	*0*	*0*
5	Riding a motorcycle without a helmet.	Filler	1	6
6	Revealing a friend's secret to someone else.	Filler	1	4
7	Not returning a wallet you found that contains £200.	Filler	0	0
8	Susan usually eats cereals for breakfast. One morning she realizes she finished her favourite cereal. She only has an old pack with grubs and insects inside. She puts them in a bowl and microwaves it first to kill any germs. Then she eats it.	Decency	1	5

9	Jennifer was very bored during class. She wanted to be somewhere else. When her teacher asked her a question she decided to hit her	Moral	2	3
10	Leaving your young children alone at home while running an errand	Filler	2	3.5
11	Going camping in the wilderness	Filler	0	0
12	Sunbathing without sunscreen.	Filler	2	7
13	George was a very short boy. He wanted to be a few inches taller. He found his mother's high heels and decided to wear them	Social conventional	0	0
14	Mary went to eat lunch at the cafeteria. The line was very long. She decided to cut in line	Social conventional	2	4
15	Speaking your mind about an unpopular issue in a meeting at work.	Filler	3	7
16	Admitting that your tastes are different from those of a friend.	Filler	0	0
17	Bungee jumping off a tall bridge.	Filler	1	6
18	Sara makes cruel remarks to Jessica, who is overweight, about her appearance.	Moral	1	3
19	A brother and sister like to kiss each other on the mouth. When nobody is around, they find a secret hiding place and kiss each other on the mouth, passionately.	Decency	3	3.66
20	Passing off somebody else's work as your own.	Filler	3	3.66
21	Engaging in unprotected sex.	Filler	1	5
22	Starting a new career in your mid-thirties.	Filler	2	7
23	David and Ben were in the library studying for an important test on the next day. They realized it was late, and they were running out of time. While they were still in the	Moral	2	4

	library and had a couple of more hours to study they decided to cheat.			
24	Lisa is in the cinema but really bored with the movie she is watching. She takes out her phone and makes a phone call to her best friend.	Social conventional	3	3.66
25	Going whitewater rafting at high water in the spring	Filler	*0*	*0*
26	Driving a car without wearing a seat belt.	Filler	3	5.66
27	Ed created a performance art piece in which he and all participants have to act like animals for 30 minutes, including crawling around naked and urinating on stage.	Decency	2	5.5
28	In Sharon's school students should address their teachers by their title or last name, but not by their first name. Sharon saw her teacher, Dr. Jason Smith, in the hallway and said: "Hello Jason."	Social conventional	1	4
29	Having an affair with a married man/woman	Filler	3	4
30	A family's dog was killed by a car in front of their house. They had heard that dog meat was delicious, so they cut up the dog's body and cooked it and ate it for dinner.	Decency	2	4.5
31	Disagreeing with an authority figure on a major issue.	Filler	1	7
32	Moving to a city far away from your extended family.	Filler	2	6.5
33	Piloting a small plane.	Filler	3	7
34	Liam, Isaac, and Robert are in the pub together. Liam buys the second round of drinks for everybody. When they have finished their second round of drinks, Robert walks to the bar and buys a drink only for himself.	Social conventional	1	4
35	Taking a skydiving class.	Filler	2	7

36	Choosing a career that you truly enjoy over a more secure one.	Filler	1	7
37	Going down a ski run that is beyond your ability	Filler	3	6.66
38	Ted kicked a dog in the head, hard.	Moral	3	2.66

Part 1 (online survey) was sent to participants 10 to 5 days before the lab-based study (Part 2). After being briefed and consenting to taking part, participants were asked to state their gender and date of birth and created a personal ID code. Then they rated the 38 scenarios (15 morality, decency, or social conventional items; 23 filler items) individually and privately. The 38 scenarios were presented in random order. Part 1 took no longer than 15 minutes.

Ten to five days afterwards, participants were invited to the group-based Part 2, which took place at the Psychology laboratories at Plymouth University. Up to eight participants were tested at the same time. Participants sat in one of eight cubicles, which were separated by floor-to-ceiling walls and doors leading to an internal corridor. After being briefed and having signed the consent form, participants had to fill in demographic questions and entered their personal ID code. Participants were told that they would make decisions with three other participants online. These other group members could be in the same session with them or in other sessions. Group members were anonymous to each other; at the beginning of each session, each group member chose an avatar to represent them, and decisions during the group task were only associated with the chosen avatar.

Participants were then presented with the 38 scenarios in pseudo-random order. For 29 of the 38 scenarios, the critical trials, participants were confronted with the ratings of one, two, or three of the supposed other participants, denoted as "Social pressure" in Table 2.1. Social pressure equalling 1 means that participants saw the response of one of the other participants, social pressure of 2 means that participants saw responses of two group

members, etc. In fact, the responses were pre-determined in the design of the study and were

not based on real participants' ratings. For 9 scenarios, the non-critical trials, participants did

not receive information about others' ratings (social pressure = 0; see Figure 2.1a). Table 2.2

shows the twelve critical scenarios used in the moral, social-conventional, and decency

Figure 2.1

 Screenshots of Items used in Study 1: (a) No Social Pressure; (b) Social Pressure of 2. The Participant Chose to Be Represented by the Frog Avatar

(a)

(b)

domains. One scenario per domain (i.e., three altogether) was non-critical (social pressure = 0) and are not displayed in Table 2.2. Since we were only interested in critical items, only 12, not 15 items, were analysed. As can be seen in Figure 2.2, participants' responses were higher in the group than the individual setting.

Table 2.2

Means (and Standard Deviations) of Participants' Individual Responses (Part 1) and Responses in Group Setting (Part 2) on Critical Trials by Culture (UK, Kuwait) and Domain (Moral, Social-conventional, Decency)

	Study 1: UK	Study 2: Kuwait

		Individual responses (Part 1)	Responses in group setting (Part 2)	Individual responses (Part 1)	Responses in group setting (Part 2)
		M (SD)	*M (SD)*	*M (SD)*	*M (SD)*
	Moral Critical Trials				
9	Jennifer hitting a teacher	1.14 (.50)	1.36 (.60)	1.39 (.86)	1.76 (1.11)
18	Sara making cruel remarks	1.49 (.68)	1.72 (.73)	1.74 (1.16)	1.84 (.99)
23	Charlie and Ben deciding to cheat	2.06 (1.13)	2.48 (1.28)	2.11 (1.24)	3.05 (1.39)
38	Ted kicking a dog in the head, hard.	1.08 (.34)	1.20 (.61)	1.53 (1.07)	1.55 (.90)
	Social-conventional Critical Trials				
14	Mary cutting the line	2.14 (.89)	2.24 (.94)	1.86 (1.14)	2.15 (1.31)
24	Lisa making a phone call in the cinema	1.55 (.74)	1.60 (.67)	2.29 (1.44)	2.46 (1.38)
28	Sharon addressing her teacher by his first name	3.43 (1.16)	3.66 (1.14)	3.07 (1.47)	3.37 (1.44)
34	Robert only buying a drink for himself	2.69 (1.33)	3.24 (1.38)	3.16 (1.52)	3.59 (1.49)
	Decency Critical Trials				
8	Susan eating cereals with grubs and insects	2.37 (1.37)	3.04 (1.62)	1.65 (1.13)	1.82 (1.15)
19	A brother and sister kissing each other on the mouth	1.67 (.92)	1.98 (1.12)	1.16 (.67)	1.34 (.82)

| 27 | Ed creating a performance art piece | 2.61 (1.40) | 3.00 (1.47) | 1.26 (.82) | 1.80 (1.29) |
| 30 | A family cooking and eating their dead dog | 1.86 (1.24) | 2.22 (1.40) | 1.55 (1.14) | 1.96 (1.26) |

Figure 2.2

Means of Participants' Individual Responses and Responses in Group Setting on Critical Trials in UK by Domain (Moral, Social-conventional, Decency). Error Bars Display Standard Errors.
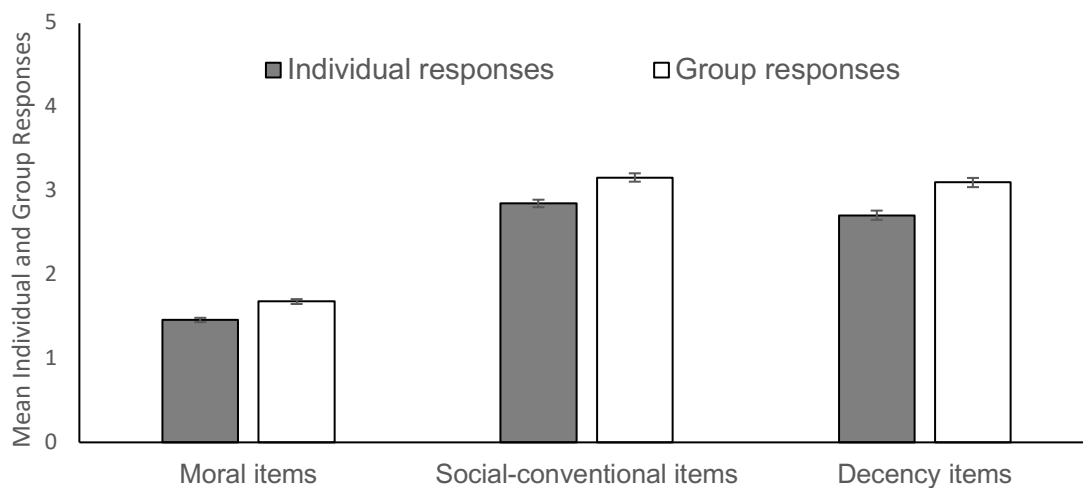
Following Lisciandra et al. (2013), the other group members' ratings of the critical scenarios were two scale points more permissive (for the moral, social conventional, and decency scenarios) than the mean individual ratings in a pilot study. The other group members' ratings are denoted as "confederates' opinions" in Table 2.1. For example, in Scenario 30 (Figure 2.1b) participants were presented with the responses of two group

members, one of them rated this action as "neutral", the other as "slightly approve". Thus, for Scenario 30, social pressure was 2, confederates' opinions was 4.5.

After participants made their decisions, they were thanked, debriefed and paid or received course credit. Part 2 took no longer than 30 minutes.

2.2.2 Results and Discussion

Table 2.2 shows the means and standard deviations for participants' individual and group responses to the critical moral, social conventional and decency scenarios.

Following Lisciandra et al. (2013), conformity (C) was calculated as $C = |O – M1| – |O – M2|$, with M1 denoting participants' responses in the individual condition, M2 denoting participants' responses in the group condition, and O denoting confederates' opinions. A positive value of C indicates that participants' ratings shifted closer to the other group members' in the group condition, a negative value denotes that the distance between participants' and other group members' ratings increased, and a value of 0 indicates that there was no shift. The distribution of Conformity (C) was approximately normal (skewness = .25, SE = .10; kurtosis = 1.24, SE = .20). A Pearson correlation showed that conformity was positively and significantly correlated with social pressure, $r(735) = .15$, $p < .001$. The higher the social pressure, the more participants conformed.

Table 2.3 shows the mean conformity levels in the moral, social conventional, and decency domains by gender. An Analysis of Variance (ANOVA) with the dependent variable Conformity, the independent variables Domain (moral, social-conventional, decency) and Gender (female, male) and the co-variate Age (in years) revealed a significant main effect of Domain, $F(2, 569) = 5.38$, $p = .005$, $\eta^2 = .02$. All other main and interaction effects were non-

significant.[1] Post-hoc tests (with Bonferroni corrections) indicated significantly higher conformity in the decency than the social conventional domain ($p = .002$). There was no difference in conformity in the moral and social conventional domains ($p = .87$) and the decency and moral domains ($p = .051$).

One-sample t-tests showed that conformity in the moral, $t(195) = 4.35$, $p < .001$, $d = .31$, and decency domain, $t(195) = 6.61$, $p < .001$, $d = .47$, differed significantly and positively from 0. Conformity in the social-conventional domain did not differ from 0, $t(195) = 1.93$, p = .06, d = 14.

Table 2.3

Study 1: Mean (and Standard Deviations of) Conformity by Domain and Gender

	Females		Males		Total	
Domain	*M*	*SD*	*M*	*SD*	*M*	*SD*
Moral	.18	.56	.24	.75	.20	.62
Social conventional	.17	.83	-.02	.77	.11	.82
Decency	.40	.81	.30	.73	.37	.79
Total	.25	.75	.17	.76	.23	.75

When removing participants whose individual ratings were the same as the confederates' opinions, an ANOVA with the dependent variable Conformity, the independent variables Domain (moral, social-conventional, decency) and Gender (female, male) and the co-variate Age (in years) revealed a significant main effect of Domain, $F(2, 719) = 6.49$, $p = .002$, $\eta^2 = .02$. All other main and interaction effects were non-significant. Post-hoc tests

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[1]Gender, $F(1, 569) = 1.18$, $p = .28$, $\eta^2 = .002$; Age, $F(1, 569) = .006$, $p = .94$, $\eta^2 = .00$; Domain x Gender, $F(2, 569) = 1.10$, $p = .33$, $\eta^2 = .004$

(with Boferroni corrections) indicated significantly higher conformity in the decency ($M =$ .25, $SD = .89$) than the social conventional domain ($M = .-.03$, $SD = .88$; $p = .001$) and marginally more conformity in the moral ($M = .14$, $SD = .70$) than the social conventional domain ($p = .051$). One-sample t-tests showed that conformity in the moral, $t(244) = 2.99$, $p = .003$, $d = .70$, and the decency domain, $t(244) = 4.42$, $p < .001$, $d = .90$, differed significantly and positively from 0. Conformity in the social-conventional domain did not significantly differ from 0, $t(244) = -.64$, $p = .52$, $d = .89$.

Overall, Study 1's findings are in line with those reported by Kelly et al. (2017). Even in a situation with low social presence, participants conformed to others' opinions. This conformity was particularly pronounced for moral and decency items, but less so for social conventional concerns. This highlights the fact that rather minimal social information can be enough to sway participants' opinions towards those of the majority.

Study 1 did not reveal any age or gender effects. Research on conformity across adulthood has generally shown mixed results with some studies showing that younger adults conform more than older ones and vice versa, depending on the decision domain (Klein, 1972; Pasupathi, 1999). We could not identify age effects, even though we recruited a sample with a wide age range. Similarly, no gender effects in conformity emerged. Numerous studies have found that females conform more than males, but that these gender differences were moderated by variables, such as historical period and cultural gender roles (Eagly, 1987). However, it should be acknowledged that the sample size of Study 1 was small and not well-balanced regarding gender. Therefore, Study 1 might not have had enough power to detect gender effects. Since other studies on moral conformity in western societies did not collect gender information (Kelly et al., 2017), investigating the role of gender differences in moral conformity should be a priority for future research.

2.3 Study 2: Moral Conformity in Kuwait

Study 2 drew on a new sample and investigated whether the findings regarding

conformity to moral, social-conventional, and decency concerns can be generalized to a non-

western, Middle-Eastern culture.

2.3.1 Method

2.3.1.1 Participants. Participants were recruited by approaching undergraduate

students taking a one-semester course at Kuwait University. Two-hundred and forty

participants were initially recruited. However, a number of participants were excluded from

the final sample: 53 only took part in Part 1, 23 participants had more than five missing

answers on the individual questionnaire. The final sample consisted of 164 adults (M_{Age} =

21.49 years, SD = 6.14, 90 females, 74 males). Students at the university were all Kuwaiti

nationals and are recruited from middle-class background. Participants received course credit.

2.3.1.2 Measures. The same measures as for the UK participants were used,

translated into Arabic by a native Arabic speaker and checked for correctness and

understanding by another independent native Arabic speaker.

2.3.1.3 Procedure. Ethical approval was obtained by the University of Plymouth

Ethics Committee. Participants in Kuwait followed the same produce as UK participants.

They first participated in the individual Part 1, and five to 10 days later in the group Part 2.

All testing was conducted in Arabic by a female experimenter, a native Arabic speaker.

2.3.2 Results and Discussion

Table 2.2 shows the means and standard deviations for participants' individual and

group decisions for the critical moral, social-conventional, and decency trials. These data are

also displayed graphically in Figure 2.3.

As for Study 1, we created the variable Conformity (see Table 2.4). Conformity was

significantly and positively related with social pressure, $r(2441)$ = .13, p < .001. An ANOVA

with the dependent variable Conformity, the independent variables Domain and Gender, and

the covariate Age revealed a significant main effect of Gender, $F(1, 1586) = 12.57$, $p < .001$,

$\eta^2 = .008$. The other main or interaction effects did not reach statistical significance.[2]

Figure 2.3

Means of Participants' Individual Responses and Responses in Group Setting on Critical

Trials in Kuwait by Domain (Moral, Social-conventional, Decency). Error Bars Display

Standard Errors
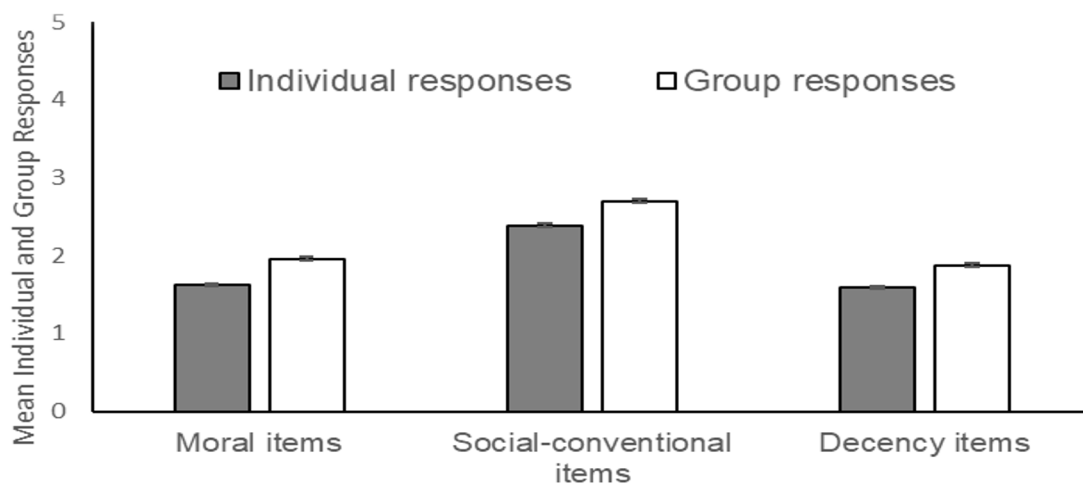
Table 2.4

Study 2: Mean (and Standard Deviations of) Conformity by Domain and Gender

	Females		Males		Total	
Domain	*M*	*SD*	*M*	*SD*	*M*	*SD*
Moral	.44	.99	.18	.93	.33	.97

[2] Domain, $F(2, 1586) = 1.55$, $p = .21$, $\eta^2 = .002$; Age, $F(1, 1586) = 2.94$, $p = .09$, $\eta^2 = .002$; Domain x Gender, $F(2, 1586) = 1.64$, $p = .20$, $\eta^2 = .002$

Social conventional	.25	1.14	.18	1.15	.22	1.14
Decency	.47	1.07	.18	1.18	.34	1.13
Total	.39	1.07	.18	1.09	.30	1.08

Females showed consistently higher conformity than males across domains (Table 2.4). However, one-sample t-tests showed that conformity was larger than 0 in both females, $t(1075) = 11.39$, $p < .001$, $d = .35$ and males, $t(887) = 5.37$, $p < .001$, $d = .18$. Thus, both males' and females' ratings shifted closer to the other group members', but this shift was stronger in females than males. This gender effect is in line with previous meta-analyses (Bond & Smith; 1996; Eagly & Carli, 1981). It might be that cultural gender-role expectations, which are more traditional in Kuwaiti society (Kucinskas, 2010), underlie these gender differences. In Eagly's (1987) analysis, one major determinant affecting the size of gender differences in conformity was the historical period with research carried out before 1970 (more unequal gender relations in society) showing that females conform more and research carried out after 1970 (more equal gender relations) showing no gender differences. Future research should investigate whether variables, such a gender-role expectations, moderate the effect of gender on conformity in non-western societies.

Conformity did not significantly differ across domains. One-sample t-tests showed that conformity was significantly and positively different from 0 in the moral, $t(652) = 8.10$, $p < .001$, $d = .32$, social-conventional, $t(652) = 5.23$, $p < .001$, $d = .21$, and decency domain, $t(653) = 7.55$, $p < .001$, $d = .30$. Thus, participants shifted their ratings towards those of the other group members in all three domains.

When removing those participants whose individual ratings were the same as the confederates' opinions, an ANOVA showed a significant main effect of Gender, $F(1, 1988) = 7.71$, $p = .006$, $\eta^2 = .004$. None of the other main or interactions effects reached statistical

significance. Females ($M = .26$, $SD = 1.14$) conformed more than males ($M = .10$, $SD = 1.17$). Similar levels of conformity emerged across domains (Moral: $M = .21$, $SD = 1.03$; Social-conventional: $M = .11$, $SD = 1.14$; Decency: $M = .25$, $SD = 1.27$). One-sample t-tests showed that conformity in all three domains significantly differed from 0: Moral: $t(811) = 5.26$, $p < .001$, $d = 1.02$; Social-conventional: $t(812) = 3.08$, $p = .002$, $d = 1.13$; Decency: $t(813) = 5.40$, $p < .001$, $d = 1.22$.

2.4 General Discussion

The aim of this research was to investigate conformity in the moral, social-conventional and decency domains among adult participants from the UK and Kuwait. While the study of conformity has a long history, research on whether and how people conform to others' moral opinions is still comparatively rare. Furthermore, very little research exists on conformity in Middle-Eastern societies, and no study has investigated moral conformity in these societies. This research thus contributes to our understanding of the universality of and differences in morality and conformity across domains and cultures.

Drawing on a sample of UK adults, Study 1's results are similar to those reported previously (Kelly et al., 2017; Lisciandra et al., 2013): In the group condition, UK participants' opinions shifted closer to those of the other group members particularly for decency, but also moral items. However, UK participants were least likely to conform in the social-conventional domain. In Study 2, Kuwaiti adults showed equal levels of conformity across domains. There was no gender effect among UK participants. While female participants from Kuwait conformed significantly more than males across domains, the effect size of this gender effect was small, even among the Kuwaiti sample. No age effects on conformity were found in either study. We will discuss the implications of these findings in turn.

2.4.1 Domain differences

There has been some discussion among moral psychologists as to what constitutes the moral domain. While social domain theory (Turiel, 1983) suggests that adults in western societies differentiate between moral (i.e., avoiding physical and psychological harm, upholding the rights of others) and social-conventional concerns (i.e., assuring effective social functioning of groups and institutions), cross-cultural research (e.g., Haidt et al., 1993; Shweder et al., 1987) indicated that adults in non-western societies perceive moral, social-conventional, and decency violations (i.e., sexual, religious, or cultural taboos that "feel" disgusting but are harmless) as similarly blameworthy. Indeed, empirical research (e.g., Graham et al., 2011) showed that while western participants distinguished more sharply between the three domains, participants from the Middle East conceptualize the moral domain more widely, including not just concerns for harm and rights, but also those related to (in)group functioning, authority, and purity (Alqahtani et al., 2020). These cultural effects are also reflected in Studies 1 and 2. Type of norm violation mattered for UK participants, with the highest levels of conformity found in the decency domain, while participants from Kuwait showed no domain differences in conformity.

Why would decency judgments be particularly susceptible to conforming with others' opinions? Decency violations are very often accompanied by strong negative emotions, such as disgust (Haidt et al., 1993), but, unlike moral violations, are rarely associated with (physical) harm. Research has shown that asking people to reflect on whether a decency violation is actually harmful (i.e., consequentialist reflection) reduced the condemnation of decency violation among UK participants, but not among participants from Colombia (Hannikainen & Rosas, 2019). Thus, at least among western participants, asking adults to focus on the fact that decency violations are not physically harmful made them more acceptable. Concerning conformity, Kelly et al. (2017) showed that presenting participants with rational arguments in addition to descriptive social norms made participants' judgments

more acceptable of decency violations. Thus, it might be that simply presenting participants the opinion of a majority concerning a decency violation that is more acceptable than their own might make them aware that the violation might not actually be harmful and therefore more likely to conform. It should be noted, however, that in our current study we only presented participants with a majority whose decency judgments were more acceptable than the individual participants'. This was because we closely followed the procedure by Lisciandra et al. (2013) who devised a similar conformity violation. Furthermore, on average, participants did not agree with the decency violations in their individual responses, so there was very little scope in trying to make participants conform to a more condemnable opinion. This is a topic that could be investigated further in future research (see Kelly et al., 2017).

Whereas in Kelly et al.'s (2017) study participants conformed to others' responses (represented as statistical descriptive norms in an online context) for both moral and decency items, Lisciandra et al. (2013) found that in the high social presence condition conformity was lowest for the moral items. Indeed, the authors suggest that transgressions of moral norms "are more insulated from conformity effects" (p. 761). These mixed findings might indicate that conformity in the moral domain is moderated by other variables, such as type of social distance. Another possible moderator might be the strength of a person's moral convictions (see Hornsey et al., 2003) with those with stronger moral convictions being less likely to conform to others. Investigating whether cultural values predicted moral attitudes across 56 societies, Vauclair and Fischer (2011) found very little cross-cultural variations in attitudes towards dishonest and illegal behaviors, which were generally condemned. Similarly, in the current research, violations in the moral domain were generally disapproved of by participants from the UK and Kuwait (see Table 1). Yet, differences in cultural-value orientations (particularly the dimension of autonomy vs. embeddedness) predicted attitudes towards personal-sexual behaviors (which are comparable to some of decency scenarios used

in the current studies; Vauclair & Fischer, 2011). Whether and how moral convictions, social distance, and cultural attitudes towards morality and decency affect moral conformity in different cultures should be investigated in future research.

2.5 Limitations and Future Research

The current studies followed previous research on moral conformity in western societies and extended these questions to a Kuwaiti context, a society where little research on conformity or moral decision making has been conducted. While our findings contribute both to research on conformity and moral functioning across cultures, they are not without limitations. First, our studies' set-up presented a low social pressure context with participants not seeing and hearing each other but interacting over computers. While this context mirrors many internet-based social interactions (e.g., on social media), this low social pressure context might actually underestimate the effect of conformity to moral, social-conventional, and decency items. Second, participants were only presented with the ratings made by the other group members, not any reasons for these choices. Future research should implement some of the methodologies employed by Kelly et al. (2017) and study whether asking group members to state the rationales for their choices affects conformity in the different moral domains differently. Third, as discussed above, the current research only investigated whether participants' judgments in the group context would become more acceptable of moral, social conventional, or decency violations. Future research should examine whether participants would also rate violations as more impermissible to conform with others' opinions (Kundu & Cummins, 2013). Fourth, future research might investigate the role of emotions in moral conformity. In Haidt's (2001) social-intuitionist model to moral judgment the reasoned-persuasion and the social-persuasion links change others' moral judgments by creating new emotionally-valenced moral intuitions. This mediating role of moral emotions could be assessed by, for example, asking participants to judge their emotions associated with

another's opinion. Fifth, following Lisciandra et al. (2013), we used filler items to make the aim of the research less transparent to participants. These were taken from the DOSPERT (Weber et al., 2002), an established scale measuring risk-taking. While we believe that it is good practice to use filler items to reduce the social desirability demands of conformity research, future studies might want to reduce the number of filler items. Finally, it should be acknowledged that the sample size for Study 1 was rather small, and the sample was not well-balanced for gender. This might have underestimated any significant gender effects in the UK sample.

As discussed above, the effects of gender and age have rarely featured in research on moral conformity, and the effects of gender role expectations and cultural values regarding gender should be investigated in future research. Furthermore, experiments conducted in online contexts (as in the present studies) have revealed mixed results regarding the effect of gender on conformity (Wijenayake et al., 2020). Given that studies on moral decision-making haven often found age and gender effects (Walker, 2006), the effects of these variables should be studied further in future research on moral (and online) conformity.

Despite these limitations, the current research significantly contributes to our knowledge about the social influences on moral decision making. In line with Haidt's (2001) social-intuitionist model, we find that simply being exposed to others' opinions on morally-related issues makes adults more likely to conform with these opinions across moral domains, cultures, and genders. Future research should continue to explore potentially moderating effects on moral conformity across contexts and cultures.

Chapter 3

Study 2: Risk and Conformity: Effects of Risk Domain and Culture

3.1 Introduction

According to a survey done by Drapers, the magazine for the Fashion business, "wardrobing", that is shoppers wearing an item of clothing and then returning it for a refund, has cost the UK retailers £1.5bn (https://www.drapersonline.com/news/used-returns-costing-retailers-1-5bn). Twenty percent of shoppers have admitted to engaging in wardrobing (https://www.theguardian.com/fashion/shortcuts/2019/sep/18/is-wardrobing-ever-acceptable-shoppers). Such is the concern to the industry, that the online retailer Asos has threatened to blacklist those customers it perceives to be "serial returners".

Whether it's wardrobing, not putting all required details on the tax form, or claiming incorrect work hours, as we have seen above people do engage in such risky ethical behaviours. By engaging in these behaviours, people accrue some (financial) benefit, but, if caught, would have to endure serious negative consequences. The above raises the questions of whether people more willing to make risky decisions when others are doing so as well? For example, are people more likely to cheat on their taxes, or cross the street at a red light when they see others doing so as well. Ultimately, this chapter aims to answer the question whether conformity with others plays a role when people make risky decisions and whether the influence of others depends on the risk domain (e.g., ethical risk-taking versus health or recreational risk-taking). Furthermore, this research investigates the role of people's cultural background regarding the effect of social influence on risky decision-making. Given the prominence of investigating how and why people make risky decisions in the judgment and decision-making literature, social, developmental, consumer, and health psychology (e.g., Cavalca et al, 2013; Cohn et al., 1995; Ginsburg, & Miller, 1982; Hoorn et al., 2016;

Michael, & Ben-Zur, 2007; Slovic, 1966; Zweig et al., 2001), understanding social influences on risky decisions has both applied and theoretical implications.

3.1.1 Defining Risk

The concept of risk has used in different contexts and scientific disciplines, such as finance, business, health, and psychology. The definition of risk is usually related to negative consequences, and the concept of risk has been related to human attitudes, situations, anticipated values, probabilities, and goals. Because of the varying definitions across fields, Kaplan (1997) suggested at the 1996 Annual Meeting of the Society for Risk Analysis, "maybe it is better not to define risk. Let each author define it in his own way, only please each should explain clearly what way it is." (p.407)

In the decision-making literature, a risky decision is one in which outcomes are not certain but happen with a meaningful (and often clearly defined) probability (Colman, 1995). For example, a person is presented with choice 1, receiving £1 for sure, or choice 2, receiving £100 with a probability of 1/80. A rational decision maker would follow probability, calculate the expected value (probability of outcome x value of outcome) of each choice and chose the option with the higher expected value. While this maximization of expected value sounds like a straightforward way to make (risky) decisions, mathematicians (e.g,. Bernoulli), philosophers, economists, and psychologists have pointed out that the desirability of outcomes is subjective, especially when outcomes go beyond monetary values. This "subjective desirability of an outcome" has been termed utility (Colman, 1995, p. 19). Thus, people have subjective valuations of uncertain outcomes. A utility function measures a person's subjective and relative preferences for different levels of risk. These preferences can, for example, be assessed by asking participants to make choices on different types of gambles such as the one introduced above. Thus, different people can have different utility

functions, but rational decision-makers should follow the principle of expected utility maximization.

People's subjective views and preferences do not only affect the way they make risky decisions, but also how they perceive risks. Rehani (2015) define risk perception as "the subjective judgement that people make about the characteristics and severity of a risk" (p. 3). People's risk perceptions strongly influence other types of behaviours, such as health-related behaviours (e.g., smoking), social relationships (e.g., how we interact with family and friends), financial decisions (e.g., investing), etc. Both theoretical and empirical research has shown how cognitive and emotional factors influence risk perception and risky decision-making (e.g., Loewenstein, Weber, Hsee, & Welch, 2001; Slovic, 2000; Slovic, Fischhoff, & Lichtenstein, 1980; Weinstein, Rothman, & Nicolich, 1998). In the current research, the roles of social processes on risk taking, and how they might affect risk taking in different domains was investigated. I was particularly interested in whether social influences, such as conformity processes, affect risky decision in the ethic domain differently to decisions in other risk domains, a topic that has so far received little empirical attention.

3.1.2 Social Influences on Risky Decision-Making

Do groups behave in more risky and less inhibited ways than individuals? A large corpus of data suggest that this is the case. Early proponents of mass psychology (e.g., LeBon, 1895), for instance, believed that people lose their sense of individuality and responsibility in large groups and crowds and that this could lead to more emotional and destructive decisions and actions. Proponents of deindividuation theory (e.g., Festinger et al., 1952; Zimbardo, 1969) suggested that in anonymous situations, where individuals become part "of the crowd", they feel less personal responsibility and less fear of public disproval. As a consequence, people become less inhibited, and risky (and particularly aggressive) behaviour can result.

However, it is not just crowds that behave more riskily than individuals. Indeed, it has been a robust finding that small groups make riskier decisions than their group members individually (see Kerr & Tindale, 2004, for a review). One paradigm used to study this question is the risky shift paradigm. In the original study, Stoner (1961) presented participants with 12 hypothetical situations in which the main characters had to make a choice between a course of action with a relatively certain outcome and a risky course of action. In the scenarios, moreover, the risky action would entail a greater outcome than the one received by the certain action; Furthermore, the probabilities of obtaining the risky option varied. For example, one situation used by Stoner (1961, p. 11) is the following:

> "Mr A., an electrical engineer who is married and has one child, has been working for a large electronics corporation since graduating from college five years ago. He is assured of a lifetime job with a modest, though adequate, salary and liberal pension benefits upon retirement. On the other hand, it is very unlikely that his salary will increase much before he retires. While attending a convention, Mr A. is offered a job with a small, newly founded company with a highly uncertain future. The new job would pay more to start and would offer the possibility of a share in the ownership if the company survived the competition with larger firms."

Participants were then presented with different probabilities or odds that the new company is financially sound, for example, a 1 in 10 chance that the new company is financially sound, a 2 in 10 chance, up to a 10 in 10 chance. Participants were instructed to imagine advising the main character and were asked to pick the lowest probability that they would consider making it worthwhile for Mr A. to take the riskier job with the new company.

In Stoner's (1961) original research, participants first made a decision on 12 scenarios individually and, after 7 days, made decisions on the same scenarios again in a 6-person group. Groups were meeting face-to-face and were instructed that they were allowed to

discuss the situation without a time constraint to reach a unanimous group decision. In the control condition, participants filled in the 12 items individually again. Stoner (1961) found that groups' decisions were risker that those of individuals, both compared to participants' own individual choices and the choices made by participants in the control group.

This risky shift has been reported for a variety of judgments and participants (e.g., students, industrial supervisors, jurors) in different countries and different settings (both in the psychological laboratory and naturalistic settings, see Baron et al., 1992; Myers, 1982). Several explanations have been put forward for this risky shift, such as diffusion of responsibility (Wallach et al., 1964), the personality of risk-takers and their ability to persuade others (Collins & Guetzkow, 1964), or groups encouraging members to view themselves as risk-takers (Levinger & Schneider, 1969). However, the two main theoretical explanations of the risky shift are social comparison and persuasive arguments theory. These processes can be equated with the normative and informational influences operating in social conformity situations (Baron et al., 1992, see Chapter 1).

According to social comparison theory (Festinger, 1954), people are motivated to perceive and present themselves in a socially desirable way and, ideally, to be perceived as more favourable than average. In group situations as those implemented by Stoner (1961), when all group members engage in similar comparison processes, the group decision would result in an average shift in the direction of greater perceived social value (see Baron et al., 1992; Isenberg, 1986). Hence, in the group context people discover the preferred tendency within the group (also called the group norm), and give a more extreme judgment than their individual opinion. Persuasive arguments theory (e.g., Burnstein, 1982; Vinokur & Burnstein, 1974) suggests that an individual's choice is a function of the number and persuasiveness (i.e., the perceived validity and novelty) of arguments that this person recalls from memory. During a group discussion, members' opinions will therefore shift to the extent that the discussion

exposes them to persuasive arguments favouring that direction. Thus, risky shifts depend on the pool of arguments presented in the group.

Empirical tests of social comparison and persuasive arguments theory provided support for both. Indeed, a meta-analysis by Isenberg (1986) concluded that both processes might interact and contribute to risky shifts, but this might depend on the type of topic discussed. When the group discusses factual topics, persuasive arguments might dominate, whereas for value-based and ego-involving topics social comparisons might be more influential. For example, supporting persuasive arguments theory, Burnstein and Vinokur (1973) and Myers et al. (1971) demonstrated that even if participants were only exposed to relevant arguments during a group discussion but were prevented from learning the others' actual opinions, risky shifts still occur. Risky shifts were also found when participants were not allowed to mention their initial choices or when they were not aware of the response scale on which they had to indicate their individual choices (thereby preventing a comparison of choices).

On the other hand, investigations in line with social comparison theory demonstrated that the mere exposure to others' opinions or the simple knowledge about the other group members' preferences was sufficient for risky shifts (Baron & Roper, 1976; Pruitt, 1971). In a study by Blascovich and colleagues (1975), for example, participants bet on several rounds of the card game blackjack as individuals, as a group in which the members only heard the bets of the others, or as a group that could discuss bets (all these conditions were played after participants played several rounds of blackjack by themselves). Results showed that participants in the individual (control) condition did not increase the size of their bets (i.e., they did not become riskier), whereas in both group conditions the size of bets increased significantly compared to the individual condition. Since this increase in bets did not differ between the two group conditions, Blascovic and colleagues concluded that the mere knowledge of the other group members' bets is enough for risky shifts to occur.

These investigations mirror findings that explicitly tested social conformity effects for risky decision-making. In a study by Yechiam et al. (2008) participants engaged in repeated risky decision-making either alone or in pairs (see also Cooper & Rege, 2011). The results showed that those who worked in groups exhibited greater risk-taking tendencies compare to those working individually. Gardner and Steinberg (2005) studied risk preferences, risky decision making, and risky behaviour either alone or with peers in three different age groups; adolescents (13-16), youths (18-22), and adults (24 and older). There was a negative association between risk-taking, risky decision making and age. Participants of all ages behaved more riskily with peers than alone, but the impact of peers on a risky decision and risk-taking was stronger in adolescents than adults.

Overall, this research shows that adults' risky decision-making increases in the presence of other group members. In fact, just being informed about the choices of others is enough to increase risk-taking. This is in line with social conformity effects found for other types of decisions (as discussed in Chapters 1 and 2). However, most previous research has focused on the impact of social influences on financial risk-taking only. One exception is the study by Knoll et al. (2015) who showed that children, adolescents and adults were influenced by the decisions of others when making risky health decisions (e.g., cycling without a helmet). The current research follows up on these results and examines whether risky decision-making in other domains might be subject to conformity effects, and whether there are domain differences. Given the findings on social influence on moral decision-making reported in Chapter 2, I was particularly interested in contrasting risky decision in the ethical compared to other risk domains.

3.1.3 Domain-specific Risk-taking

The expected utility approach to risk assumes that, inter-individual differences notwithstanding, people can be characterized by their person-specific risk attitude. Domain-

specific approaches to risk (e.g., Blais & Weber, 2006; Slovic, 1964; Weber et al., 2002) argue that there are not just inter-individual differences in risk attitudes but that there are within-individual differences in how much risk people take in different domains. For example, a person might take high risks in the financial domain (e.g., gamble), but low risks in the health domain (e.g., eat a balanced diet). Inspired by these ideas, Weber and colleagues (2002, Blais & Weber) developed the Domain-specific Risk-taking (DOSPERT) scale that measures adults' risk-attitudes in the five risk domains health/safety (e.g., smoking, using a seatbelt), ethical (e.g., cheating on an exam, having an affair), social (e.g., confronting colleagues or family members), recreational (e.g., bungee jumping, whitewater rafting), and financial (e.g., betting at the races, risky investments).

Several studies have reported that domain-specific risky decision-making as measured by the DOSPERT predicts real-world domain-specific risk-taking. A study by Hanoch et al. (2006) recruited participants who were either high risk-takers (e.g., sky divers in the recreational risk domain; smokers in the health/safety domain) or risk avoiders (e.g., gym members in the health/safety domain) in a specific risk domain and asked to complete the DOSPERT. The study findings indicated that participants exhibited high risk-taking proclivities in one domain but similar risk-taking attitudes in other domains. That is, sky divers showed higher risk-taking in the recreational, but not in the financial domain. Zimerman et al. (2014) found that ethical risk-taking tendencies predicted actual dishonest behaviour in a coin-tossing task, and Szrek et al. (2012) showed that people's actual unhealthy behaviour was predicted by their score in the health/safety domain, but not their score in the financial domain.

Weber et al. (2002) used the risk-return model to explain these within-subject variations in risk-taking. According to this model, risk-taking is driven by the perceived benefits and the perceived risks of the respective activity. Domain-specific variations in perceived benefits and risks explain the domain variations in individual risk-taking, with perceived benefits a

particularly strong predictor (e.g., Hanoch et al., 2006; Blais & Weber, 2006). However, in samples with (ex-)offenders Hanoch and Gummerum (2010) and Gummerum et al. (2014) found that perceived risk was a relatively stronger predictor of health risk-taking, while perceived benefits predicted risk-taking in all other domains. Thus, the processes underlying risky decisions might differ by risk domain.

Given these findings, it is possible that social influences on risky decision-making also differ by domain. As discussed above, social conformity has mainly been reported in financial risk-taking. Other research has measured conformity effects in other domains more indirectly. For example, there is robust evidence showing the effect that peers have on adolescents' and young adults' health-related behaviours, such as smoking (e.g., Ali & Dwyer, 2009; McVikar, 2011), or substance abuse (e.g., Kremer & Levy, 2008). Peers also positively influence adolescents' recreational behaviours (e.g., Salvy et al., 2012), although this research is more concerned about the health benefits rather than the risks of recreational activities. And, as I have shown in Chapter 2, conformity effects differ depending on whether people judge moral, social-conventional, or decency transgressions, at least among UK participants. Overall, then, research indicated the importance of social influences on risk-taking in some domains, notably the financial and health/safety domain, but conformity effects in other risk domains have not been investigated. The current research aimed to examine social conformity effects in the health/safety, ethical, social, and recreational domains.

3.1.4 Cross-cultural Differences in Risk-taking

While research on risky decision-making has been done across the world (e.g., Rieger et al., 2015), studies that compare domain differences in risk-taking or social influences on risky decisions across different cultures are more limited. Concerning the former, Hsee and Weber (1999) examined domain differences in risk-taking taking (gambling, investment, academic and medical) between Chinese and Americans participants. In lottery and

investment scenarios, they found Chinese were taking more risks than American, but no cultural differences emerged in academic and medical risk-taking. This is in line with other research that has shown that participants from collectivistic societies (e.g., South Asians) showing higher financial risk-taking than those from western societies (e.g., US Americans; Baxi, 2011). One explanation for this cross-cultural difference might be that uncertain economic conditions lead to riskier decisions (Triandis et al., 1988). Furthermore, cultural norms (such as the acceptance of gambling as almost a recreational activity in China) might affect levels of risk-taking (Hsee & Weber, 1999).

Concerning cross-cultural difference in the influence of social factors on risk-taking, Kim and Park (2010) compared South Korean and Australian adults' risk attitudes and choices in both individual and group conditions. They found that Australians showed higher preferences for risk at the individual level than South Koreans. South Koreans showed higher preferences for risk in the group than in the individual condition. This risky shift was only observed among males in Australia. The authors speculate that in collectivistic countries, such as South Korea, the collectivistic norm of maintaining harmonious interdependent relationships might lead to a diffusion of responsibility at the group level and thus higher preferences for risk.

Bobek et al. (2007) investigated tax compliance (an ethical risky decision) in adults from Australia, Singapore, and the US. No overall cross-cultural differences in tax compliance emerged. Furthermore, in all three cultures, personal social norms regarding paying taxes and societal expectations regarding proper behaviour affected tax compliance. Descriptive social norms, that is perceived tax-paying behaviour of the majority, did not affect tax compliance. Thus, this study implies that ethical risky decisions might not be subject to social influences (such as descriptive social norms) across cultures.

3.1.5 The Present Research

This research compared social conformity effects on risky decision making in the ethical domain with risky decisions in three other risk domains (health/safety, social, recreational). I investigated this topic with adults from the UK (Study 1) and Kuwait (Study 2). For UK participants, I expected domain differences concerning the effect of conformity on risky decisions. Specifically, given previous research on peers' influences on health/safety and recreational risk-taking, I expected stronger conformity effects in these domains. However, given the research reported in Chapter 2 on people's moral conformity, I expected the weakest conformity with ethical risky decision-making.

There is very limited research on risky decisions of individuals (as compared to institutions, such as banks) in the Middle East. A few studied conducted in Iran (Zamani-Alavijeh et al., 2010) and Bahrain (Alzayani & Hamadeh, 2015) showed that risky driving behaviours (a health/safety risk) is very prevalent in these countries, particularly among young males and Kuwaiti participants. These studies also highlight the effect of peers on risky driving. As such, it was expected that conformity to particularly affect risky decisions in the health/safety domain. As shown in Chapter 2 (Study 2), moral decisions were subject to effects of social influence among Kuwaiti participants. Therefore, it was expected that conformity effects will be evident in the ethical risk domain.

Decades of research have shown strong gender differences in risk-taking, with males making riskier decisions than females. However, a meta-analysis by Byrnes et al. (1999) indicated that the size of the gender differences varied by risk domain. Males were more likely to take financial and physical risks, while gender differences for some health/safety risks (e.g., smoking, drug use, sexual activities) were considerably smaller. Kim and Park's (2010) study indicated that among Australian participants the predominant gender norm might be amplified in group situations, with males taking more risks than females. Together, these findings might suggest a social amplification of those risky activities with strong gender

differences at the individual level. That is, males might show larger conformity effects in the recreational domain than females, whereas conformity might affect risky decisions in the health/safety domain similarly for males and females. We explore this question in both an individualistic (UK, Study 1) and collectivistic (Kuwait, Study 2) sample.

3.2 Study 1: Domain Differences in Risk-taking Conformity in the United Kingdom

3.2.1 Method

  3.2.1.1 Participants. This research drew on the same sample of participants as those reported in Chapter 2 (Study 1). As reported earlier, 64 UK participants were recruited through the participant pool of Plymouth University. Out of these, 14 participants only took part in Part 1 of the study and were therefore deleted from the sample. The final sample contained 50 participants (M_{Age} = 31.29 years, SD = 14.76, 34 females, 16 males). While no information about ethnicity or social class was collected, over 90% of participants in the participant pool identify as middle-class and White-British. An a-priori power analysis with the program G*power (Faul et al., 2007) indicated that a total sample size of 58 would be necessary to detect an effect of f = .17 with a power of .80 and α = .05. Furthermore, the participant pool recruits participants from both student and the general population. Participants received either course credit or money (£2/15 minutes) for taking part.

  3.2.1.2 Measures. Domain-specific Risk-taking Scale (DOSPERT, Weber et al., 2002). Twenty-three items were taken from the domain-specific risk-taking scale (DOSPERT, Weber et al., 2002; Table 3.1), five items from the ethical risk-taking sub-scale, and six items from the health-safety, social, and recreational risk-taking subscales, respectively. Participants responded, both in the individual and group situations, using a 7-point Likert scale ranging from 1 (extremely unlikely) to 7 (extremely likely).

  Filler items were added to follow the design used in previous research on moral conformity (Lisciandra et al., 2013) and to reduce demand characteristics**.** Fifteen items were

taken from Lahat et al. (2012) and Lisciandra et al. (2013), with five items representing

moral, social-conventional, and decency violations, respectively (Table 3.1). In both the

individual online questionnaire (Part 1) and the group situation (Part 2), participants

responded on a 7-point Likert scale from 1 (strongly disapprove) to 7 (strongly approve).

Table 3.1

Order of Scenarios in the Group Condition (Part 2). Items Depicted in Italics Display the

Non-critical Items (Social Pressure = 0)

Order of scenarios		Domain	Social pressure	Confederates' opinions
1	Michael woke up and started getting ready for school. He decided to go over to his sister's closet. He saw a dress and he tore it.	Filler	0	0
2	Drinking heavily at a social function.	Health/safety	0	0
3	A man got a blood transfusion of 1 pint of disease-free, compatible blood from a convicted child molester.	Filler	0	0
4	Walking home alone at night in an unsafe area of town.	Health/safety	0	0
5	Riding a motorcycle without a helmet.	Health/safety	1	6
6	Revealing a friend's secret to someone else.	Ethical	1	4
7	Not returning a wallet you found that contains £200.	Ethical	0	0
8	Susan usually eats cereals for breakfast. One morning she realizes she finished her favourite cereal. She only has an old pack with grubs and insects inside. She puts them in a bowl and microwaves it first to kill any germs. Then she eats it.	Filler	1	5
9	Jennifer was very bored during class. She wanted to be somewhere else. When her	Filler	2	3

	teacher asked her a question she decided to hit her			
10	Leaving your young children alone at home while running an errand	Ethical	2	3.5
11	Going camping in the wilderness	Recreational	0	0
12	Sunbathing without sunscreen.	Health/safety	2	7
13	George was a very short boy. He wanted to be a few inches taller. He found his mother's high heels and decided to wear them	Filler	0	0
14	Mary went to eat lunch at the cafeteria. The line was very long. She decided to cut in line	Filler	2	4
15	Speaking your mind about an unpopular issue in a meeting at work.	Social	3	7
16	Admitting that your tastes are different from those of a friend.	Social	0	0
17	Bungee jumping off a tall bridge.	Recreational	1	6
18	Sara makes cruel remarks to Jessica, who is overweight, about her appearance.	Filler	1	3
19	A brother and sister like to kiss each other on the mouth. When nobody is around, they find a secret hiding place and kiss each other on the mouth, passionately.	Filler	3	3.66
20	Passing off somebody else's work as your own.	Ethical	3	3.66
21	Engaging in unprotected sex.	Health/safety	1	5
22	Starting a new career in your mid-thirties.	Social	2	7
23	David and Ben were in the library studying for an important test on the next day. They realized it was late, and they were running out of time. While they were still in the library and had a couple of more hours to study they decided to cheat.	Filler	2	4

24	Lisa is in the cinema but really bored with the movie she is watching. She takes out her phone and makes a phone call to her best friend.	Filler	3	3.66
25	Going whitewater rafting at high water in the spring	Recreational	0	0
26	Driving a car without wearing a seat belt.	Health/safety	3	5.66
27	Ed created a performance art piece in which he and all participants have to act like animals for 30 minutes, including crawling around naked and urinating on stage.	Filler	2	5.5
28	In Sharon's school students should address their teachers by their title or last name, but not by their first name. Sharon saw her teacher, Dr. Jason Smith, in the hallway and said: "Hello Jason."	Filler	1	4
29	Having an affair with a married man/woman	Ethical	3	4
30	A family's dog was killed by a car in front of their house. They had heard that dog meat was delicious, so they cut up the dog's body and cooked it and ate it for dinner.	Filler	2	4.5
31	Disagreeing with an authority figure on a major issue.	Social	1	7
32	Moving to a city far away from your extended family.	Social	2	6.5
33	Piloting a small plane.	Recreational	3	7
34	Liam, Isaac, and Robert are in the pub together. Liam buys the second round of drinks for everybody. When they have finished their second round of drinks, Robert walks to the bar and buys a drink only for himself.	Filler	1	4
35	Taking a skydiving class.	Recreational	2	7
36	Choosing a career that you truly enjoy over a more secure one.	Social	1	7

37	Going down a ski run that is beyond your ability	Recreational	3	6.66
38	Ted kicked a dog in the head, hard.	Filler	3	2.66

3.2.1.3 Procedure. The study received ethical approval from the University of Plymouth Human Ethics Committee. Participants were given a study brief and were informed about the study, the anonymity of their data and their entitlement to withdraw, after which they signed a consent form before being able to participate.

As described in Chapter 2 (Study 1), participants were tested in two sessions, an individual session and a group session. After consenting to taking part in the study, participants were asked to state their gender and date of birth and created a personal ID code. Part 1 of the study was conducted online. Participants were sent a link to the online questionnaire, and they made their decisions individually. Five to 10 days after the individual Part 1, up to eight participants were invited to Part 2 (group session), which took place at the Psychology laboratories at Plymouth University. Participants sat in one of eight cubicles, which were separated by walls and doors leading to an internal corridor. After being briefed and having signed the consent form, participants had to fill in demographic questions and entered their ID code which they constructed in Part 1 of the study. Next, they were informed about the procedure of Part 2 and that they would make decisions with three other participants online. Participants were told that the group members, whose decisions they saw during the group task, could be in the same session with them or in another session. Group members were anonymous to each other; at the beginning of each session, each group member chose an avatar to represent themselves, and decisions during the group task were only associated with the chosen avatar.

The 38 items (risk-taking and filler items) were presented to participants in a pseudo-random order (see Table 3.1). For 29 of the 38 scenarios, the critical trials, participants were confronted with the ratings of one, two, or three of the supposed other group members, denoted as "Social pressure" in Table 3.1. A social pressure of 1 means that participants saw the response of one of the other group member, a social pressure of 2 means that participants saw responses of two group members, etc. In fact, the responses were pre-determined in the design of the study and were not based on real participants' ratings. For 9 scenarios, the non-critical trials, participants did not receive information about others' ratings (social pressure = 0). In the following analyses section, only participants' responses to the critical items (i.e., social pressure > 0) were analysed. For the critical items, the other group members' ratings were two scale points more risk-taking than the mean individual risk-taking ratings in a pilot study. The other group members' ratings are denoted as "confederates' opinions" in Table 3.1.

After making decisions in all 38 scenarios, participants debriefed and thanked. Part 1 of the study took no longer than 10 minutes and Part 2 no longer than 30-45 minutes.

3.2.2 Results and Discussion

3.2.2.1 Descriptive statistics. Table 3.2 shows the means and standard deviations for participants' individual (Part 1) and group responses (Part 2) to all critical health and safety risk, ethical risk, social risk, and recreational risk items. These are also displayed graphically in Figure 3.1. An ANOVA showed that individual responses differed significantly by Domain, $F(3, 1116) = 118.78$ $p < .001$, $\eta^2 = .24$. Post-hoc tests (with Bonferroni correction) indicated that participants took significantly more risks in the social ($M = 5.11$, $SD = 1.62$) than all other domains (health/safety: $M = 3.03$, $SD = 2.02$; ethical: $M = 2.28$, $SD = 1.50$; recreational: $M = 3.29$, $SD = 2.10$; all ps < .001). Participants engaged in significantly less

ethical risk taking than in all other domains (all ps < .001). Risk-taking in the health/safety

and recreational domains did not differ (p = .57).

Table 3.2

Means and Standard Deviations of Participants' Individual (Part 1) and Group (Part 2)

Responses to the Critical Risk-taking Items by Risk Domain

	Participants' individual responses (Part 1)		Participants' responses in group setting (Part 2)	
	M	*SD*	*M*	*SD*
Health /safety risks				
Riding a motorcycle without a helmet.	1.63	1.10	2.08	1.60
Sunbathing without sunscreen.	4.00	1.89	4.34	2.12
Engaging in unprotected sex.	3.25	2.17	3.56	2.12
Driving a car without wearing a seat belt.	1.73	1.15	1.96	3.93
Ethical risks				
Revealing a friend's secret to someone else.	2.41	1.38	2.54	1.18
Leaving your young children alone at home while running an errand.	2.37	1.42	2.26	1.23
Passing off somebody else's work as your own.	1.94	1.30	1.80	1.01
Having an affair with a married man/woman	2.22	1.64	2.50	1.61

Social risks				
Speaking your mind about an unpopular issue in a meeting at work.	4.63	1.70	5.28	1.53
Starting a new career in your mid-thirties.	5.02	1.70	5.32	1.61
Disagreeing with an authority figure on a major issue.	4.53	1.62	5.30	1.46
Moving to a city far away from your extended family.	5.22	1.74	5.44	1.79
Choosing a career that you truly enjoy over a more secure one.	5.20	1.41	5.62	1.31
Recreational risks				
Bungee jumping off a tall bridge.	3.44	2.28	3.48	2.23
Piloting a small plane.	3.02	2.10	3.28	2.08
Taking a skydiving class.	4.19	2.29	4.28	2.21
Going down a ski run that is beyond your ability.	2.20	1.51	2.80	1.80

Concerning participants' responses in the group setting, an ANOVA showed a significant effect of Domain, $F(3, 1143) = 164.75$ $p < .001$, $\eta^2 = .31$. Post-hoc tests (with Bonferroni correction) indicated that participants took significantly more risks in the social ($M = 5.52$, $SD = 1.48$) than all other domains (health/safety: $M = 3.16$, $SD = 2.02$; ethical: $M = 2.32$, $SD = 1.36$; recreational: $M = 3.60$, $SD = 2.06$; all ps $< .001$). Participants also showed significantly less risk taking in the ethical than in all other domains at the group level (all ps

< .001) and more risk-taking in the recreational than the health/safety domain (p = .02).

Overall, the results of both the individual and group scores are in line with earlier research and my expectations in that participants made significantly less risky decisions in the ethical compared to all other risk domains. However, unexpectedly, participants engaged in the highest risk-taking in the social domain.

Figure 3.1

Means For Participants' Individual And Group Responses To All Critical Health And Safety Risk, Ethical Risk, Social Risk, And Recreational Risk Items. Error Bars Display Standard Errors
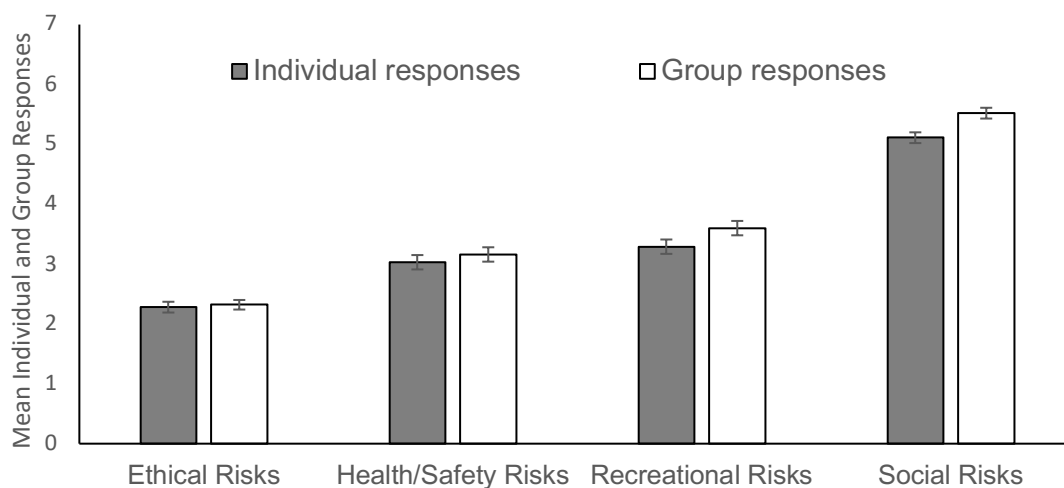
We created a difference score by subtracting participants' individual scores from their scores in the group context. A negative difference score indicates that risk-taking was higher in the individual than the group context; a positive score indicates that risk-taking was higher in the group than the individual context; a score of zero indicates no difference between the individual and group context. This difference score was positive in all risk domains

(health/safety: $M = .10$, $SD = 1.41$; ethical: $M = .04$, $SD = .98$; social: $M = .41$, $SD = 1.21$;

recreational: $M = .27$, $SD = 1.14$), but only significantly differed from zero in the social,

$t(292) = 5.77$, $p < .001$, $d = .34$, and the recreational domains, $t(290) = 4.10$, $p < .001$, $d = .24$.

3.2.2.2 Conformity Effects. Conformity was calculated in line with Lisciandra et al.

(2013), by the following formula: $C = |O – M1| – |O – M2|$. M1 indicating responses of

participants in the individual condition, while M2 indicating responses of participants in the

group condition, and O indicating the responses of the group members (confederates'

opinions). Conformity had a skewness of .31 (SE = .09), and a kurtosis of 3.00 (SE = .17).

We thus assumed normal distribution of the Conformity variable. A small but significantly

positive correlation emerged between conformity and social pressure, $r(1119) = .10$, $p = .001$.

Table 3.3 shows the mean conformity levels by risk domains and gender. An ANOVA

was performed with Conformity as dependent variable and the two independent variables

Domain (Health/safety, ethical, social, recreational) and Gender (female, male), and the co-

variate Age (in years). The two main effects of Domain, $F(3, 1088) = 4.70$, $p = .003$, $\eta^2 = .01$,

and Gender, $F(1, 1088) = 4.27$, $p = .04$, $\eta^2 = .004$ reached statistical significance. All other

main or interaction effects were non-significant.[3] Post-hoc tests (with Bonferroni correction)

indicated that participants showed significantly less conformity in the recreational risk

domain than the health/safety ($p = .02$) and social risk domains ($p = .001$), and marginally

less conformity in the ethical compared to the social risk domain ($p = .06$). An independent-

sample t-test showed that, across domain, females significantly conformed more than males,

$t(1118) = 2.47$, $p = .01$, $d = .16$.

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[3] Age, $F(1, 1088) = .46$, $p = .50$, $\eta^2 = .00$; Domain x Gender, $F(3, 1088) = .22$, $p = .89$, $\eta^2 = .00$.

Table 3.3

Mean and Standard Deviations of Conformity by Risk Domains and Gender

Domain	Females		Males		Total	
	M	*SD*	*M*	*SD*	*M*	*SD*
Health/safety	.35	1.33	.12	1.18	.28	1.28
Ethical	.13	.80	.07	.76	.11	.79
Social	.43	1.18	.22	1.23	.37	1.19
Recreational	.07	1.09	-.16	1.34	-.00	1.18
Total	.25	1.14	.07	1.16	.19	1.15

We conducted a series of one-sample t-tests to investigate whether conformity in the different risk domains differed significantly from zero (no conformity). Participants showed positive levels of conformity that were significantly different from zero in the health and safety, $t(290) = 3.71$ $p < .001$, $d = .22$, ethical, $t(244) = 2.22$, $p = .03$, $d = .14$, and social domains, $t(292) = 5.24$, $p < .001$, $d = .31$, but not in the recreational domain, $t(290) = -.03$, $p = .97$, $d = .002$.

These findings are only partly in line with my predictions. Previous research suggested that conformity with others' risk-taking tendency might be particularly strong in the health/safety and recreational domains and less strong in the ethical domain. While participants did indeed show significantly positive levels of conformity in the health/safety domain, this was not the case for risky decisions in the recreational domain. Furthermore, participants did conform with other's risky decisions in the ethical domain, a finding which is partly in line with what I found in Chapter 2. However, conformity was strongest in the social domain, a finding I did not expect.

One-sample t-tests also indicated that females' conformity across domains was positively and significantly larger than zero, $t(775) = 6.09$, $p < .001$, $d = .22$, while males' conformity did not significantly differ from zero, $t(343) = 1.04$, $p = .30$, $d = .06$. This finding is surprising, given Kim and Park's (2010) results that gender norms regarding risk taking might get amplified in group situations; since gender norms are generally more tolerant towards male than female risk-taking, I would have suspected more conformity from males than females. However, the lower conformity score of males compared to females might be an artifact of the study. Remember that the average confederates' opinions in the group setting were, on average, two scale-points more risk-seeking than the average individual responses to that item as identified in a pilot study. However, the individual responses of males in the current study might have been already more risk-seeking than those average individual responses in the pilot study. Thus, presenting males with the confederates' opinions in the group setting would not have shifted their responses as much towards the confederates' opinions than for females. I tested this possibility by comparing the average individual responses for each item for males and females. As shown in Table 3.4, while not always significant, for the majority of items males' individual responses were more risk-seeking than females'.

Table 3.4

Means and Standard Deviations of Participants' Individual Responses (Part 1) to the Critical Risk-taking Items by Risk Domain and Gender

	Participants' individual responses (Part 1)			
	Females		Males	
	M	*SD*	*M*	*SD*
Health /safety risks	2.86[1]	1.89	3.42[2]	2.24

Riding a motorcycle without a helmet.	1.67[1]	1.14	1.53[1]	1.06
Sunbathing without sunscreen.	3.94[1]	1.77	4.13[1]	2.20
Engaging in unprotected sex.	2.97[1]	2.08	3.87[1]	2.30
Driving a car without wearing a seat belt.	1.65[1]	.95	1.93[1]	1.53
Ethical risks	2.09[1]	1.35	2.71[2]	1.72
Revealing a friend's secret to someone else.	2.44[1]	1.31	2.33[1]	1.59
Leaving your young children alone at home while running an errand.	2.41[1]	1.54	2.27[1]	1.16
Passing off somebody else's work as your own.	1.59[1]	1.02	2.73[2]	1.53
Having an affair with a married man/woman	1.82[1]	1.34	3.13[2]	1.96
Social risks	4.96[1]	1.66	5.46[2]	1.46
Speaking your mind about an unpopular issue in a meeting at work.	4.39[1]	1.77	5.13[1]	1.46
Starting a new career in your mid-thirties.	4.91[1]	1.71	5.27[1]	1.71

Disagreeing with an authority figure on a major issue.	4.35^1	1.61	4.93^1	1.62
Moving to a city far away from your extended family.	5.09^1	1.87	5.53^1	1.41
Choosing a career that you truly enjoy over a more secure one.	5.06^1	1.41	5.53^1	1.41
Recreational risks	3.00^1	2.07	3.94^2	2.04
Bungee jumping off a tall bridge.	3.12^1	2.33	4.21^1	2.01
Piloting a small plane.	2.65^1	2.03	3.87^1	2.07
Taking a skydiving class.	3.82^1	2.35	5.00^1	1.96
Going down a ski run that is beyond your ability.	2.03^1	1.40	2.60^1	1.72

Note. Row-wise comparisons: Means sharing the same super-script do not differ on p < .05.

3.3 Study 2: Domain Differences in Risk-taking Conformity in Kuwait

3.3.1 Method

3.3.1.1 Participants. This study drew on the same sample described in Chapter 2 (Study 2). The final sample involved 164 participants (M_{Age} = 21.49 years, SD = 6.14, 90 females, 74 males). All participants were university students, Kuwaiti nationals, and from middle-class backgrounds. They received course credit for participating in the study.

3.3.1.2 Procedure. This study in Kuwait followed the same procedure as Study 1 in the UK. Ethical approval was granted by the University of Plymouth Ethics Board. All materials were translated into Arabic, and sessions were conducted by a native Arabic speaker.

3.3.1.3 Measures. The same measures were used as in Study 1. All measures were translated into Arabic by a native Arabic speaker and checked for correctness and understanding by another independent native Arabic speaker.

3.3.2 Results

3.3.2.1 Descriptive Statistics. The means and standard deviations of all health/safety risk, ethical risk, social risk, and recreational risk items in the individual condition (Part 1) and group responses condition (Part 2) are shown in Table 3.5. Descriptive statistics of participants' individual responses to all items in the health/safety, ethical, social, and recreational risk domains by gender are shown in Table 3.4. An ANOVA indicated a significant main effect of Domain, $F(3, 3715) = 214.05$, $p < .001$, $\eta^2 = .15$, and a significant interaction effect of Domain x Gender, $F(3, 3715) = 12.87$, $p < .001$, $\eta^2 = .01$. The main effect of Gender was only marginally significant, $F(1, 3715) = 3.49$, $p = .06$, $\eta^2 = .001$. Post-hoc tests (with Bonferroni correction) indicated that participants took significantly more risks in the social ($M = 4.34$, $SD = 1.89$) than all other domains (health/safety: $M = 2.88$, $SD = 1.93$; ethical: $M = 2.16$, $SD = 1.68$; recreational: $M = 3.64$, $SD = 2.07$; all $ps < .001$). Participants engaged in significantly less ethical risk taking than in all other domains (all $ps < .001$). Risk-taking was significantly higher in the recreational than the health/safety domain ($p < .001$).

To further investigate the Domain x Gender effect, independent-sample t-tests were conducted separately for each domain. Males indicated significantly higher risk-taking than females in the health/safety, $t(970) = 4.22$, $p < .001$, $d = .27$, and ethical domains, $t(807) = 2.23$, $p = .03$, $d = .16$. However, in the social risk domain, females reported significantly higher individual risk responses than males, $t(972) = 4.20$, $p < .001$, $d = .27$. There was no significant gender difference in the recreational domain, $t(966) = 1.44$, $p = .15$, $d = .09$. As shown in Table 3.6, these gender differences generally also apply (but are not always

significant) when looking at participants' responses regarding the individual items in each domain.

Concerning participants' responses in the group setting, an ANOVA showed a significant effect of Domain, $F(3, 3764) = 384.88$ $p < .001$, $\eta^2 = .24$. Post-hoc tests (with Bonferroni correction) indicated that participants took significantly more risks in the social ($M = 5.28$, $SD = 1.62$) than all other domains (health/safety: $M = 3.54$, $SD = 2.02$; ethical: $M = 2.57$, $SD = 1.63$; recreational: $M = 4.56$, $SD = 1.91$; all $ps < .001$). Participants also showed significantly less risk taking in the ethical than in all other domains at the group level (all $ps < .001$) and more risk-taking in the recreational than the health/safety domain ($p < .001$).

As for the UK sample, we created a difference score by subtracting participants' individual scores from their scores in the group context. This difference score was positive in all risk domains (health/safety: $M = .66$, $SD = 1.80$; ethical: $M = .41$, $SD = 1.68$; social: $M = .94$, $SD = 1.89$; recreational: $M = .92$, $SD = 1.89$), indicating that risk-taking was higher in the group than the individual context. Furthermore, in all domains the difference score was significantly different from zero (health/safety, $t(971) = 11.39$, $p < .001$, $d = .37$; ethical: $t(808) = 7.05$, $p < .001$, $d = .25$; social: $t(973) = 15.57$, $p < .001$, $d = .50$; recreational, $t(967) = 15.25$, $p < .001$, $d = .49$).

Overall, similar to what has been reported in studies with western participants, Kuwaiti adults showed increased risky decisions in all risk domains in the group compared to the individual setting. As expected, risk-taking was lowest in the ethical compared to all other domains. As in Study 1, participants showed the highest risk in the social compared to all other domains, both in their individual and group responses. Interestingly, gender differences in individual risky decision-making differed by domain: In the social domain, females were more risk-seeking than males, while the opposite gender effect emerged in the health/safety and ethical domain.

Table 3.5

Means and Standard Deviations of Participants' Responses in the Individual and Group

Setting for Each Critical Scenario

	Participants' individual responses (Part 1)		Participants' responses in group setting (Part 2)	
	M	*SD*	*M*	*SD*
Health /safety risks				
Riding a motorcycle without a helmet.	2.70	1.80	3.57	1.87
Sunbathing without sunscreen.	4.01	2.11	5.07	1.82
Engaging in unprotected sex.	1.60	1.08	2.13	1.49
Driving a car without wearing a seat belt.	3.75	1.94	4.52	1.77
Ethical risks				
Revealing a friend's secret to someone else.	1.72	1.26	2.18	1.54
Leaving your young children alone at home while running an errand.	2.51	1.76	3.02	1.44
Passing off somebody else's work as your own.	1.98	1.34	2.41	1.37
Having an affair with a married man/woman.	1.87	1.63	2.29	1.50
Social risks				

Speaking your mind about an unpopular issue in a meeting at work.	3.93	1.73	5.09	1.60
Starting a new career in your mid-thirties.	4.49	1.80	5.60	1.40
Disagreeing with an authority figure on a major issue.	4.42	1.56	5.31	1.56
Moving to a city far away from your extended family.	3.09	1.93	4.07	1.78
Choosing a career that you truly enjoy over a more secure one.	3.17	1.77	3.79	1.73
Recreational risks				
Bungee jumping off a tall bridge.	2.55	1.87	3.57	1.93
Piloting a small plane.	3.23	1.94	4.68	1.93
Taking a skydiving class.	3.92	1.99	5.11	1.77
Going down a ski run that is beyond your ability.	3.17	1.77	3.79	1.73

Table 3.6

Means and Standard Deviations of Participants' Individual Responses by Gender

	Participants' individual responses (Part 1)	
	Females	Males

	M	SD	M	SD
Health /safety risks	2.64[1]	1.83	3.16[2]	2.00
Riding a motorcycle without a helmet.	2.48[1]	1.69	2.96[1]	1.88
Sunbathing without sunscreen.	3.59[1]	2.08	4.52[2]	2.05
Engaging in unprotected sex.	1.43[1]	.87	1.81[2]	1.26
Driving a car without wearing a seat belt.	3.66[1]	1.86	3.86[1]	2.04
Ethical risks	2.04[1]	1.60	2.30[2]	1.76
Revealing a friend's secret to someone else.	1.73[1]	1.29	1.70[1]	1.23
Leaving your young children alone at home while running an errand.	2.43[1]	1.69	2.62[1]	1.85
Passing off somebody else's work as your own.	1.74[1]	1.26	2.27[2]	1.38
Having an affair with a married man/woman	1.66[1]	1.41	2.12[1]	1.83
Social risks	4.58[1]	1.86	4.07[2]	1.89
Speaking your mind about an unpopular issue in a meeting at work.	3.98[1]	1.69	3.86[1]	1.78
Starting a new career in your mid-thirties.	4.70[1]	1.85	5.23[1]	1.70

Disagreeing with an authority figure on a major issue.	4.53[1]	1.52	4.28[1]	1.59
Moving to a city far away from your extended family.	3.44[1]	2.04	2.66[2]	1.71
Choosing a career that you truly enjoy over a more secure one.	5.03[1]	1.76	4.45[2]	1.88
Recreational risks	3.55[1]	2.09	3.75[1]	2.03
Bungee jumping off a tall bridge.	2.45[1]	1.88	2.68[1]	1.86
Piloting a small plane.	3.22[1]	1.99	3.25[1]	1.88
Taking a skydiving class.	3.78[1]	2.05	4.08[1]	1.90
Going down a ski run that is beyond your ability.	3.17[1]	1.91	3.16[1]	1.60

Note. Row-wise comparisons: Means sharing the same super-script do not differ on p < .05.

3.3.2.2 Conformity Effects. We created the variable Conformity the same way as for as Study 1. Table 3.7 presents the means and standard deviation of conformity across the critical items by domain and gender.

Table 3.7

Mean (and Standard Deviations) Conformity Levels by Risk Domain and Gender

	Females		Males		Total	
Domain	*M*	*SD*	*M*	*SD*	*M*	*SD*
Health/ safety	.36	1.90	.41	1.68	.38	1.80
Ethical	.33	1.46	.26	1.26	.30	1.37
Social	.84	1.95	.65	1.95	.75	1.95

Recreational	.64	2.07	.32	1.88	.49	2.00
Total	.55	1.89	.42	1.74	.49	1.82

An ANOVA with the dependent variable Conformity, the independent variables Domain and Gender, and the covariate Age was conducted. The ANOVA revealed main effects of Domain, $F(3, 3030) = 9.56$, $p < .001$, $\eta^2 = .01$, and Gender, $F(1, 3030) = 6.81$, $p = .009$, $\eta^2 = .002$. The age and interaction effects were non-significant. Post-hoc tests (with Bonferroni corrections) indicated that participants showed significantly higher conformity in the social than any other risk domain (all $ps < .02$). Across domains, females showed higher conformity than males (see Table 3.4).

One-sample t-tests showed that conformity was positive (Table 3.7) and significantly different from zero in all risk domains (health/safety: $t(970) = 6.62$, $p < .001$, $d = .21$; ethical: $t(808) = 6.16$, $p < .001$, $d = .22$; social: $t(973) = 11.99$, $p < .001$, $d = .38$; recreational: $t(967) = 7.70$, $p < .001$, $d = .25$. Females' and males' conformity across domains was positive and significantly different (females: $t(2032) = 13.17$, $p < .001$, $d = .29$; males: $t(1688) = 9.82$, $p < .001$, $d = .24$).

3.4 General Discussion

The research reported in this chapter had three general goals: First, I aimed to assess whether conform with others' risky decisions across different risk domains. Second, I wanted to investigate whether conformity to others' risky decisions differed depending on people's cultural background. Third, I examined gender differences in conformity to others' risky decisions across risk domains and cultures.

The main goal of the current research was to investigate social influences on risky decision-making in the United Kingdom and Kuwait. Indeed, a host of previous studies have confirmed a risky shift, with people making riskier decisions in groups than individually

(Baron et al., 1992; Isenberg, 1986; Kerr & Tindale, 2004; Stoner, 1961). Furthermore, people make riskier decisions when paired with a peer than alone (Gardner & Steinberg, 2005; Yechiam et al., 2008). However, most of this research has ignore risky decisions outside the financial risk domain, and no study has investigated social influences on risky decisions in the Middle East.

Consistent with previous research, I found a risky shift with participants' responses being, on average more risk-seeking in the group than the individual setting. Among the UK sample, this risky shift differed by domain with only social and recreational risky decisions reaching statistical significance. Kuwaiti participants displayed a risky shift in all risk domains. While I expected this risky shift in the recreational and health/safety domain, given previous research on peer influences on health-related and recreational behaviours (e.g., Ali & Dwyer, 2009; Salvy et al., 2012), the findings for risky decisions in the social domain were surprising. Indeed, in both cultures and across genders, in both individual and group settings, participants were most risk-seeking in the social domain. This is not without precedent: Hanoch and Gummerum (2010) and Gummerum et al. (2014) showed that risk-taking was highest in the social compared to all other domains among incarcerated offenders, ex-offenders, and control participants. Yet, to my knowledge, no study has so far investigated why people are more prone to take risks in the social domain. Moreover, research is lacking as to whether social risk-taking as assessed by the DOSPERT (Weber et al., 2002) correlates or predicts real-life social risk-taking. Looking at the DOSPERT items, it seems that the social risks (e.g., speaking your mind about an unpopular issue) seem to be more "everyday" and common than risks in other domains (e.g., piloting a small plane). Perhaps people have already engaged in some of the social risks and therefore can see themselves as more likely to engage in them again than some of the ethical or recreational risks. This could be explored in future research.

In addition to investigating the risky shift, I also examined whether participants would conform with the opinion of a more risk-seeking majority in a group setting, and I was particularly interested in whether participants would conform less in the ethical compared to the other risk domains, given the findings reported in Chapter 2. With the exception of the recreational domain in the UK, I found conformity effects in all domains and in both cultures. Conformity was highest in the social risk domain in both cultures. This was not in line with my expectations. As discussed above, there is limited research on conformity effects in risk domains other than the financial domain, but peer influences have been reported in the health/safety and recreational domains. Furthermore, the findings of Chapter 2 indicated that both UK and Kuwaiti participants conformed with others' evaluations of moral transgressions, but at least among UK participants this moral conformity was significantly lower than conformity with evaluations decency violations.

A few interesting gender effects emerged. In the both cultures, females conformed significantly more than males across domains. This was unexpected, especially given Kim and Park's (2010) findings that (individual) gender differences in risk-taking get amplified at the group level. Since males have been shown to generally take more risks in the financial and recreational domains, I expected stronger conformity effects form males than females, particularly in these domains. While the findings, especially for the UK sample, should not be over-interpreted, given the small sample size, uneven gender distribution, and the methodological set-up of the study (see discussion in Section 3.2.2.2), previous research on gender effects in conformity (see Section 1.2.2.1) has shown that the type of stimuli used matter as to whether gender effects emerge. Specifically, tasks, stimuli, or topics that are more pertinent to males are associated with more conformity in females and vice versa (e.g., Lee, 2003; Sistrunk & McDavid, 1971). Thus, risk-taking might be seen as a male-typed activity that is more subject to conformity among females than males. Interestingly, at the

individual level, Kuwaiti females took more risks in the social domain than Kuwaiti males, while the opposite gender effect emerged in the health/safety and ethical risk domains. It is possible that in Kuwait females are more likely to express their risk-taking tendencies in their social lives while societal norm might prevent them from engaging in risks in other domains.

As stated above, I was particularly interested social influences on risky decisions in the ethical compared to the other domains. In general, the findings are in line with the results reported in Chapter 2 that adults do conform in morally-relevant decisions, but less so than in other domains (at least among western UK participants). Thus, moral decisions are not impervious to the influence of others' opinions, as suggested by Haidt's (2001) socio-intuitionist model. What differentiates ethical risky decisions as studied here and moral decisions as studied in most moral psychology research is that ethical risky decisions come with the possibility of serious negative consequences. These negative consequences of (im)moral decisions (e.g., being punished, incurring financial or social consequences) are often implied in moral psychological research, but rarely directly studied. Thus, a fruitful avenue for future research would be to look more closely at how people conceptualize the benefits and risks of moral decisions and how these processes are affected by others.

This research has a number of limitations some of which have already been acknowledged above and in Chapter 2. First, this research investigated people's risky decisions (i.e., their likelihood of engaging in a specific activity), not their actual risk-taking behaviour. It is possible that peer and conformity effects differ when people actually decide to engage in a risky activity. Indeed, the differences in the findings of the current research to peer effects in health-related risky behaviours, such as smoking or substance abuse (e.g., Kremer & Levy, 2008; McVikar, 2011) might point to this possibility. Second, in this study, participants were presented with a risk-seeking majority. It is an open question whether adults would also conform with a majority that made more risk-averse choices. Third, research on

domain-specific risk-taking (e.g., Hanoch et al., 2006; Weber et al., 2002) suggests that risk-taking across domain (with the possible exception of the health/safety domain) is more strongly driven by the perceived benefits of the risky activity than the its perceived risks. In this study, I only investigated participants' risk-taking tendencies, but it would be fascinating to investigate whether social pressures affect the perception of benefits and risks differently and how this, in turn, drives risk-taking across domains.

In sum, the current research investigated social influences on risky decision-making across risk domains and in two different cultures. I found that risk taking was subject to conformity pressures across risk domains and cultures. Given the potential real-life consequences of risky decisions, it is important to understand how social influences can be used to ameliorate negative and boost potential positive consequences of risky decisions.

Chapter 4

Normative and Informational Influences on Moral Conformity: The Role of Social Exclusion and Moral Conviction

4.1 Introduction

The research reported in the previous chapters as well as earlier research (e.g., Kelly et al., 2017; Lisciandra et al., 2013) have shown that adults from two different cultures conform to the opinion of others in different domains, such as concerning their risky decisions and for morally-relevant topics. Indeed, Chapter 2 indicated that UK adults particularly conformed with others' judgments in the decency domain. This is in line with Kelly et al. (2017) who have shown that just presenting adults with a descriptive norm (i.e., how many people previous agreed or disagreed with an issue) influenced participants' judgments in moral and decency dilemmas. On the other hand, Lisciandra et al. (2013) argued that judgments in the moral domain are more protected from conformity effects. The data reported in Chapter 2 for UK and Kuwaiti participants did not support this conclusion, however. While conformity with decency issue was strongest in UK participants, they also conformed with others' judgments in the moral domain. In Kuwait, adults conformed equally strongly for moral, social-conventional, and decency issues. The goal of the study reported here is to investigate these effects further and to test boundary conditions of moral conformity. First, I will investigate conformity with five moral concerns or foundations using the descriptive norm approach used by Kelly et al. (2017). Second, I will investigate if people's moral convictions moderate the effect of others' opinions on individuals' moral judgments in the five different foundations (see Hornsey et al., 2003). Third, I will assess whether people conform with others' moral opinions, if others judge a moral violation to be morally acceptable or condemnable (see Kundu & Cummins, 2013). Fourth, I will examine whether a social exclusion manipulation, which has been shown to increase others' normative influence (Williams et al., 2000), will also affect moral conformity.

4.1.1 Moral Foundations

As discussed in Chapter 2, moral psychologists have increasingly proposed that morality encompasses wider concerns than those pertaining to not harming others, fairness, rights, and justice (Graham et al., 2009, 2011; Rozin et al., 1999; Shweder et al., 1987). Graham and colleagues (2009, 2011; Haidt & Graham, 2007) summarized these discussions in their Moral Foundations Theory (MFT). They suggest that human morality encompasses five moral concerns or foundations: The harm/care foundation is related to disapproval of, avoiding, and ameliorating pain and misery in others and is based on sympathy, friendliness, and nurturance (Koleva et al., 2012). The fairness/reciprocity foundation is related to equality and justice and seeks that these principles not be violated. The ingroup/loyalty foundation is based on people's relation to important ingroups (e.g., one's family, home country) and seeks to promote the group's cohesion and well-being. The authority/respect foundation is related to status differences between people and within societies. Subordinates are supposed to follow authorities' norms and rules, but authorities also have a duty to support the well-being of subordinates. The purity/sanctity foundation is related to the emotion of disgust that is associated with avoiding biological and social contaminants (Koleva et al., 2012). The harm/care and fairness/reciprocity foundations are generally regarded as the "individualising" foundations, the ingroup/loyalty, authority/respect, and purity/sanctity foundations as the "binding foundations" (Graham et al., 2011). Furthermore, given the definitions of morality, social conventions, and decency I presented in Chapter 2, one could regard morality as equivalent to the individualising foundations harm/care and fairness/justice, decency as equivalent to purity/sanctity, and social conventions as equivalent to ingroup/loyalty and authority/respect.

Research within western societies has repeatedly shown that politically liberal adults tend to endorse the individualising foundations more than the binding foundations, whereas

politically conservative adults tend to endorse all five foundations to an equal degree

(Graham et al., 2009, 2011). Similarly, participants from collectivistic societies tend to

endorse all five foundations to a similar degree, whereas participants from more

individualistic societies differentiate more strongly between the individualising and binding

foundations (Alqahtani et al., 2020; Graham et al., 2011).

To my knowledge, conformity to others' judgments regarding all five moral

foundations has not been studied so far. In the current research, I investigated whether UK

adults would conform when presented with a descriptive norm regarding others' acceptance

or condemnation of foundation-specific violations. Kelly et al. (2017, Study 1) presented

participants with scenarios depicting either a moral or a decency violation. Participants' own

moral judgments of these scenarios were in line with the presented descriptive norm (e.g.,

"58 people who previously took this survey rated it as morally condemnable [acceptable]", p.

59). That is, for both the descriptive and moral scenarios, participants who received the

condemnable descriptive norms rated the violations as more condemnable than participants

presented with the acceptable descriptive norm. Following from this research, I would expect

participants to conform with a condemnable versus an acceptable descriptive norm across all

five moral foundations.

4.1.2 Moral Convictions and Conformity

People's moral opinions can be subject to change, based on their social, cultural, and

historical contexts they are embedded. For example, public opinions about abortion differ

across countries (Osnos, 2012) and people's view of smoking has been increasingly

moralized in western societies over the last 50-60 years (Rozin & Singh 1999). However,

there are opinions or attitudes that people view as a reflection of their core and fundamental

belief of what is right and wrong, a construct that Skitka et al. (2021) termed "moral

conviction". A body of empirical research (e.g., Aramovich et al., 2012; Hornsey et al., 2003,

2007; see review by Skitka et al., 2021) has shown that inter-individual variation in the strength of people's moral convictions is associated with social and political engagement with the issues that participants hold dear. Importantly, strength of moral conviction also made adult and child participants less susceptible to social and authority influences (Smetana, 1981; Wisneski et al., 2009). For example, Hornsey et al. (2003) investigated whether the strength of people's attitudes towards pro-gay legal rights (Study 1) or for the government to provide an apology to Aborigines (Study 2) moderated whether they privately or publicly conformed with the majority opinion on these issues. The majority opinion was presented as statistical information (i.e., the group norm) of others being either strongly in favour or strongly against participants' own opinions on these issues. Results across two studies showed that, in private, participants with weak moral attitudes were more likely to act in line with the group norm, but the norm did not affect the private conformity of people with a strong moral attitude. Participants with strong moral attitudes were marginally more likely to engage in public actions that acted counter to the group norm. Similarly, across two studies Hornsey et al. (2007) showed that those with strong moral attitudes regarding government apologies to Australian Aborigines or legalizing voluntary euthanasia reported a stronger intention to publicly speak out even when their attitudes ran counter to the group norm.

Overall, this research shows that strength of moral attitude emerged as a moderator for public and private moral conformity which might lessen the normative influences operating in social conformity situations. The current research investigated whether the strength of adults' moral judgments in the five moral foundations would modulate the effect of perceived group norms on conformity.

4.1.3 Social Exclusion and Conformity

Relatedness, that is experiencing a feeling of bonding, being connected, liked, and being significant for others, is one of the basic human psychological needs (Deci & Ryan,

2000; Ryan & Deci, 2000). This need of relatedness can be frustrated when individuals feel lonely, alienated from, or excluded by others. Indeed, decades of research has shown the negative effects of social exclusion and ostracism on human functioning (e.g., Williams, 2007; Williams et al., 2005). In the current study, we investigated whether social exclusion would affect people's conformity regarding issues associated with the five moral foundations.

To manipulate feelings of social exclusion we implemented the Cyberball paradigm (Williams et al., 2000; William & Jarvis, 2006), a virtual ball-tossing game played online. During an online cyberball game, participants and two virtual manikins throw and catch balls. In non-exclusion conditions, all players (including the participant) receive the same number of ball tosses. In social exclusion conditions, the number of ball tosses the participants receive from the manikins can be manipulated. For example, after two initial tosses, participants may not get any balls from the others. Even short-term (2-3 minutes) exposure to such social exclusion elicits strong negative emotions (e.g., sadness, anger) and self-reported experiences of social exclusion in participants (Williams, 2009). Compared to non-excluded participants, socially excluded participants are more likely to engage in behaviours that help them restore their relations with others and increase the probability of them being socially included in the future. For example, socially excluded participants have been shown to be more obedient and cooperative towards others and are more likely to mimic them than non-excluded adults (Williams & Nida, 2011). Importantly, Williams et al. (2000; see also Carter-Sowell et al., 2008) showed that being socially excluded by others increased conformity in a classical Asch conformity paradigm compared to participants who were not excluded. Feeling socially excluded might particularly affect normative influences in a conformity situation; that is, socially-excluded people conform with others because they want to "fit in", be liked by others, and thus restore their social relationships and sense of belonging.

The effect of such social-exclusion manipulations on conformity on moral issues has, to our knowledge, not been investigated yet. Following previous research, we would expect that socially excluded participants show higher levels of moral conformity than non-excluded participants. Indeed, normative concerns of being liked and fitting in are also likely to motivate conformity in the moral domains due to people's desire to show that they comply with the perceived (moral) norms of the group. On the other hand, moral opinions might be more resistant to conformity influences (Lisciandra et al., 2013), particularly for those moral issues where people hold strong moral convictions (Hornsey et al., 2003). As such, we might expect that strength of moral conviction modulates the effect of social exclusion on moral conformity.

4.1.4 The Present Research

This project will extend my previous PhD studies and previous research on social influences on moral opinions. I want to find out whether adults' conformity with the descriptive norm regarding moral issues is moderated by their moral convictions. Furthermore, I would like to test the boundary conditions of moral conformity. Previous research has identified two motivations as to why people conform with others' opinions: Informational influences means that people rely on others' opinion to determine "correct" information, particularly in ambiguous situations. Normative influence means that people conform with others because they want to "fit in" and be liked by others. While both types of influences may operate in conformity situations, certain experimental manipulations have been shown to increase the effect of one or the other. For example, Williams et al. (2000) showed that manipulating participants' feelings of being socially excluded by others increased conformity in a classical Asch conformity paradigm. This social exclusion manipulation particularly affected normative influences. However, the effect of a social

exclusion manipulation has not been studied for moral conformity yet. The goal of this study was to fill this gap.

Overall, this study investigated the following research questions: How do descriptive norms affect moral judgments in the five moral foundations? Kelly et al. (2017) showed that adults conformed with descriptive social norms (i.e., statistical information as to how many people previous condemned or accepted a behaviour) in the moral and decency domain. Alshaalan and Gummerum (2021; see also Lisciandra et al., 2013) showed that in an Asch-style conformity paradigm adults conformed with moral, social-conventional, but particularly decency issues. Following this research, I predicted that presenting a descriptive social norm makes participants conform with this social norm across moral foundations, but particularly in the purity foundation, which is conceptually most similar to the decency domain.

How does social exclusion affect moral conformity? I predicted that participants in a social exclusion condition would be more likely to show moral conformity with the descriptive social norms than participants in a no-exclusion condition. Since no research has investigated this question across moral foundation or moral domains, I investigated this predicted effect of social exclusion on moral conformity exploratively across moral foundations.

How do moral convictions affect moral conformity? Following Hornsey et al. (2003, 2007), I predicted that people with stronger moral convictions in a moral foundation would be less likely to show moral conformity with the descriptive social norm in the no-exclusion condition. In the social exclusion condition, concerns with normative influence might override the effects of moral convictions. Thus, the strength of moral convictions should not moderate moral conformity with the descriptive social norm in the social exclusion condition.

4.2 Method

4.2.1 Participants

Kelly et al. (2017) identified that the smallest effect for conformity with descriptive moral and decency norms was d = .39 in a non-social exclusion situation. A power analysis with G*Power indicated that 82 participants per between-subject condition would be needed to detect a d = .39 with a power of .80 and alpha = .05. As such, we aimed to recruit a minimum of 328 participants (82 participants x 4 between-subject conditions).

Participants were recruited via Warwick University's participant pool (SONA) and the online recruitment platform Prolific; they needed to be UK residents over 18 years of age. The final sample contained 398 participants (99 males, 291 females, 8 other/did not want to indicate gender; M_{Age} = 27.49 years, SD = 10.02). Participants either received financial compensation or course credit.

4.2.2 Design

The study employed a 2 (social exclusion: no exclusion, social exclusion) x 2 (statistical norm: permissible, condemnable) x 5 (moral foundation: harm, justice, ingroup, authority, purity) mixed design. Social exclusion and statistical norm were between-subject variables, moral foundation the within-subject variable. Participants were randomly allocated to the between-subject conditions (no exclusion/permissible: n = 101; social exclusion/permissible: n = 100; no exclusion/condemnable: n = 99; social exclusion/condemnable: n = 98).

4.2.3 Procedure

The study was run on Qualtrics. Full ethical approval was received from the Psychology Department Research Ethics Committee at the University of Warwick (PGR_20-21/42). Participants were fully briefed about the study and had to sign an informed consent form before being able to take part.

At the beginning of the study, participants were asked to answer the 15-item Moral Foundations Questionnaire (Graham et al. 2011), which measures participants' concerns

regarding the five moral foundations Harm, Fairness, Ingroup, Authority, and Purity. After that, social exclusion was manipulated using the online game Cyberball (Williams & Jarvis, 2006). During Cyberball, participants and two other players, all represented by virtual manikins, threw a ball to each other. In the social exclusion condition, participants initially have the ball, but once thrown to one of the two other players, they do not receive any more ball tosses. In the non-exclusion condition, all players (including the participant) receive the same number of ball tosses. Participants in both condition played Cyberball for two minutes. Afterwards, three manipulation check questions about their perception of exclusion (Juanchich et al., 2018) were asked.

Participants were the presented with five moral violations, one violation per moral foundation. Participants are asked to rate their approval with these violations on a 7-point Likert scale (1 – strongly disapprove to 7 – strongly approve). As another between-subject manipulation, participants were presented with statistical information regarding the descriptive social norm, that is how previous participants had supposedly responded to the five moral violations. In the permissible condition, participants were told that the majority (69 to 75%) of previous respondents approved of this violation. In the condemnable condition, participants were told that the majority (69 to 75%) of previous respondents disapproved of these violations. Numbers representing the statistical norms were taken from previous research (e.g., Alshaalan & Gummerum, 2021; Graham et al., 2009).

Finally, participants were asked to report demographic information before being debriefed. The whole study took no longer than 15 minutes.

4.2.4 Measures

Demographic information

Participants were asked to report their age and gender (with options to not disclose this information).

Moral Foundations Questionnaire (MFQ, Graham et al., 2011)

Participants were asked to respond to 15 items measuring their moral judgments regarding the five moral foundations Harm, Fairness, Ingroup, Authority, and Purity through a 5 Likert scale from 0- strongly disagree to 5 strongly agree (e.g., "When the government makes laws, the number one principle should be ensuring that everyone is treated fairly"). Cronbach's α were .35 (harm subscale), .35 (justice subscale), .57 (ingroup subscale), .53 (authority subscale), .61 (purity subscale).

Manipulation check: Perception of exclusion (Juanchich et al., 2018)

Participants were asked three questions about their perception of exclusion: "I felt included", "I felt excluded" (both rated from 1 "not at all" to 5 "very much"), and they had to indicate the percentage of ball tosses they received during the game (0 – 100%).

Moral violations

Items were taken from Graham et al. (2009, Study 3) with one violation for each moral foundation (Harm: Make cruel remarks to an overweight person about their appearance; Fairness: Say no to a friend's request to help him move into a new apartment after he helped you move the month before; Ingroup: Break off all communications with your immediate and extended family for one year; Authority: Curse your parents, to their face (you can apologise and explain1 year later); Purity: Get a blood transfusion of 1 pint of disease-free, compatible blood from a convicted child molester). Participants were asked to rate their approval with these violations on a 7-point Likert scale (1 – strongly disapprove to 7 – strongly approve).

Statistical Analyses

I used hierarchical linear regression analysis to test the predicted moderation effects of Statistical Norm x Moral Judgment, Social Exclusion x Moral Judgment, Statistical Norm x Social Exclusion, and Statistical Norm x Social Exclusion x Moral Judgment. Five separate

linear regression analyses were conducted (one per moral foundation) with participants'

approval ratings of the moral violation as dependent variable. At Step 1, the main effects of

Statistical Norm, Social Exclusion, and foundation-specific Moral Judgment were entered. At

Step 2, the interaction effects were additionally entered. Foundation-specific moral judgments

were mean-centered; Statistical Norm and Social Exclusion were dummy-coded. Interaction

terms were created by calculating the product of the main effects (Aiken & West, 1991).

Significant interaction terms were further analyzed by calculating the slopes and plotting the

interaction following the procedures outlined by Aiken and West (1991).

4.3 Results

4.3.1 Manipulation Check: Perception of Exclusion

Compared to those in the no exclusion condition, participants in the social exclusion

condition felt significantly less included (no exclusion: $M = 4.06$, $SD = 1.08$; social

exclusion: $M = 1.95$, $SD = 1.03$, $t(377) = 19.45$, $p < .001$), significantly more excluded (no

exclusion: $M = 2.18$, $SD = 1.26$; social exclusion: $M = 4.06$, $SD = 1.12$, $t(377) = 15.43$, $p <$

.001) and reported a significantly lower percentage of ball tosses during the game (no

exclusion: $M = 42.95$, $SD = 16.61$; social exclusion: $M = 18.40$, $SD = 17.40$, $t(389) = 14.28$, p

$< .001$). Therefore, the manipulation of perceptions of social exclusion was successful.

4.3.2 Effects of Social Exclusion and Descriptive Norms on Judgments of Permissibility and Condemnation across Moral Foundations

Table 4.1 shows mean approval ratings (higher scores depict higher approval) with

the moral violations in the harm, justice, ingroup, authority, and purity domains when

presented with a permissible versus condemnable descriptive norm by social exclusion

condition. A repeated-measures ANOVA with the within-subject factor Moral Foundation

(harm, justice, ingroup, authority, purity) and the between-subject factors Social Exclusion

(no exclusion, social exclusion) and Statistical Norm (permissible, condemnable) showed

main effects of Moral Foundation, $F(4, 393) = 216.74$, $p < .001$, $\eta^2 = .36$, Statistical Norm,

$F(1, 393) = 9.52$, $p = .002$, $\eta^2 = .02$, and a significant interaction effect of Moral Foundation x

Statistical Norm, $F(4, 393) = 3.29$, $p = .02$, $\eta^2 = .008$. Participants were more likely to

approve moral violations in the ingroup, authority, and purity than the harm and justice moral

foundations. Across moral foundations, participants were more likely to approve of moral

violations when the statistical norm was permissible than when it was condemnable.

However, the influence of the statistical norm on the acceptance of moral violations differed

by moral foundation. Independent-sample t-tests indicated that there was no effect of

statistical norm for the harm ($t(396) = .18$, $p =.86$), justice ($t(396) = 1.60$, $p =.11$), and

authority ($t(395) = .72$, $p = .47$) foundations, but participants judged moral violations in the

ingroup ($t(396) = 3.17$, $p = .002$) and purity ($t(396) = 2.63$, $p =.009$) foundations as more

acceptable when the statistical norm was permissible than when it was condemnable. No

other significant main or interaction effects emerged.

Table 4.1

Mean Approval Ratings (and SDs) with Violations in the Harm, Justice, Ingroup, Authority,

and Purity Domains by Statistical Norm and Exclusion Conditions

Moral foundation	No exclusion		Social exclusion	
	Permissible	Condemnable	Permissible	Condemnable
Harm/Care	1.24 (.62)	1.35 (1.11)	1.32 (1.04)	1.23 (.64)
Justice/fairness	1.95 (1.14)	1.99 (1.23)	2.11 (1.43)	1.69 (.78)
Ingroup/loyalty	3.21 (1.85)	2.75 (1.60)	3.31 (2.06)	2.65 (1.46)
Authority/respect	2.29 (1.54)	2.32 (1.53)	2.65 (1.68)	2.40 (1.33)
Purity/decency	4.13 (2.01)	3.76 (2.02)	4.33 (2.03)	3.65 (1.89)

4.3.3 Moderation Analyses

The results of the hierarchical regression analyses are displayed in Table 4.2. For each foundation, foundation-specific moral judgment was significantly associated with acceptability ratings: The higher the moral judgment in the foundation, the more likely participants were to disapprove of the moral violation in the foundation. Statistical norm was only associated with approval ratings in the ingroup and purity foundations: Participants were less likely to approve of ingroup and purity moral violations in the condemnable than in the permissible condition.

For the ingroup, authority, and purity foundations, none of the interaction effects reached statistical significance. However, for the harm foundation, social exclusion condition moderated the effect of moral judgment on approval ratings. As can be seen in Figure 4.1, in the no exclusion condition, moral judgments did not predict acceptability ratings in the harm foundation (β = -.07, p = .39). In the exclusion condition, those with lower moral judgment rated the harm violation as significantly more acceptable than those with higher moral judgment (β = -.30, p < .001).

In the justice foundation, social exclusion significantly moderated the association between statistical norm and acceptability ratings. As shown in Figure 4.2, in the no-exclusion condition, mean acceptability ratings did not differ for the permissible versus condemnable statistical norm (β = .07, p = .69). In the exclusion condition, acceptability ratings were significantly higher in the permissible than the condemnable statistical norm condition (β = -.44, p = .007).

Figure 4.1

Social Exclusion Moderates the Effect of Moral Judgment on Acceptability Ratings in the Harm Foundation.
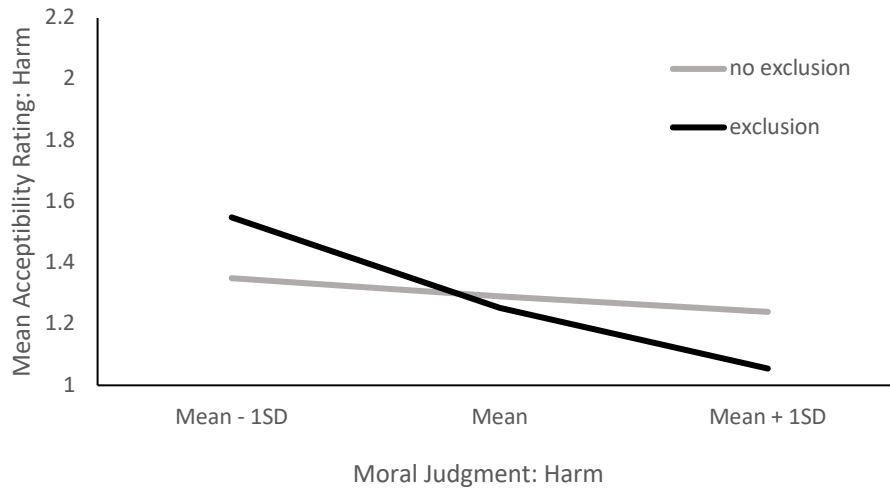
Note: y-axis shows mean acceptability ratings (1 – strongly disapprove to 7 – strongly approve) of the moral violation in the harm foundation. x-axis shows moral judgment in the harm foundation (as measured by the moral foundations questionnaire, graham et al., 2011) at one standard deviation below the mean, the mean, and one standard deviation above the mean.

Figure 4.2

Social Exclusion Moderates the Effect of Statistical Norm on Acceptability Ratings in the Justice Foundation.
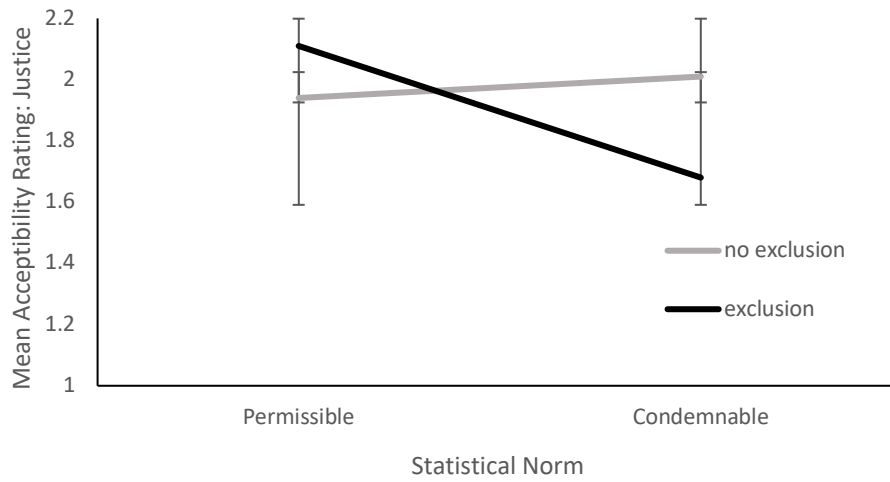
Note. y-axis shows mean acceptability ratings (1 – strongly disapprove to 7 – strongly approve) of the moral violation in the justice foundation. x-axis displays the two levels (permissible, condemnable) of the statistical norm condition.

Table 4.2

Results of Hierarchical Regression Analyses: Predicting Approval Ratings in Five Moral Domains

Independent variables	Approval ratings									
	Harm		Justice		Ingroup		Authority		Purity	
	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2	β	ΔR^2
Step 1		.03**		.05**		.13**		.04**		.08**
Statistical Norm	.01		-.08		-.15**		-.03		-.14**	
Social Exclusion	-.01		-.03		-.01		.07		.01	
Moral Judgment	-.18**		-.20**		-.32**		-.19**		-.25**	
Step 2		.03*		.02†		.004		.01		.01
Statistical Norm	.07		.03		-.13†		.02		-.10	
Social Exclusion	.07		.07		.01		.11		.04	
Moral Judgment	-.002		-.16†		-.34**		-.13		-.24*	
Norm x Judgment	-.10		-.01		.08		.04		-.07	
Exclusion x Judgment	-.28**		-.14		-.03		-.10		-.02	
Norm x Exclusion	-.12		-.18*		-.04		-.07		-.06	
Norm x Exclusion x Judgment	.19†		.13		-.03		-.02		.10	

† $p < .1$; *$p < .05$; **$p < .01$

4.3.4 Additional Exploratory Analyses

The following analyses were not set out a priori and should therefore be considered exploratory. These analyses try to address of some of the methodological issues identified in the data. As these analyses are exploratory, future research should replicate any (significant) findings.

As reported in the Methods section, the internal consistency scores of moral judgments in the five moral foundations were rather low, particularly for the harm and justice foundations. This might imply that the MFQ did not measure moral judgment reliably. Graham et al. (2009) suggested that the five moral foundations might cluster into two general moral concerns: An individualizing cluster, which includes concerns about harm and fairness, and a binding cluster, which includes concerns for ingroup, authority and purity. To explore whether grouping the MFQ items into these clusters, I conducted a confirmatory principal component analysis on the 15 MFQ items with orthogonal rotation (varimax). Two components, incorporating all 15 items, had eigenvalues over 1 and together accounted for 34.75% of the variance. Table 4.3 shows the factor loadings after rotation suggesting that all ingroup, authority, and purity items loaded (more highly) onto component 1 (binding cluster) and all harm and fairness items loaded onto component 2 (individualizing cluster). Factor loadings were derived.

I conducted five separate hierarchical linear regression analysis (one per foundation) to test the predicted moderation effects. For the harm and justice foundation, at Step 1 the main effects of Statistical Norm, Social Exclusion, and Moral Judgment (individualizing) were entered. Additionally, at Step 2, the interaction effects of Statistical Norm x Moral Judgment (individualizing), Social Exclusion x Moral Judgment (individualizing), Statistical Norm x Social Exclusion, and Statistical Norm x Social Exclusion x Moral Judgment (individualizing) were entered.

Table 4.3

Results of Confirmatory Factor Analysis

	Rotated Factor Loading	
Item	Binding Cluster	Individualizing Cluster
1. Compassion for suffering (harm)	.06	.66
2. Defenseless animal (harm)	.09	.45
3. Killing a human (harm)	.09	.37
4. Fair treatment (fairness)	-.02	.54
5. Just society (fairness)	.21	.57
6. Unfair inheritance (fairness)	-.30	.58
7. Proud of country (ingroup)	.67	-.09
8. Family loyalty (ingroup)	.63	.08
9. Team player (ingroup)	.50	.26
10. Respect for authority (authority)	.70	.06
11. Different gender roles (authority)	.61	-.19
12. Following orders (authority)	.51	.13
13. Avoiding disgust (purity)	.41	.36
14. Unnatural acts (purity)	.61	.03
15. Chastity (purity)	.55	.18
Eigenvalue	3.34	1.88
% of variance	22.25	12.51

For the ingroup, authority, and purity foundations, at Step 1 the main effects of Statistical Norm, Social Exclusion, and Moral Judgment (binding) were entered. Additionally, at Step 2, the interaction effects of Statistical Norm x Moral Judgment

(binding), Social Exclusion x Moral Judgment (binding), Statistical Norm x Social Exclusion, and Statistical Norm x Social Exclusion x Moral Judgment (binding) were entered.

Table 4.4 shows the results of the regression analyses for approval ratings in the harm and justice foundations. Moral judgment (individualizing) was significantly negative associated with approval ratings such that participants with higher scores on individualizing moral judgment were less likely to approve of harm and justice violations. In the harm foundation, exclusion condition significantly moderated the effect of moral judgment on approval ratings. In the justice foundation, social exclusion significantly moderated the effect of statistical norm.

Table 4.4

Results of Hierarchical Regression Analyses: Predicting Approval Ratings the Harm and Justice Foundations

| | Approval ratings | | | |
| | Harm | | Justice | |
Independent variables	β	ΔR^2	β	ΔR^2
Step 1		.05**		.06**
Statistical Norm	.02		-.08	
Social Exclusion	-.01		-.02	
Moral Judgment (individualizing)	-.22**		-.23**	
Step 2		.02		.02
Statistical Norm	.08		.03	
Social Exclusion	.06		.10	
Moral Judgment (individualizing)	-.14†		-.26**	
Norm x Judgment	.03		.05	
Exclusion x Judgment	-.15*		-.02	

Norm x Exclusion	-.13	-.20*
Norm x Exclusion x Judgment	-.01	-.02

Table 4.5 shows the results of the regression analyses for approval ratings in the ingroup, authority, and purity foundations. Moral judgment (binding) predicted approval ratings in all three domains: The higher the moral judgment (binding), the lower participants' approval ratings. For the ingroup and purity foundations, statistical norm was additionally associated with approval ratings. Participants in the condemnable condition were less likely to approve ingroup and purity foundations that those in the permissible condition.

Table 4.5

Results of Hierarchical Regression Analyses: Predicting Approval Ratings in the Ingroup, Authority, and Purity Foundations

	Approval ratings					
	Ingroup		Authority		Purity	
Independent variables	β	ΔR^2	β	ΔR^2	β	ΔR^2
Step 1		.10**		.08**		.04**
Statistical Norm	-.17**		.07		-.12*	
Social Exclusion	.01		-.04		-.002	
Moral Judgment	-.27**		-.27**		-.17**	
Step 2		.01		.01		.01
Statistical Norm	-.14†		.002		-.09	
Social Exclusion	.04		.10		.02	
Moral Judgment	-.25**		-.16†		-.10	
Norm x Judgment	.05		-.08		-.18†	
Exclusion x Judgment	-.07		-.15		-.06	

Norm x Exclusion	-.06	-.07	-.05
Norm x Exclusion x Judgment	-.003	.12	.20†

4.4 Discussion

This study had three main goals: First, to investigate whether descriptive statistical norms affected approval with a moral violation in five moral foundations. Second, to assess how moral convictions affect moral conformity. Third, to examine how social exclusion affected moral conformity in the five moral foundations. The results relating to these three research questions are discussed in turn.

4.4.1 How do descriptive norms affect moral judgments in five moral foundations?

Previous research (e.g., Alshaalan & Gummerum, 2021; Kelly et al., 2017; Lisciandra et al., 2013) showed that adults conformed with others' moral judgments regarding moral violations even when only a descriptive statistical norm about how many people previously condemned or accepted a violation was displayed. However, the influence of this social norm on conformity might depend on the moral domain. Following this research, I predicted that presenting a descriptive social norm makes participants conform with this social norm across moral foundations, but particularly in the purity foundation.

To answer this research question and hypothesis, participants were presented with either a permissible or condemnable descriptive social norm, similar to the methods employed by Kelly et al. (2017). In the permissible condition, participants were told that the majority of previous respondents approved of this item. In the condemnable condition, participants will be told that the majority of previous respondents disapproved of these items. Results showed that this statistical norm manipulation affected approval ratings of violations differently depending on the moral foundation. While there was no effect for statistical norm in the harm, justice, and authority foundations, for the ingroup and purity foundations

participants' approval ratings were higher when the statistical norm was permissible than when it was condemnable.

These findings are (partly) in line with my predictions and with previous research. As predicted, approval ratings (which I treated as an index for conformity) were particularly affected by the statistical norm in the purity foundation. This is in line with previous research (e.g., Alshaalan & Gummerum, 2021; Kelly et al., 2017; Lisciandra et al., 2013) that others' opinions influence participants' own moral judgments about purity/decency. Indeed, this conformity effect for purity judgments has been shown in Asch-style conformity experiments and in studies using descriptive norms as well as adult participants from various societies (i.e., Kuwait, Netherlands, UK, USA). Thus, there seems to be a robust conformity effect regarding moral opinions in the purity/decency domain.

In Chapter 2 (Studies 1 and 2), I already speculated as to why moral judgments in the decency/purity domain might be particularly susceptible to conformity. Briefly, I stated that because decency/purity violations are rarely associated with physical harm (Haidt et al., 1993), presenting participants with information that others approve of a decency/purity violation might make participants engage in consequentialist reflection (Hannikainen & Rosas, 2019) and thus approve of these violations in line with the statistical norm. As an innovation and extension of Studies 1 and 2, in the current study I now presented participants with information about others' opinion that approved of the moral violations (i.e., permissible statistical norm) or that condemned the moral violation. However, unlike in Studies 1 and 2, I did not measure participants' approval ratings of the moral violations without the presentation of any statistical norm. Thus, it was not possible to compare whether the presentation of the statistical norm increased or decreased approval ratings compared to participants' individual ratings.

The effects of conformity regarding violations in the harm and justice foundations have received more mixed results. Lisciandra et al. (2013) showed that in situations with high social presence (i.e., when the majority group members were in the same room as the participants) conformity with moral violations that encompass both harm and justice issues was low. Alshaalan and Gummerum (2021) found that in a low social presence situation, where participants interacted with other group members over the computer, participants conformed with moral issues (including harm and justice violations), but this moral conformity was lower when compared to conformity with decency violations. In Kelly et al.'s (2017) study, participants conformed with the statistical norm both regarding decency and harm violations. In the present study, the statistical norm did not seem to affect participants' approval ratings in the harm and justice foundations, therefore indicating that these moral concerns "are more insulated from conformity effects" (Liscinadra et al., 2013, p. 761). However, as I discuss below, the effects of statistical norm on approval ratings regarding harm and justice violations might be moderated by other factors, most notably exclusion experiences.

To my knowledge, no previous research has investigated conformity effects for the ingroup and authority foundations. The statistical norm affected approval ratings for ingroup, but not the authority foundation. This is surprising as both foundations are considered binding foundations (Graham et al., 2009), so I would have predicted similar effects of the statistical norm manipulation. Clearly, the obtained effects should be replicated in future research. It is possible that the specific violations chosen had different emotional impacts on participants, which might have affected their approval ratings. It is also possible that normative concerns with group membership and belonging are particularly associated with ingroup violations. In turn, heightened normative influences might lead to increased conformity for the ingroup foundation. This question could be investigated in future research.

4.4.2 How do moral convictions affect moral conformity?

My results showed that strength of participants' moral judgment significantly affected their acceptability ratings in all five moral foundations. That is, the more participants endorsed a foundation-specific moral judgment, the less likely they were to accept the foundation-specific violation. Thus, people's moral judgments or moral convictions are indeed relevant when they judge immoral actions, independent of the opinion of other people on the subject matter.

Following previous research (e.g., Aramovich et al., 2012; Hornsey et al., 2003, 2007), I predicted that moral judgment would moderate the effect of social norms on acceptability ratings. That is, people with stronger foundation-specific moral convictions should be less likely to show moral conformity with the descriptive social norm. However, my results show that moral judgment did not serve as the predicted moderator for acceptability ratings for either of the five moral foundations, contrary to expectations. There are several explanations as to why my findings diverge from those obtained by previous studies.

First, the previous studies focused on one or two issues (e.g., attitudes towards recognition of gay couples in law; government apology towards Aborigines; legalizing euthanasia; Hornsey et al., 2003, 2007; attitudes towards torture; Aramovich et al., 2012) and assessed the strength of participants' moral convictions regarding these issues only. In the current study, participants' moral judgments were assessed regarding their attitudes to principles associated with the respective moral foundation, but that were different to the foundation-specific moral violations presented to measure acceptability ratings. Thus, my results might have been more in line with previous findings if I had assessed strength of people's convictions regarding the specific moral violations.

Second, Hornsey et al. (2003) showed that strength of moral conviction only served as a moderator for the influence of social norms on conformity when participants had to engage in public actions supporting their convictions (e.g., attending a rally). Private actions (e.g., voting in a referendum) were only predicted by strength of moral convictions. This is in line with my study; here, participants' acceptability ratings regarding the foundation-specific moral violations were also private. Thus, moral convictions may only serve as a moderator when actions in line with one's convictions are public (and thus potentially socially costly but also rewarding). It should be noted, though, that in Aramovich et al.'s (2012) Asch-style conformity experiment, strength of moral convictions moderated both participants' public (i.e., those that could be seen by the majority group members) and private responses (i.e., those that were not shared by with the other group members). However, in that study, private responses were always collected directly after the public ones, which might have influenced participants' private responses.

Overall, my study indicates that the opinion of others (expressed as descriptive norms) affects individual's judgments of moral violations, at least for some moral foundations. This is in line with Haidt's (2001) social-intuitionist model of moral judgments, which, in its social persuasion link, states that others' moral judgments affect individuals' own moral judgments. However, this study also showed that, independent of others' opinions, participants' moral convictions regarding principles associated with moral foundations affect their moral judgments. Future research should continue to investigate how these moral convictions emerge and what makes the strength of people's moral convictions impervious to the social influence of others.

4.4.3 How does social exclusion affect moral conformity?

I investigated whether social exclusion moderated the association between moral judgment and acceptability ratings and the link between statistical norm and acceptability

ratings. I predicted that participants in a social exclusion condition should be more likely to show moral conformity with the descriptive social norms than participants in a no-exclusion condition. Furthermore, social exclusion effects on moral conformity should decrease for participants with strong (vs. weak) social convictions. This is because social exclusion manipulations particularly affect normative influences in conformity situations (Williams et al., 2000), that is, people's motivation to fit in and be liked by others.

I manipulated participants' experience of social exclusion (vs. no exclusion) with the established online game Cyberball (Williams & Jarvis, 2006). In line with previous research, manipulation checks showed that this operationalization of social exclusion was successful. Nevertheless, my study only produced some of the expected moderation effects involving social exclusion. For the harm foundation, social exclusion moderated the effect or moral judgment on acceptability ratings: Participants with weak moral judgment were more likely to accept the harm moral violation in the social exclusion than the no exclusion condition. There was no effect for social exclusion for participants with strong moral judgment. For the justice foundation, social exclusion experiences moderated the effect of statistical norm on acceptability ratings: Participant in the exclusion condition were more likely to follow the statistical norm (i.e., accept the moral violation in the permissible and disagree with the violation in the condemnable condition) than those in the no-exclusion condition.

It is interesting to note that there were no main or interaction effect of social exclusion on acceptability ratings of ingroup, authority, or purity violations. This is surprising, as I would have expected a stronger effect of social exclusion on moral conformity for the binding foundations (i.e., ingroup, authority, purity) than the individualizing moral foundations (i.e., harm, justice). The binding foundations have been conceptualized as being rooted in the need for groups or collectives to promote order and cohesion (Malka et al., 2016); as such, social excluded participants might be particularly motivated to show their

commitment to norms that support group functioning. However, as discussed above, social exclusion effects only emerged for the individualizing foundations harm and justice.

It is possible that people re-establish their commitment to social groups after experiences of social exclusion by engaging in actions that they perceive as (a) being in line with the group's norm and (b) as non-trivial. Concerning the latter point, studies that have shown social exclusion effects on conformity investigated non-trivial conformity actions. Williams et al. (2000) used a classic visual perception task in an Asch-style conformity experiment where participants' responses were supposedly displayed to the incorrect majority. Thus, in this task there is an obvious correct solution, and participants' responses are not private but public. Carter-Sowell et al. (2008) showed that socially excluded participants were more likely to comply with requests to donate money, a financially costly and public action. As discussed above, in my study, participants' acceptability ratings were private and anonymous. This might have made agreeing with the descriptive social norm a trivial action for participants. In order to compensate for social exclusion, participants might have to engage in public and costly actions to affirm their commitment. This could be tested in future research.

4.5 Limitations

While my study gives some important insights into the factors affecting moral conformity, it is not without limitations. First, the MFQ did not measure moral judgment reliably as indicated by the low internal consistency of moral judgments in some of the five moral foundations. While I tried to address this in the additional exploratory analyses, future studies should use other measures of moral judgment or moral convictions for the five moral foundations. This measure of moral judgment or moral conviction could be more directly related to the moral violations assessed in the conformity task, as was done in other research on the influence of moral conviction on moral conformity (e.g., Hornsey et al., 2003, 2007).

Second, unlike in Alshaalan and Gummerum (2021), I did not assess people's individual moral judgments independently from their judgments when presented with the statistical norm; I only examined whether the direction of the descriptive norm (i.e., permissible vs. condemnable) made a difference for people's acceptability judgments. Future research should additionally assess people's individual moral judgments independent from their conformity judgments. Third, as discussed above, participants' acceptability ratings regarding the foundation-specific moral violations were private and non-costly. This might have affected the influence of the proposed moderators of moral judgment and social exclusion. Future research should vary the privacy and costs of people's moral acceptability judgments.

4.6 Conclusion

To my knowledge, this study is the first that investigated moral conformity across the five moral foundations identified by Graham et al. (2009, 2011) and potential moderators of moral conformity, namely moral conviction and experiences of social exclusion. While I found that adult participants conformed with descriptive statistical norms regarding the acceptability of moral violations in the ingroup and purity foundations (partially replicating Kelly et al., 2017), acceptability ratings in the harm, justice, and authority foundations were not influenced by the statistical norms. Furthermore, strength of moral conviction and experiences of social exclusion did not systematically moderate moral conformity across foundations. Thus, while the opinions of others are influential for some moral judgments (as suggested by Haidt's, 2001, social intuitionist model), other factors, particularly people's foundation-specific moral convictions, tend to be more influential for acceptability ratings across foundations. Future research should not only continue to investigate moderators of people's moral conformity, but also why and how moral convictions affect moral judgments even when presented with others' (opposing) moral opinions.

Chapter 5

Do as I Say: The Role of Moral Arguments in Moral Judgment and Social Transmission

5.1 Introduction

The previous studies reported in Chapters 2 to 4 have shown that adults generally conform to others' moral opinions. That is, simply presenting adults with the moral opinions of anonymous others makes their own moral judgments more similar to others' moral judgments. My empirical studies so far have shown that this moral conformity happens when there is little social pressure from others (i.e., when other group member are anonymous and cannot be seen or heard) and even when the opinion of others is represented as a statistical norm. Moral conformity, however, does differ by (moral) domain and differs in strength in different cultures and by gender. Overall, though, my research so far lends support to the social persuasion link in Haidt's (2001) social-intuitionist model (see Section 1.1.4): Others' moral judgments affect a person's own moral intuitions and judgments.

The research reported in this Chapter investigated the second "social" link in Haidt's (2011) social-intuitionist model, namely the reasoned persuasion link: Others' moral arguments or moral reasoning affects an individual's own moral intuitions and, in turn, their moral judgments. In the study reported here, I used a diffusion-chain method (Bartlett, 1932). Originally, in this method, the experimenter trained an individual to perform a behaviour, for example how to open a puzzle box in a specific way, and then serve as a model for the other individuals to learn how to perform that behaviour. In the current study, participants were presented with the summary of a text of an anonymous person and were asked to summaize the content themselves. Participants' own summary was then given to another person. The aim of use this method is to investigate how an anonymous other's summary of a moral dilemma and the moral arguments mentioned in this summary affect people's own recounting

of the moral dilemma, their emotions/intuitions about the moral dilemma, and their moral judgments regarding the main protagonists of the moral dilemmas. This methodological set-up allowed testing Haidt's (2001) reasoned persuasion link. I used two moral dilemmas from two different domains: In the morality domain, the moral norm of not harming others and saving lives conflicted with the moral norm of people's right to (intellectual) property. This moral dilemma is akin to the famous Heinz dilemma introduced by Kohlberg (1984) which was repeatedly used when investigating moral reasoning from the perspective of the cognitive-structural tradition (see Section 1.1.2). The second moral dilemma used was from the decency domain where disrespectful actions are displayed that might feel disgusting but are generally harmless (Haidt et al., 1993; see Chapter 2).

Using a diffusion-chain design also allowed me to study how moral arguments, moral judgments, and moral emotions get socially transmitted among groups of people. This helps illuminate what (moral) information is maintained and lost along the transmission chain therefore showing potential biases in the transmission of moral information.

5.1.1 The Reasoned Persuasion Link

Haidt's (2001) social-intuitionist model is not the first to suggest that others' moral reasoning can influence and change an individual's moral functioning. As discussed in Section 1.1.2, the cognitive-structural tradition to morality and moral development acknowledges the power of moral discussions, that is, the exchange of moral reasons, in supporting moral development. For example, Piaget (1932) regarded the discussion and collaboration between peers about establishing and changing rules as one of the hallmarks of autonomous (mature) morality. Based on his theory of moral development, Kohlberg and colleagues developed the moral dilemma discussion approach as a moral intervention (Blatt & Kohlberg, 1975; Lind, 2002). This intervention is based on the cognitive-structural assumption that a conflict in perspectives creates a disequilibrium in people's (moral)

schemas and understanding. In order to re-achieve equilibrium, people accommodate their schemas thus making moral growth possible (Berkowitz & Gibbs, 1985). Discussions about moral dilemmas, in which people present and are presented with conflicting opinions, can foster such a disequilibrium and a subsequent change in people's moral opinions. The moral dilemma discussion method has been mainly used as part of schools' efforts to improve pupils' moral development and reasoning. Under the guidance of an experienced teacher or instructor, students are presented with a moral dilemma (e.g., Kohlberg's Heinz dilemma) and discuss the reasons for their moral choices. The teacher/instructor guides the moral discussion and also joins the discussion with arguments. According to the original Blatt-Kohlberg (1975) method, presenting moral reasons that are one stage higher than the moral reasons used by students (i.e., the +1 rule) is particularly successful in promoting growth in moral reasoning. Indeed, decades of research have shown that exchanging moral reasons as part of moral dilemma discussions can improve moral growth (e.g., Berkowitz & Gibbs, 1983, 1985; see Berkowitz & Bier, 2006; Lind, 2002 for reviews).

This research tradition notwithstanding, direct evidence for Haidt's (2001) proposed reasoned persuasion link in moral judgment is hard to find. Gummerum et al. (2008) investigated the reasoned persuasion link in a developmental context. They studied the influence of moral reasoning when children, adolescents, and adults tried to persuade others whether to share or be selfish when allocating resources in a dictator game. In their experimental set-up, groups of three same-aged and same-sex proposers had to decide whether (or not) to share real money with a group on anonymous receivers. Gummerum et al. (2008) found that moral reasoning was instrumental in persuading the other group members to be more prosocial. Thus, this study indicates that moral reasoning can help in negotiating to change another's mind and their moral behaviour.

Kelly et al. (2017, Study 2) asked participants to make moral judgments regarding harm and decency moral violations. Participants were presented with a descriptive statistical norm (i.e., the majority of previous respondents either condemned or approved of the violation). Additionally, participants received either an emotional or rational reason (purportedly devised by previous respondents) as to why the moral violation was condemnable or acceptable. For example, a rational reason arguing that the decency violation was acceptable was "many cultures eat dogs, and the family should not let food go to waste." An emotional reason arguing for the acceptance of the decency violation was "the poor family must have been starving to make this decision." Overall, Kelly et al. (2017) found that the rational justifications were more powerful than the emotional arguments in increasing participants' conformity with the presented statistical norms for both harm and decency scenarios. Thus, others' "rational" moral reasons influenced participants' own moral judgments.

In this study, I followed up on this research in testing the reasoned persuasion link more directly. Participants took part in a diffusion-chain study in which information from one participant was passed on to the next one in the chain. Participants in the first chain position were presented with a newspaper article depicting either a harm or decency moral dilemma. Their task was to summarize the information in the article, which was then passed on to the next person in the chain. Every subsequent participant had to summarize the summaries they had received to pass on to the next person. All participants were asked for their moral judgments about the main protagonists in the article and their emotions when reading the article. This experimental set-up allowed me to test key mechanisms that are proposed to underlie the reasoned persuasion link, namely (1) whether others' (moral) arguments influenced recipients' own moral arguments and emotions (used as proxies for "moral

intuitions") and (2) whether participants' own moral intuitions affected their moral judgments.

5.1.2 Social Transmission of (Moral) Information

In addition to examining the reasoned persuasion link in Haidt's (2001) social-intuitionist model, using a diffusion chain methodology also allowed me to study the social transmission of moral information or moral reasons among individuals in the chain. The earliest experimental studies on diffusion chains were done by Bartlett (1932) who utilized the serial reproduction method. In the Bartlett method, participants read or engaged with stimulus material and then had to recall this material or repeat this behaviour for another individual. Initially, the experimenter trained individual A to perform a behaviour (e.g., how to open a puzzle box). While individual A performs the behaviour, individual B is introduced and watches A's behaviour. After that, the experimenter removes individual A while individual B preforms the behaviour for individual C. This process is repeated and continues through the chain till the last participant in the chain is reached. Bartlett's method permits evaluating which information types are copied with the greatest fidelity through the chain, which information is lost or added, and whether there are biases in the transmission of information (i.e., whether different types of information are more likely to be transmitted than others).

Because diffusion-chain designs mimic the process of leaning information through one another it has been used to study cultural transmission processes, that is how information is transmitted between non-genetically related individuals (see Mesoudi, 2007; Mesoudi & Whiten, 2008). Diffusion-chain studies have investigated cultural transmission in animals and humans, for example birds (Feher et al., 2009; Lefebvre, 1986), rats (Galef & Allen, 1995; Laland & Plotkin, 1990, 1993), chimpanzees (Menzel et al., 1972; Paquette, 1992; Sumita et al., 1985; Whiten et al. 2005), guppies (Brown & Laland, 2002; Reader & Laland, 2000), and

human children and adults (Bangerter, 2000; Bartlett, 1932; Flynn, 2008; Horner et al., 2006; Jagiello & Hills, 2018). In humans, research has investigated biases in social transmission depending on the type of information transmitted or the source of the information. For example, Kirby and colleagues (2008) investigated the cumulative cultural evolution of language through diffusion-chain and found languages transmitted culturally to be easier to transmit and learn. This explains how languages transmit and evolve over different generations. Mesoudi and colleagues (2006) examined how gossip about third-party social relationships was transmitted through diffusion chains and found that social information was transmitted with greater accuracy and quantity than non-social information. Similarly, McGuigan and Cubillo (2013) utilised this method to investigate the transmission of social and non-social information among children and found that children transmitted social information more than non-social information. Jiménez and Mesoudi (2020) tested whether information based on prestigious sources was transmitted more than those by non-prestigious sources. Participants read two conflicting arguments online, for or against replacing schools' textbooks with computer tablets. Depending on condition, the sources of these arguments differed in their level of prestige and relevance to this debate. The authors did not discover a reliable impact of prestige and relevance of information source on how well participants recalled and transmitted the information they received.

Moral information might be particularly privileged in social transmission. Ayala (2010) defined moral information as value judgments about others' behaviour, that is social information. People might know what is moral or immoral in their social group through transmission of moral information, and moral norms may appear or disappear through cultural transmission (McNamara et al., 2019). Stubbersfield et al. (2019) utilized a diffusion-chain design to examine the transmission of morally good and morally bad content (Studies 1, 2) and used physiological arousal measurement to investigate the role of emotions in moral

information transmission (Study 2). The authors found that participants transmitted morally good content with higher fidelity that morally bad and neutral (non-moral) content. Physiological arousal had a negative impact on transmission; more arousing material was transmitted less faithfully.

Stubbersfield et al.'s (2019) research is surprising, especially given the findings of studies that investigated spread of information and social transmission of information online, through social media. Many studies investigating online content in different domains showed that content high in emotional arousal was more likely to be shared or "liked" online (Berger & Milkman, 2012; Fan et al., 2014; Hansen et al., 2011; Kramer et al., 2014; Stieglitz & Dang-Xuan, 2013). For example, Berger and Milkman (2010) analyzed over 7,500 articles from the New York Times website to find the correlation between article content and spread. Each article was coded as containing practical information, inspiring awe, or evoking surprise. They found that likelihood of sharing was not related to a specific topic area, but content containing awe was more likely to spread. Berger (2011) manipulated participants' emotional arousal and emotional valence by having them watch film clips in the experimental condition and neutral content in the control condition. Participants were then asked how likely they were to share articles online. Berger (2011) found that emotion induction impacted sharing; arousal helped to spread and share content to attract people online.

Brady and colleagues (2017) utilized 563,312 tweets on Twitter on three highly contentious and morally-relevant issues: gun control, same-sex marriage, and climate change. They coded morality- and emotion-language in each tweet. They counted each retweet as one chain link in the diffusion of information on Twitter and examined the impact of natural shaped social networks and particular message properties on diffusion online. Their results showed that emotion plays a vital role in moral content diffusion in social networks. Brady et al. (2017) found what increased the spread of the messages was the presence of moral and

emotional words, where each additional word contributed 20% to its spread. In the study of gun control, the retweet rate by adding a single moral-emotional word increased by 19%, same-sex marriage by 17%, and climate change by 24%. While in all these content domains, negative moral-emotional language increased retweets, the low arousal emotion sadness was related to a decrease in social transmission.

In their motivation, attention, and design (MAD) model Brady et al. (2020) particularly focus on the psychological underpinnings of social contagion online and why content, particularly political and moral discourse, spreads. The model assumes that people's motives to share moral and emotional content are based on group identity, and this content attracts people's attention. Additionally, moral and emotional information attracts people's attention more than any other content online. For example, in a study using the attentional blink paradigm, Brady et al. (2020) measured the individual words that capture attention in retweets of political messages. Their research showed that moral and emotional content captured participants' visual attention, and this was related to increased retweets during political discourse on Twitter.

Another surprising finding of Stubbersfield et al.'s (2019) research was that morally good and content was transmitted with higher fidelity in their diffusion chain study. This contrasts with findings showing negativity bias in the transmission of (moral) content. People prefer negatively-valenced to positively-valenced information (Baumeister et al., 2001) and are more likely to share negative news with others (Godes et al. 2005). The higher survival of negative compared to positive information in transmission might be because this type of information protects people from potential dangers (Baumeister et al., 2001). Studies on how rumours spread indeed show evidence of this negativity bias in social transmission. Walker and Blaine (1991) planted comparable dread and wish rumours (predicting unpleasant or pleasant consequences) in college students. They showed that the dread rumour transmitted

among students more easily than the wish rumour. Students were also more likely to indicate having heard a dread rumour one week later than the wish rumour. Bebbington et al. (2017) used diffusion chains to investigated the social transmission of negatively-valenced compared to positively-valenced information. Participants transmitted three types of stories: unambiguously positive or negative stories and ambiguous stories that participants could interpret as positive or negative. The first participants read the story and then wrote a summary for the next participant in the chain, etc. The negatively-valenced information exhibited enhanced survival across the chains than positively-valenced information. That is, there was a general negativity-bias in social information transmission.

5.1.3 The Present Research

The present study had two main goals. First, I wanted to test the reasoned persuasion link as proposed in Haidt's (2001) social-intuitionist model, particularly (1) whether others' (moral) arguments influenced recipients' own moral arguments and emotions (used as proxies for "moral intuitions") and (2) whether participants' own moral intuitions affected their moral judgments in a harm or decency moral dilemma situation. While not a lot of research exists that investigated the reasoned persuasion link directly, the limited research allowed me to make some predictions.

The harm moral dilemma I used presents a conflict between the two moral norms of not harming another person on the one and respecting others' (property) rights on the other hand. Thus, participants should conceptualize the dilemma in these terms, and statements contained in participants' summaries of the articles should mainly concern harm and justice arguments. If conceptualized as intended, the decency dilemma should present a conflict produced by an action that provokes strong negative emotions because it violates decency standards but that is in itself harmless. Thus, decency and harm arguments should be most common in people's summaries of the decency dilemma.

Moral violations and moral conflicts provoke strong (negative) emotions (Malti & Ongley, 2014), particularly anger and sadness in observes of moral transgressions related to harm and justice violations (Gummerum et al., 2020; Lopez-Perez et al., 2022). Therefore, I expected that (summaries of) the harm dilemma would be associated with negative emotions. As discussed above, one key feature of the decency dilemma are the negative emotional reactions it provokes (Haidt et al., 2013). Therefore, I expected that (summaries of) the harm dilemma would also be associated with negative emotional reactions.

In their study, Kelly et al. (2017) found that the rational justifications were more powerful than the emotional arguments in increasing participants' conformity with others' moral opinions. This might imply that others' moral reasoning influences individuals' moral judgments through "cognitive" or "rational" moral intuitions, not through emotions (as proposed by Haidt, 2001). I explored these links in my study through mediation analysis.

The second main goal of this research was to analyse social transmission of moral information through diffusion chains. My design was most similar to Stubbersfield et al.'s (2019) diffusion-chain study. These authors found that participants transmitted morally good content with higher fidelity that morally bad and neutral (non-moral) content. As discussed above, I presented participants with harm and decency moral dilemma situations; the key characteristic of a moral dilemma is that any actions the protagonists of the story take are not unequivocally morally good or bad. However, certain arguments might be associated with positive or genitive emotions. Following Stubbersfield et al. (2019), arguments associated with positive emotions should be more likely to be transmitted than those associated with negative emotions or emotionally neutral arguments.

On the other hand, particularly studies on online information transmission has shown a negativity bias, with participants being more likely to share negatively-valenced than positively-valenced information. Indeed, Bebbington et al. (2017) showed that information

that was emotionally ambiguous was more likely to be interpreted as negative when moving through the diffusion chain. If this negativity bias exists for moral information, I would expect negatively-valenced or ambiguous information to be more likely to be transmitted.

5.2 Method

5.2.1 Participants

Study participants were recruited via Warwick University Psychology Department Research Experience Pool. This pool contains first-year psychology students who participate in studies for course credit. The final sample contained 150 participants (M_{Age} = 18.71 years, SD = 1.11, 125 females, 22 males).

5.2.2 Design

The study employed a diffusion-chain design with 30 chains of 5 chain positions/participants. Participants in the first chain position (N = 30) were randomly assigned to read one of the two original articles (see Appendix C) and were asked to send a summary of the article to the anonymous participant in chain position 2. Fifteen participants in chain position 1 were randomly assigned to the morality condition and read an article about the legal fight between the South African government and pharmaceutical companies concerning the production of generic HIV drugs. Fifteen participants in chain position 1 were randomly assigned to the decency condition and read an article about the Russian protest artist Petr Pavlensky who nailed his scrotum to the Red Square in Moscow in protest against the Russian government and political environment. Participants in chain positions 2 to 5 (N = 120, 60 per condition), after having received a summary of the article from the person in the previous chain position, were asked write their own summary, which was then passed to the person in the next chain position. All participants were asked to write a summary of at least 100 words.

5.2.3 Materials

5.2.3.1 Articles. Participants in chain position 1 were randomly presented with one of two newspaper articles. Both articles were taken from the UK newspaper *the guardian* and were presented in Times New Roman 12pt font, in black-and-while, without accompanying pictures or hyperlinks. The article titles were presented in Times New Roman 24pt bold font. Both articles had approximately the same length (morality article: 1,246 words; decency article: 1,284 words). The morality article reported on the lawsuit of the South African government by pharmaceutical companies about the government's import and production of generic HIV medication to fight the AIDS epidemic in the country. This case has been described as a real-life Heinz-Dilemma (Molina, 2015), as just as in Kohlberg's most famous moral dilemmas the moral norms of "saving lives" and "protecting (intellectual) property" conflict. The decency article described the actions of protest artist Petr Pavlensky who uses extreme means (e.g., sewing his lips closed, nailing his scrotum to the Red Square in winter) to protest again the Russian government and police state. The actions described in the decency article are akin to the decency dilemmas used by Haidt et al. (1993) in that the actions by Pavlensky feel disgusting and uncomfortable, but they are performed for the ultimate goal of protesting the lack of democracy. The full article stimuli can be found in Appendix C.

5.2.3.2 Moral Judgment. After reading one of the original articles (participants in chain position 1), a summary of one of the articles (participants in chain positions 2-5) and producing their own summary, participants indicated their moral judgments of the South African government and the pharmaceutical companies (morality condition) or the artist Pavlensky and the Russian state (decency condition). Participants had to indicate how much they approve of the actions of these main protagonists on a 7-point scale from 1 (strongly disapprove) to 7 (strongly approve).

5.2.3.3 Emotion Ratings. Participants were asked to rate how reading the article made them feel by rating 10 emotions (angry, calm, scared, happy, fearful, peaceful, irritated, sad, joyful, upset) on a five-point scale from 1 (not at all) to 5 (extremely). In the morality condition, Cronbach's α were .83 (angry-irritated scale), .74 (calm-peaceful scales), .83 (scared-fearful scales), .76 (happy-joyful scales), and .83 (sad-upset scales). In the decency condition Cronbach's α were .54 (angry-irritated scales), .66 (calm-peaceful scales), .79 (scared-fearful scales), .66 (happy-joyful scales), and .79 (sad-upset scales). In both conditions, scores across the two emotions were averaged to create the variables angry, calm, scared, happy, and sad.

5.2.4 Procedure

The study received ethical approval from the Psychology Department Research Ethics Committee at the University of Warwick (PGR_20-21/5). The study was run on Qualtrics. At the beginning of the study, participants received a brief/information sheet and indicated their willingness to participate by providing informed consent (by clicking a box).

After consenting to take part in the study, participants were asked to create a personal ID code and to state their gender and date of birth. Participants were sent a link to the online study and were randomly allocated either to the morality or decency condition. Participants in the first chain position were then presented with one of the original articles and were asked to write a summary of the article for the next person in the chain. Participants in chain positions 2-5 received a summary of the person in the preceding chain position and were asked to write their own summary. Participants were instructed to write a summary of at least 100 words.

After reading the article/summary and producing their own summary, participants were asked for their moral judgment of the main protagonists of the articles. They were then asked for their emotion ratings. Afterwards, participants were shown a two-minutes clip from the cartoon The Junglebook to counteract any lingering negative emotions associated

with reading the article/summaries. At the end of the study, participants were debriefed in written form and thanked for their participation.

5.2.5 Coding

All summaries produced by participants were coded according to the descriptions of the five moral foundations in Haidt and Graham (2005). The five coding categories were:

Harm: Statements that refer to the physical or emotional suffering of others; actions that prevent or relieve such suffering, virtues, such as kindness and compassion, and vices such as cruelty and aggression (e.g., "This is causing an unnecessary number of deaths"; "wrapped himself naked in the barbed wire.").

Fairness/justice: Statements that refer to the elaboration and valuation of (individual) rights and equality, virtues such as fairness, honesty, and justice, and vices, such dishonesty, egoism, and injustice (e.g., "right to peaceful protest"; "drugs should be accessible to all.")

Ingroup: Statements referring to people valuing their ingroups (e.g., family, nation), sacrifices people make for their ingroup, and distrust of outgroups. Statements in this category also refer to virtues, such as loyalty, patriotism, and heroism (e.g., "artists should stay in their place.")

Authority: Statements referring to deference, respect, awe, and admiration towards superiors in hierarchical communities and virtues, such as good leadership, respect, duty, and obedience. Statements in this category can also refer to instances where superiors do exploit their position (e.g., by being despotic or exploitative) and where subordinates question superiors' bad leadership (e.g., "the government is over-policing the people of the country"; "they rely on the generosity of overseas governments and pharmaceutical companies.")

Decency/purity: Statements referring to bodily and religious activities that are seen as disgusting and contamination-related, virtues, such as chastity, spirituality, and piousness, and vices related to the carnal passions (e.g., "The extreme and shocking nature of his artistic protesting"; "expressing himself through his project-themed self-harm.")

I used an event-coding technique, meaning that every statement that fit with one of the five coding categories was coded. Two independent coders coded 25 randomly-selected summaries. Inter-rater reliability was good, Cohen's $\kappa = .77$. Disagreeing codes were discussed and resolved between the raters. After the reliability analysis, one rater coded the remaining summaries.

5.3 Results

5.3.1 Descriptive Statistics

Table 5.1 shows the mean moral judgments concerning the main protagonists, participants' mean emotion ratings after reading the article or summary of the article, and the mean number of harm, justice, ingroup, authority, and decency statements coded from participants' summaries.

In the morality condition, participants were more likely to approve of the actions of the South African government than the pharmaceutical companies. However, in absolute terms participants, on average, neither agreed nor disagreed with the actions of the South African government and tended to disagree with the actions of the pharmaceutical companies. This indicates that participants might have regarded the scenario as a moral dilemma as they neither fully agreed nor fully disagreed with the actions of the main protagonists.

Participants were most likely to report feelings of anger and sadness when reading the morality summary/article. Anger at injustice and sadness for victims of harm are typical emotions reported in instances of these moral violations (Gummerum et al., 2022; Lopez-

Perez et al., 2022). Participants' summaries were most likely to reference harm and justice, but statements referring to authority were used as well. Overall, these descriptive statistics indicate that participants interpreted the moral scenario as a moral dilemma that included violations of harm and justice concerns which are associated with negative emotions, such as anger and sadness.

Concerning the decency conditions, on average, participants' moral judgments regarding the Russian artist were slightly more approving than their moral judgments of the Russian state. In absolute terms, participants' slightly disapproved or neither approve nor disapprove of the actions of the main protagonists. Again, this might indicate that participants conceptualize the situation as a moral dilemma where neither protagonist is clearly morally right or wrong.

Participants mainly reported negative emotions of feeling sad, scared, and angry after reading the summary/article. Positive emotions, such as feeling calm or happy, were reported less frequently. In their summaries, participants mainly referred to justice, harm, and authority issues. Ingroup statements were barely used, and decency issues were also referred to less. This is interesting, as we conceptualized the situation as a decency dilemma. However, participants seemed to regard the actions of Russian artist as more akin to (self-)harm and violations of the authority of the state than as violations of decency.

Table 5.1

Means and Standard deviations of Main Study Variables by Condition

	Morality condition		Decency condition	
	M	*SD*	*M*	*SD*
Moral judgment – South African government	4.04	1.77		

Moral judgment – pharmaceutical companies	2.59	1.48		
Moral judgment – Russian artist			3.65	1.43
Moral judgment – Russian state			3.11	1.35
Angry	3.05	1.01	1.86	.78
Calm	1.53	.74	1.20	.68
Scared	2.09	1.05	2.07	.91
Happy	1.24	.50	1.15	.39
Sad	3.02	1.06	2.21	.98
Harm codes	2.53	1.55	2.49	1.38
Justice codes	3.39	1.97	2.57	1.53
Ingroup codes	.09	.33	.07	.25
Authority codes	1.64	1.17	2.15	1.65
Decency codes	.03	.16	1.01	1.14

Table 5.2 shows the correlations between the study variables in the morality condition. Importantly, the two moral judgment variables did not significantly correlate with each other, indicating that they might capture different moral considerations. Participants' moral judgment of the South African government correlated significantly positively with ingroup codes: The more ingroup codes participants used in their summaries, the more they approved of the actions of the South African government. Moral judgment of the pharmaceutical companies correlated significantly and negatively with anger. The more anger participants reported, the less they approved of the actions of the pharmaceutical companies.

The three negative emotions, feeling angry, scared, and sad, were highly positively correlated as were the two positive emotions, feeling calm and happy. Therefore, we created

the variables negative emotions (mean of angry, scared, sad) and positive emotions (mean of calm and happy).

As shown in Table 5.3, in the decency condition the two moral judgment variables did not significantly correlate with each other. Participants' moral judgment regarding the Russian artist correlated significantly and positively with justice, authority, and decency codes. The more of these statements were used, the more participants approved of the actions of the Russian artist. Moral judgments regarding the actions of the Russian state correlated

Table 5.2

Correlations between Study Variables in the Morality Condition

	1. Moral judgment – South African government	2. Moral judgment – pharmaceutical companies	3. Angry	4. Calm	5. Scared	6. Happy	7. Sad	8. Harm codes	9. Justice codes	10. Ingroup codes	11. Authority codes	12. Decency codes
1. Moral judgment – South African government	--											
2. Moral judgment – pharmaceutical companies	.18	--										
3. Angry	-.10	-.27**	--									
4. Calm	-.09	.09	-.15	--								

5. Scared	.01	.08	.62**	.01	--							
6. Happy	.14	.23	.01	.60**	.19	--						
7. Sad	-.02	-.15	.69**	-.22	.63**	-.09	--					
8. Harm codes	-.14	-.17	.19	-.12	-.00	-.23*	.17	--				
9. Justice codes	.10	.23*	.23*	-.03	.35**	.20	.14	.11	--			
10. Ingroup codes	.31**	-.03	-.11	-.12	-.00	-.14	-.01	.27*	.09	--		
11. Authority codes	-.01	-.12	.10	-.02	-.12	.03	.11	.28*	-.27*	-.19	--	
12. Decency codes	-.05	-.07	.16	-.12	.15	-.08	.15	.21	.01	.45**	.05	--

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

Table 5.3

Correlations between Study Variables in the Decency Condition

	1. Moral judgment	2. Moral judgment	3. Angry	4. Calm	5. Scared	6. Happy	7. Sad	8. Harm codes	9. Justice codes	10. Ingroup codes	11. Authority codes	12. Decency codes
	–	–										

	Russian artist	Russian state									
1. Moral judgment – Russian artist	--										
2. Moral judgment – Russian state	-.01	--									
3. Angry	.09	-.21	--								
4. Calm	.14	-.10	.04	--							
5. Scared	.07	-.09	.48**	.02	--						
6. Happy	.07	.08	.01	.37**	.11	--					
7. Sad	.20	-.24*	.56**	.00	.65**	.07	--				
8. Harm codes	-.04	-.01	.10	.30**	.08	.13	.13	--			
9. Justice codes	.26*	-.19	.07	-.07	.06	-.06	.09	-.29*	--		
10. Ingroup codes	-.01	.06	.23*	-.08	.04	-.03	.08	-.09	.15	--	
11. Authority codes	.28*	-.13	.13	.07	.04	-.05	.01	.13	.14	.21	--

| 12. Decency codes | .28* | -.11 | .00 | .26* | -.02 | -.06 | .04 | -.07 | -.03 | .18 | .06 | -- |

* *p* < .05, ****p* < .01

significantly and negatively with feelings of sadness: The more sadness was reported, the less participants approved of the actions of the Russian state. Similar to the morality condition, the negative emotions anger, sadness, and feeling scared significantly and positively correlated, as did the positive emotions calm and happiness. Therefore, we created the variables negative emotions (mean of angry, scared, sad) and positive emotions (mean of calm, happy).

5.3.2 Testing the Reasoned Persuasion Link

I first investigated, through correlation analysis, whether the arguments participants received in the summaries of the previous member of the chain were associated with the number of arguments they produced in their own summaries. This analysis was only conducted for chain positions 2-5, because the first member of the chain did not receive a summary from another member.

In the morality condition, number of arguments participants produced in their own summaries strongly correlated with those they received from the previous member of the chain (harm: $r(59) = .66$, $p < .001$; justice: $r(59) = .67$, $p < .001$; ingroup: $r(59) = .77$, $p < .001$; authority: $r(59) = .36$, $p = .004$). Because the number of decency codes produced was very small, no analysis was conducted for decency codes. Similarly, in the decency condition, number of arguments produced in participants' own summaries strongly correlated with the number or arguments they received from the previous chain member (harm: $r(59) = .52$, $p < .001$; justice: $r(59) = .65$, $p < .001$; ingroup: $r(59) = .55$, $p < .001$; authority: $r(59) = .56$, $p < .001$; decency: $r(59) = .48$, $p < .001$)

An overview of the conceptual model for testing the reasoned persuasion link as well as the regression paths analyzed is shown in Figure 5.1. Specifically, it was investigated whether the Arguments Received from the summary of the person in the previous chain

position affect Moral Judgment, either directly or mediated through the Arguments Produced

by participants themselves and/or negative emotions. A mediation analysis was run in

PROCESS, version 4 (Hayes, 2021) using a bias-corrected bootstrap approach (1000

bootstraps) to calculate 95% confidence intervals (CI). If the 95% CI limits do not include

zero, the effect is interpreted as being significant. Table 5.4 shows the results for these

mediation analyses for the morality condition. Decency arguments were not analysed, as they

were hardly produced.

Figure 5.1

Conceptual Mediation Model Used to Test the Reasoned Persuasion Link
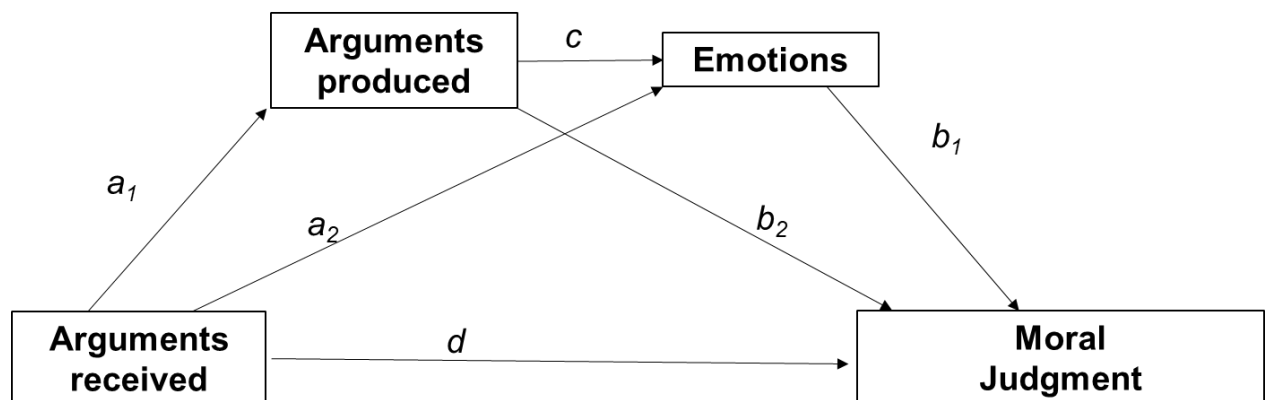
Table 5.4

Results of Mediation Analyses in the Morality Condition

	Moral Judgment: South African government		Moral Judgment: Pharmaceutical companies	
	B, SE, p	*95% CI*	*B, SE, p*	*95% CI*

Harm arguments				
a_1	.66, .10, .00	.47, .87	.66, .10, .00	.47, .87
a_2	.17, .10, .09	-.03, .36	.17, .10, .09	-.03, .36
b_1	-.24, .27, .36	-.78, .29	-.21, .23, .37	-.68, .26
b_2	.08, .19, .67	-.30, .47	-.14, .17, .40	-.48, .19
c	.02, .10, .80	-.17, .22	.02, .10, .80	-.17, .22
d	-.23, .20, .25	-.63, .17	.06, .18, .73	-.29, .41
Justice arguments				
a_1	.71, .10, .00	.50, .91	.71, .10, .00	.50, .91
a_2	-.08, .08, .35	-.24, .09	-.08, .08, .35	-.24, .09
b_1	-.43, .26, .11	-.95, .09	-.41, .21, .06	-.84, .02
b_2	.22, .16, .16	-.09, .53	.38, .13, .01	.12, .63
c	.15, .08, .06	-.005, .31	.15, .08, .06	-.005, .31
d	-.17, .16, .30	-.49, .15	-.17, .13, .22	-.43, .10
Ingroup arguments				
a_1	.98, .11, .00	.77, 1.19	.98, .11, .00	.77, 1.19
a_2	-.40, .68, .55	-1.76, .95	-.40, .68, .55	-1.76, .95
b_1	-.36, .24, .14	-.84, .12	-.28, .21, .20	-.71, .15
b_2	2.18, .96, .03	.25, 4.10	1.49, .86, .09	-.23, 3.21
c	.30, .53, .58	-.77, 1.36	.30, .53, .58	-.77, 1.36
d	-.80, 1.22, .52	-3.25, 1.65	-2.70, 1.09, .02	-4.88, -.51
Authority arguments				
a_1	.34, .12, .004	.11, .57	.34, .12, .004	.11, .57
a_2	.12, .11, .28	-.10, .34	.12, .11, .28	-.10, .34

b_1	-.30, .26, .25	-.81, .21	-.25, .23, .27	-.70, .20
b_2	.04, .22, .88	-.41, .48	-.13, .20, .52	-.52, .23
c	-.05, .12, .67	-.28, .18	-.05, .12, .67	-.28, .18
d	-.23, .21, .28	-.66, .19	.07, .19, .72	-.31, .44

Table 5.4 indicates that for moral judgments regarding the South African government, the predicted mediation effect only emerged for ingroup arguments ($\beta = 2.14$, SE = .69, 95%CI [.17, 3.29]). Specifically, ingroup arguments received from the previous chain member significantly predicted ingroup arguments produced by participants themselves. These, in turn, predicted participants' moral judgments regarding the South African government: The more ingroup arguments participants produced, the more they approved of the actions of the South African government. These effects are also shown in Figure 5.2.

Figure 5.2

Mediation Analysis Predicting Moral Judgment Regarding the South African Government: Ingroup Arguments Received from Summary of Person in Previous Chain Position Positively Predicted Ingroup Arguments Produced in Own Summary, Which, In Turn, Positively Predicted Participants Moral Judgment of the South African Government. Significant Paths are Highlighted in Bold (* p < .05, **p < .01).
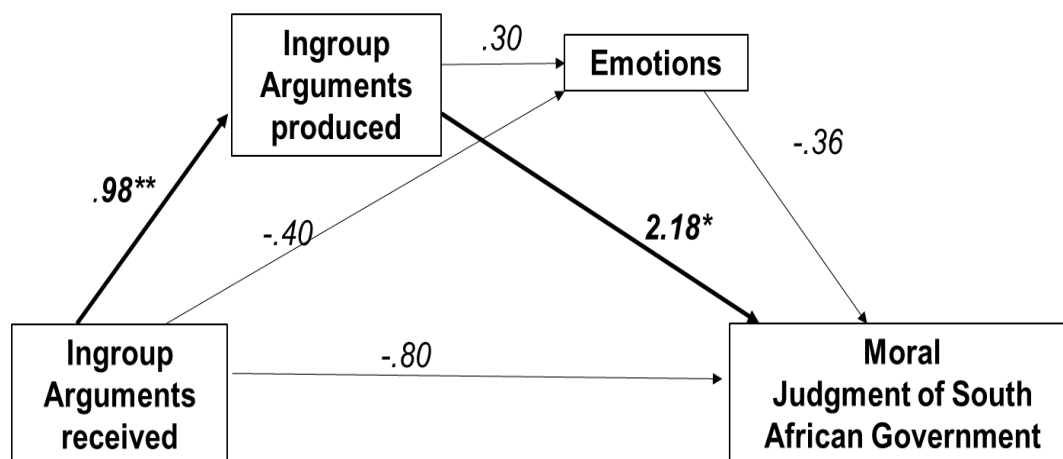
Concerning moral judgments regarding the pharmaceutical companies, a mediation effect emerged for justice arguments (β = .27 SE = .14, 95%CI [.003, .55]). Received justice arguments significantly predicted produced justice arguments, which in turn significantly negatively predicted approval ratings of the pharmaceutical companies (Table 5.4, Figure 5.3). Please note that the paths of full mediation model including the two mediators were marginally significant: Received justice arguments significantly predicted produced justice arguments. Produced justice arguments marginally predicted negative emotions, which, in turn, marginally predicted moral judgment regarding the pharmaceutical companies (Figure 5.3).

Furthermore, Table 5.4 and Figure 5.4 show a significant direct effect of received ingroup arguments on moral judgments regarding the pharmaceutical companies: The more ingroup arguments received, the more participants disapproved of the actions of the pharmaceutical companies.

Figure 5.3

Mediation Analysis Predicting Moral Judgment of the Pharmaceutical Companies: Justice Arguments Received from Summary of Person in Previous Chain Position Positively Predicted Justice Arguments Produced in Own Summary, Which, In Turn, Positively Predicted Participants Moral Judgment of the Pharmaceutical Companies. Significant Paths are Highlighted in Bold (†p < .10, * p < .05, **p < .01).
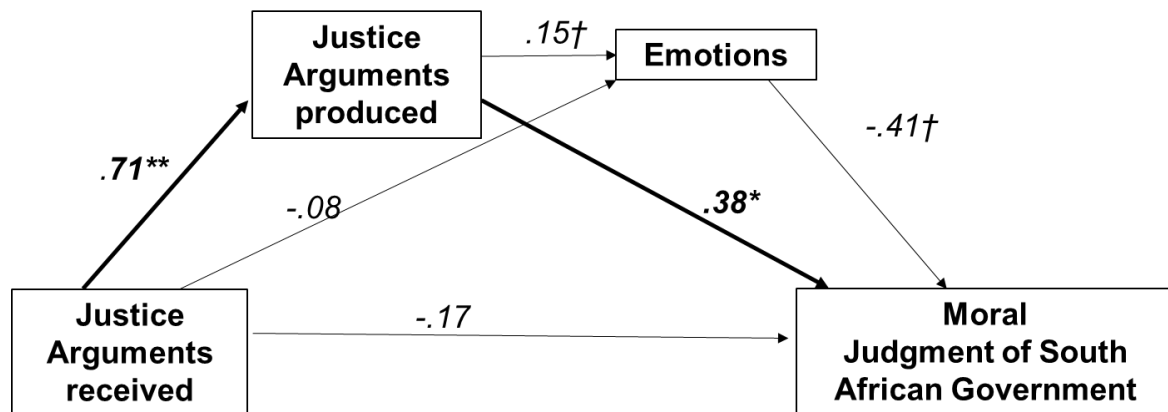
Figure 5.4

Direct Effect: Ingroup Arguments Received From in Previous Chain Position Negatively Predict Moral Judgment of Pharmaceutical Companies (*p < .05, **p < .01).

Ingroup Arguments produced

Emotions

.30

−.28

.98**

−.40

1.49

Ingroup Arguments received

−2.70*

Moral Judgment of Pharmaceutical Companies
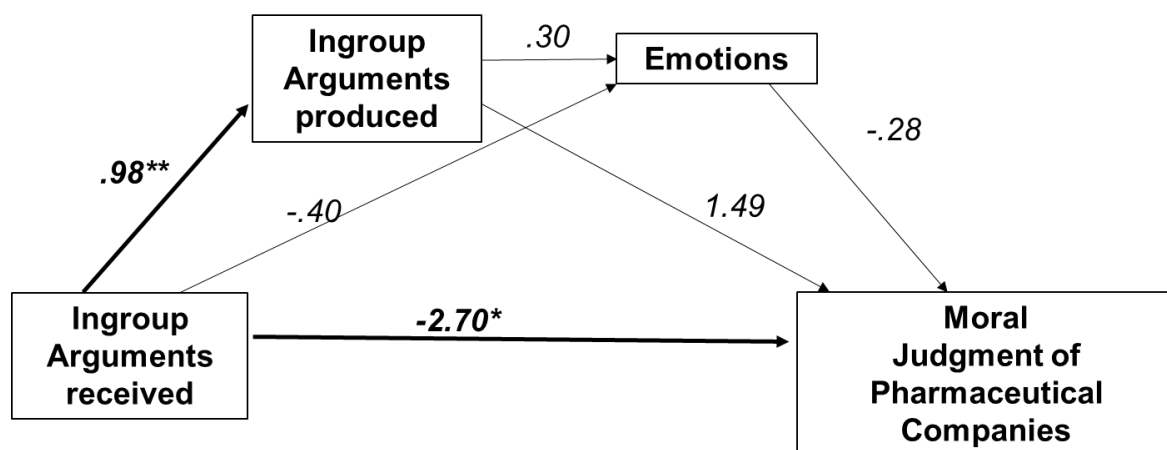
Table 5.5 shows the results of the mediation analyses for the decency condition (note that ingroup arguments were not analysed because they were hardly used). While arguments received significantly predicted arguments produced across all argument types, none of the mediation paths reached statistical significance.

Table 5.5

Results of Mediation Analyses in the Decency Condition

	Moral Judgment: Russian artist		Moral Judgment: Russian state	
	B, SE, p	95% *CI*	*B, SE, p*	95% *CI*
Harm arguments				
a_1	.54, .12, .00	.31, .77	.54, .12, .00	.31, .77
a_2	-.07, .09, .46	-.24, .11	-.07, .09, .46	-.24, .11
b_1	.26, .25, .31	-.25, .76	-.40, .24, .10	-.87, .07
b_2	.05, .16, .74	-.27, .38	.21, .15, .16	-.09, .52
c	.12, .08, .16	-.05, .29	.12, .08, .16	-.05, .29

d	-.17, .17, .30	-.50, .16	-.16, .16, .31	-.47, .15
Justice arguments				
a_1	.61, .09, .00	.42, .79	.61, .09, .00	.42, .79
a_2	-.03, .09, 72	-.20, .14	-.03, .09, .72	-.20, .14
b_1	.28, .24, .25	-.21, .77	-.32, .23, .17	-.78, .14
b_2	-.04, .17, .81	-.38, .30	-.17, .16, .28	-.49, .15
c	.04, .09, .63	-.14, .23	.04, .09, .63	-.14, .23
d	.24, .16, .14	-.08, .55	-.06, .15, .69	-.36, .24
Authority arguments				
a_1	.51, .10, .00	.31, .71	.51, .10, .00	.31, .71
a_2	.05, .07, .52	-.10, .19	.05, .07, .52	-.10, .19
b_1	.21, .24, .38	-.27, .68	-.35, .24, .15	-.82, .13
b_2	.15, .14, .28	-.13, .44	-.11, .14, .46	-.39, .18
c	.01, .08, .93	-.15, .16	.00, .08, .93	-.15, .16
d	.17, .13, .20	-.09, .43	.10, .13, .43	-.16, .36
Decency arguments				
a_1	.52, .12, .00	.27, .77	.52, .12, .00	.27, .77
a_2	.15, .10, .14	-.05, .36	.15, .10, .14	-.05, .36
b_1	.29, .25, .24	-.20, .79	-.32, .24, .19	-.80, .16
b_2	.32, .18, .08	-.04, .68	-.03, .18, .86	-.38, .32
c	-.08, .10, .41	-.27, .11	-.08, .10, .41	-.27, .11
d	-.06, .20, .76	-.46, .34	-.09, .19, .86	-.47, .30

5.3.3 Social Transmission

I investigated whether participants' negative and positive emotions changed through the social transmission across chains (see Figure 5.5). Following Bebbington et al. (2017) I conducted linear mixed-effects models with chain position, harm, justice, ingroup, authority, and decency arguments as fixed effects and subject ID as random intercept. As shown in Table 5.6, in the morality condition negative emotions were significantly and positively predicted by the use of justice and decency arguments. The more participants used these arguments, the more negative emotions they reported. Chain position, ingroup, and authority codes marginally negatively predicted negative emotions. With increasing chain position, reported intensity of negative emotions decreased. The more ingroup and authority arguments participants used, the less intense their negative emotions. Harm arguments marginally predicted negative emotion ratings: The more harm codes participants produced, the higher their negative emotion ratings. Table 5.6 also shows that positive emotions were not significantly predicted by any of the predictors.

Figure 5.5

Mean Negative and Positive Emotion Ratings across Chain Positions in the (a) Morality Condition and (b) Decency Condition. Error Bars Display Standard Errors

(a)
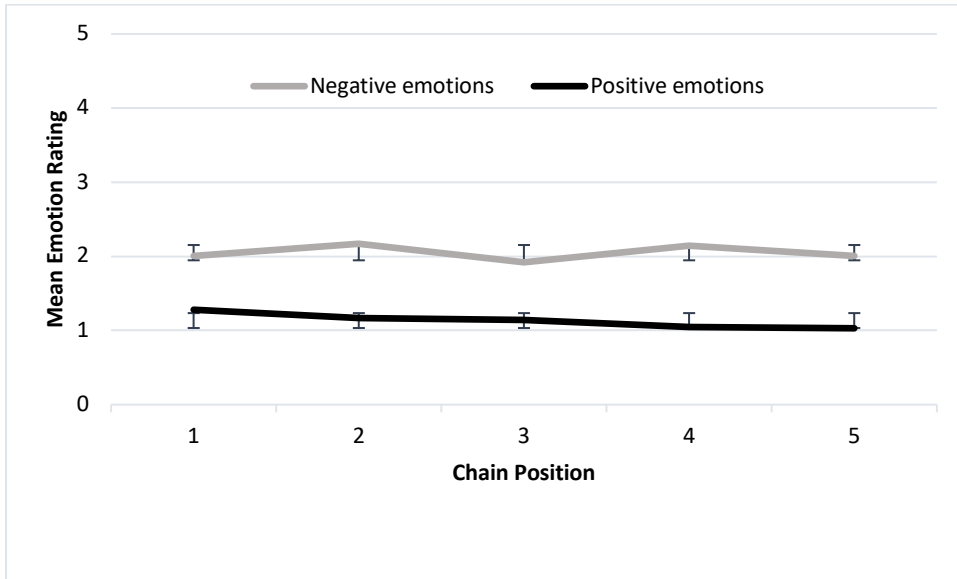
(b)
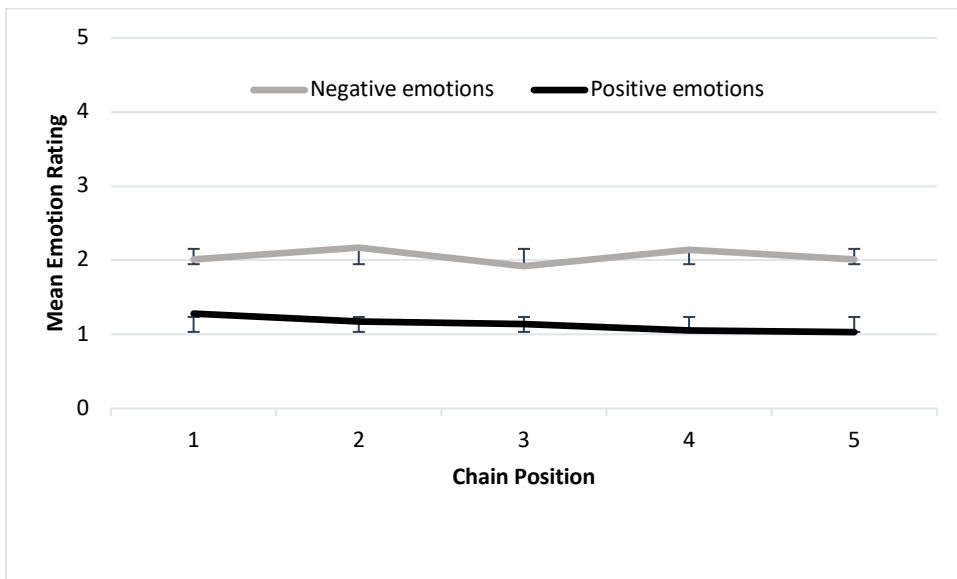
Table 5.6

Estimates (Standard Errors) of Fixed Effects and Goodness-of-Fit Statistics of the Participants' Negative and Positive Emotions in the Morality Condition

	Negative emotions	Positive emotions

Intercept	2.64 (.32)**	1.58 (.21)**
Chain position (increasing)	-.13 (.07)†	-.02 (.04)
Harm codes	.12 (.06)†	-.05 (.04)
Justice codes	.09 (.04)*	.004 (.03)
Ingroup codes	-.69 (.35)†	-.15 (.23)
Authority codes	-.09 (.04)†	-.005 (.03)
Decency codes	1.67 (.71)*	-.11 (.47)
AIC	172.17	109.93
2-Log Likelihood	-.77.08	-45.93
Number of observations	75	75
Variance: ID	.73	.32

† $p < .10$; * $p < .05$; **$p < .001$

Table 5.7 displays the results of the analyses for the decency condition. None of the predictors was significantly associated with negative emotions. For positive emotions, the more harm arguments participants used, the less likely they were to use positive emotions. The associations between positive emotions and ingroup and decency codes were marginally significant: The more ingroup arguments and the less decency arguments participants used, the stronger (marginally) their positive emotions. Importantly, chain position was not associated with either positive nor negative emotions (see Figure 5.2.b).

Table 5.7

Estimates (Standard Errors) of Fixed Effects and Goodness-of-Fit Statistics of the

Participants' Negative and Positive Emotions in the Decency Condition

	Negative emotions	Positive emotions
Intercept	2.09 (1.30)	1.72 (.68)*
Chain position (increasing)	-.32 (.37)	-.10 (.16)
Harm codes	-.28 (.57)	-1.14 (.51)*
Justice codes	-.49 (.91)	.44 (.51)
Ingroup codes	.05 (.06)	.43 (.24)†
Authority codes	.48 (.36)	-.13 (.34)
Decency codes	.36 (.39)	-.40 (.18)†
AIC	161.12	99.96
2-Log Likelihood	-.157.12	-95.96
Number of observations	75	75
Variance: ID	.30	.08

† $p < .10$; * $p < .05$; **$p < .001$

5.4 Discussion

This study had two main goals: First to empirically test the reasoned persuasion link in Haidt's (2001) social intuitionist model, namely whether others' moral reasons affect an individuals' moral intuitions and, in turn, their moral judgments. The second goal was to examine how moral information was transmitted through diffusion chains. I used a diffusion-chain design to answer these questions in a morality condition, where participants were presented and disseminated a moral dilemma, and a decency condition, where participants were presented and disseminated a decency dilemma. Participants in the first chain position had to summarize a newspaper article (containing either the moral or decency dilemma), and this summary was sent to the next person in the chain. The second person had to summarize

the information themselves, before it was sent to the third person in the chain, and so on. Summarizes were coded for moral arguments.

5.4.1 The Reasoned Persuasion Link

Regarding the first aim, I tested a mediation model that mirrored Haidt's (2001) reasoned persuasion link: I investigated whether the arguments produced by the previous person in the chain affected the current person's moral judgment of the story protagonists, either directly or mediated by the arguments the current person produced themselves and the emotions they felt when reading the summary. The arguments the current chain members produced themselves as well as their negative and positive emotions were conceptualized as the person's "moral intuitions" as per Haidt's model. Results showed that, overall, that the proposed mediation model, and consequently the reasoned persuasion link, was not a good model to describe moral judgments in the decency condition. However, in the morality condition, ingroup arguments and justice arguments served as mediators for moral judgments. In only one mediation models in the morality condition did negative emotions marginally mediate the link between arguments received, arguments produced and moral judgment.

Thus, overall, there is little evidence that emotions serve as mediators or as proxies for moral intuitions in this study. To my knowledge, there are only two other empirical studies that tested the reasoned persuasion link, and the findings of both of them are in line with my research that moral reasons, rather than emotions, are affecting others' moral judgments. For example, Gummerum et al. (2008) showed that in a prosocial dilemma group negotiation context (where norms of fairness conflicted with participants' selfish desires) those with higher moral reasoning skills were more influential in persuading others to follow their individual choice. Kelly et al. (2017) found that rational arguments were more influential than emotional ones in persuading others of one's moral opinion both when

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participants made moral judgments concerning a harm or decency scenario. The latter is particularly surprising, as a decency dilemma is usually defined as a situation that triggers strong moral emotions (particularly disgust) about an action that is in itself harmless (Haidt et al., 1993). Thus, in this situation, emotions should be particularly persuasive. However, neither Kelly et al.'s (2017) nor my findings can empirically support this.

These results pose the general questions of what "moral intuitions" actually are. In the current research, I conceptualized both participants' produced moral arguments and their negative and positive emotions as indicators of their moral intuitions. Haidt (2001, p. 818) defines moral intuitions as "the sudden appearance in consciousness of a moral judgment, including an affective valence (good-bad, like-dislike), without any conscious awareness of having gone through steps of searching, weighing evidence, or inferring a conclusion" and moral intuition is "a process akin to aesthetic judgment." Most subsequent research has subsequently operationalized moral intuitions as moral emotions, also based on Haidt et al.'s (1993) research on the role of disgust and moral dumbfounding. For example, Schnall and colleagues (2008; 2010) found that after being induced to the emotion of disgust people made more severe moral judgments than in a neutral mood, whereas the emotion of elevation made people engage in more prosocial actions. While such moral emotions might be influential in individual moral judgment, my research and those of others (e.g., Kelly et al., 2017) indicates that emotions might not be affected by others (moral) reasons in a social context, as suggested in the reasoned persuasion link. Indeed, Hannikainen and Rosas (2019) showed that making people reflect on a decency violation led to a reduced condemnation of the violation among UK participants. Potentially, engaging in moral reasoning makes people realize that the moral situation or violation does not warrant such a (strong) emotional

response. Alternatively, reflection could be seen as a means to "cool off" and regulate negative moral emotions (see Wang et al., 2011).

In sum, my research shows only limited support for the reasoned persuasion link of Haidt's (2001) social-intuitionist model and results indicate that it is moral arguments, not emotions, that mediate the link between others' reasons and an individual's moral judgment. The weak support for the reasoned persuasion link is in contrast to the generally good support I found for the social persuasion link in the previous chapters.

5.4.2 Social Transmission

The second goal of this research was to investigate whether and how moral information gets transmitted through the positions of the diffusion chain and whether some information gets transmitted with more fidelity than other. Previous research on the social transmission of moral information has found mixed results. Stubbersfield et al. (2019) used a diffusion-chain design, similar to the current study, and found that morally good content was transmitted with higher fidelity than morally neutral or bad content. Furthermore, more emotionally arousing material was transmitted less faithfully. In contrast, studies that looked at the spread of moral information online (particularly on social media) generally found that more emotionally-arousing information is more likely to be shared and "liked" and that negative (moral) information has a higher likelihood of being shared (e.g., Bebbington et al., 2017; Berger & Milkman, 2010; Brady et al., 2017, 2020). My research was designed to shed more light on these mixed findings.

Overall, I found little evidence that positive information gets shared more over the course of the diffusion chain, neither in the morality of decency condition. Negative emotions marginally changed by chain position in the morality condition. However, it is apparent that this effect indicated that negative emotions, on average, decreased with increasing chain

position, rather than increasing in intensity, as suggested by earlier research. Thus, my findings, unfortunately do not contribute to clarifying the mixed effects found in earlier research.

How can this divergence in findings be explained? It is possible that the stimulus materials used in my research were too long and complex to trigger a clear negative or positive emotional response. Stubbersfield et al. (2019) used short moral scenarios that had clear positive or negative moral content. Online (moral) information is by design concise and short, particularly on Twitter. I used two 1,200-word articles as the original source material for people to summarize in the first chain position. Furthermore, these articles were designed to mirror moral and decency dilemmas, that is situations where moral norms and points of views, and emotions conflict and there is not one unequivocal "morally right" choice. Indeed, my descriptive statistics indicate that participants did conceptualize the two scenarios as dilemmas, as none of the major protagonists of the stories were judged as unambiguously morally good or bad in participants' moral judgment. However, it should be noted that in a risk context Jagiello and Hills (2018) used newspaper articles that were similar in length and complexity to the ones used here, and those authors found the predicted effects of social transmission of negative information. Yet, future research might want to use source articles that use more explicitly positive and negative moral events and not moral dilemmas.

A second explanation for the findings is that participants were asked to summarize the original articles or previously received summaries but not their emotional reactions to those summaries. I subsequently coded the type of moral arguments produced in these summaries. Thus, participants were not instructed to submit any emotional information, and emotional information was also not coded in the summaries but inferred from participants' emotion ratings. As I have discussed above, moral reasoning might not be conducive to experiencing

moral emotions (Hannikainen & Rosas, 2019) but on the contrary might blunt participants'

emotional response. Future research might want to use more explicitly emotional scenarios.

Alternatively, future research could also measure participants' emotional reactions (e.g.,

arousal) when reading (elements) of the summaries that find out whether more arousing

content gets transmitted more faithfully, as suggested by Brady et al. (2020).

5.4.3 Limitations and Future Research

In addition to the limitations discussed above, there might be further drawback of this

study that could be addressed in future research. First, participants were UK university

students, and it is possible the content of the articles were not interesting to them. In their

MAD model Brady et al. (2020) assume that people are more likely to attend to (moral)

information that fits with their group identity. Thus, it would be useful to know how the

source material used in the diffusion chains is associated with people's moral identity and

motivations. This could be investigated in future research.

We modelled the sample size and chain length on previous relevant research with

diffusion chains. For example, Stubbersfield et al. (2019) used ten chains of four participants

(Study 1) and twelve chains of three participants (Study 2), Bebbington et al. (2017) used 48

four-person chains, and Jagiello and Hills (2018), who also seeded a complex and long

newspaper article, employed 14 chains of eight persons. This, the current study seems to be

comparable in sample size and chain length. However, quite a few of the obtained effects

were marginal, so future research might want to replicate the findings with a larger sample

size.

As alluded to above, the way emotions were measured in the current research might

have underestimated any effects of emotions on moral judgments. As discussed by Scherer

(2009), emotional experiences are appraised and processed on different levels, from

automatic-unconscious to reflective. Emotion ratings, as employed in the current study, are based on more conscious processes that summarize people's subjective feelings across appraisal dimension and levels of processing. Emotion measures that assess more automatic and unreflective emotional processes (e.g., physiological measures like skin conductance or heart rate measures) might be more indicative of emotions as moral intuitions, as proposed by Haidt (2001). Indeed, Stubbersfield et al.'s (2019) findings that more emotionally-arousing content is more likely to be transmitted fits this hypothesis. Thus, future research might use different ways of measuring participants' emotion experiences to specify the role of emotions in the reasoned persuasion link and social transmission.

5.4.4 Conclusion

The current study investigated how others' moral reasons affect and individual's own moral intuitions and moral judgment and how moral information gets morally transmitted between individuals. I found only limited evidence for social transmission and reasoned persuasion link. Where reasoned persuasion happened, it was moral arguments that played a stronger role as a mediator between the moral reasons received from others and a person's own moral judgment. While some moral interventions suggest that moral reasoning plays an important role in supporting and improving people's moral functioning, its exact role in the formation of individuals' moral judgments should be further assessed in future experimental research.

<div align="center">**Chapter 6**</div>

<div align="center">**General Discussion**</div>

The overall goal of this PhD research was to investigate how do people form opinions about moral topics and make moral judgments about whether an action is right or wrong. This is by no means the first time that this topic has been investigated. Indeed, examining what factors influence people's moral judgment has been a mainstay of philosophical and psychological theories and empirical research. The main and novel contribution of my research was to focus on social influences on people's moral judgment using experimental methods. A second focus of this research was to investigate any boundary conditions of the effect of social influences on individual moral judgment. In the following sections, I will discuss how the studies reported in this PhD contribute to answering my research questions. Learning theories of morality (e.g., Bandura) suggest that social factors, and observing others moral behaviour influences own moral behaviours and judgments of individuals. And, cognitive-structural theories (e.g., Piaget and Kohlberg) confirm the importance of cognitive and social factors of other impacts on individuals judgments. the social-intuitionist approach (e.g., Haidt) is one of discussed theories, In this approach, intuition leads to judgement, which then results in reasoning. Based on previous theoretical perspectives mentioned, the best for understanding conformity is the Social-Intuitionist Model of Moral Judgment (Haidt, 2001). He mentioned 6 links and link number (4) is the best link to describe how other judgements can change an individual own judgment, which considers a social link. More specifically, I see link number 4 that how learning about others' moral judgments affects an individual's own moral intuition and moral judgment is the best to understand how conformity works.

6.1 Do Adults Conform with Others' Moral Opinions?

As discussed in Chapter 1, many psychological theories only implicitly acknowledged the role of social processes in people's moral judgment and reasoning (e.g., Piaget, 1932; Turiel, 1983). In some theories, trying to fit one's own moral judgment to that of others to please them has been regarded as a less mature form of moral functioning (e.g. Kohlberg, 1984). Haidt's (2001) social-intuitionist model is one of the few psychological theories of morality that emphasizes the role of social processes in moral judgment. Specifically, simply being exposed to others' moral opinions or moral judgments can influence individuals' own moral intuitions, judgments, and behaviours, according to te model's social persuasion link. One goal of the current research was to study this social persuasion link. On the other hand, decades of research following Asch's (1951) seminal work on social conformity has shown that people readily conform with other people's opinions in a variety of different (judgment) tasks. Indeed, a handful of studies (e.g., Kundu & Cummins; 2013; Lisciandra et al., 2013) have reported moral conformity in adults. That is, adults adapted their moral judgments of transgressions to those of others, even when others' moral judgment was different to their own individual moral judgments. Another, overlapping goal of my research was to further explore the phenomenon of moral conformity.

The results of the studies reported in Chapters 2 to 4 are quite unequivocal: In all studies reported there, participants conformed to the ethical decisions of others. This is particularly notable as conformity was implemented in two different ways. The studies reported in Chapters 2 and 3 implemented an online version of the classical Asch paradigm with participants first making individual judgments and (after 7 to 10 days) being confronted with the judgments of a unanimous majority. This situation represents a low social pressure situation, as participants did not see and interact the other group members, and the other group members' judgments were only displayed on the computer screen. Conformity

emerged even in this situations where anonymity is high and therefore social pressure by others is low (see Huang & Li, 2016, for effects of anonymity on conformity). The study reported in Chapter 4 used another way to present the opinions of others, namely displaying others' opinions about moral transgressions as statistical descriptive norms (following a procedure by Kelly et al., 2017). Results again showed that participants' own judgments of moral transgressions conformed with the statistical norm indicating moral conformity.

Overall, then, the research reported in this thesis can affirm that adults do conform with others' moral opinions, as predicted by Haidt's (2001) social persuasion link and social conformity research. The second main goal of this thesis was to find whether moral conformity effects are moderated by other variables.

6.2 Are There Domain Differences in Moral Conformity?

The first moderator variable I investigated in all empirical studies was the judgment domain. Several theories in moral psychology attest that (moral) judgments and functioning differ by domain. Domain theory (Smetana, 2006; Turiel, 1996, 2008) proposes that three domains, which are based on how people conceptualize social interactions and events, are differentiated early in life: the moral domain, the social-conventional domain, and the personal domain. Moral interactions are characterized by concern for others' welfare, avoidance of harm, and upholding rights and justice, which are generalised and do not dependent on people's personal preferences or the rules operating in a social organization. Social conventions are concerned with how to make interpersonal interactions run smoothly and are consensually decided uniformities or rules that organize people's interactions inside a distinct social system (Killen & Smetana, 2013). The studies reported in Chapter 2 investigated people's conformity with violations in the moral and social conventional domains. Chapter 2 also assessed conformity to others' judgments regarding violations in the

decency domain, which concern actions that "feel" disgusting and disrespectful but that are harmless (Haidt et al., 1993). Thus, such decency violations put people's moral emotions (the action must be wrong because it is disgusting) and their moral reasoning (the actions is not harmful) in conflict. Similar to Chapter 2, the study reported in Chapter 5 also investigated moral reasoning in the morality versus the decency domain.

Chapter 3 approached the question of domain differences from another perspective. Here, I investigated whether social influences on people's ethical risk-taking differed from risk-taking in other risk domains. Indeed, domain-specific approaches to risk (e.g., Blais & Weber, 2006; Hanoch et al., 2006; Slovic, 1964; Weber et al., 2002) argue that people's risk attitudes are not uniform, but that they might be high risk-takers in one domain (e.g., gamble) but take lower risks in another domain (e.g., cheating on their taxes). These approaches have differentiated between different risk domains health/safety (e.g., smoking, using a seatbelt), ethical (e.g., cheating on an exam, having an affair), social (e.g., confronting colleagues or family members), recreational (e.g., bungee jumping, whitewater rafting), and financial (e.g., betting at the races, risky investments) and shows that risk-taking in these domains is differentially predicted by distinct processes. So far, the effect of social influences on risk-taking had only been investigated in the financial, not systematically across domains.

Finally, Chapter 4 examined domain differences in moral conformity by conceptualizing morality in terms of moral foundations theory (Graham et al., 2009, 2011). According to this theory, human morality encompasses five moral concerns or foundations (Graham et al., 2009, 2011): The harm/care foundation is related to disapproval of, avoiding, and ameliorating pain and misery in others. The fairness/reciprocity foundation is related to equality and justice and seeks that these principles not be violated. The ingroup/loyalty foundation is based on people's relation to important ingroups (e.g., one's family, home

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country) and seeks to promote the group's cohesion and well-being. The authority/respect foundation is related to status differences between people and within societies. Subordinates are supposed to follow authorities' norms and rules, but authorities also have a duty to support the well-being of subordinates. The purity/sanctity foundation is related to the emotion of disgust that is associated with avoiding biological and social contaminants (Koleva et al., 2012).

Overall, the empirical studies reported in this thesis show clear domain differences in conformity. Chapter 2 revealed that domain difference depended on the gender and culture of participants (see Section 6.3). However, western participants from the UK showed differences in their (moral) conformity: They conformed most in the decency domain, but least in the social conventional and moral domains. Participants from Kuwait exhibited no domain differences in their moral conformity. Similarly, Chapter 3 revealed domain (and culture) differences concerning the effect of social influences on risk-taking. British participants showed the least conformity in the ethical domain and the highest conformity in the social risk domain. Kuwaiti participants, similarly, conformed least in the ethical and most in the recreational and social domains. Finally, the study reported in Chapter 4 revealed that the influence of descriptive social norms differed by moral foundation. Whereas statistical norm affected participants' own moral judgments in the ingroup and purity foundations, there was no effect of statistical norm in the harm, justice, and morality foundations. Thus, across studies, (western) participants seem to be most likely to conform with other's moral opinions when decency/purity transgressions are concerned and least likely to conform with transgression that harm others or violate their rights.

6.3 Are There Culture and Gender Differences in Moral Conformity?

Originally, one major aim of my research was to investigate differences in conformity between UK and Kuwaiti adults. Previous research (see Bond & Smith, 1996, for a meta-analysis) has shown differences in conformity with participants from collectivistic societies more likely to conform than those from individualistic societies. I wanted to extend this research in two meaningful ways: First, most adults from collectivistic societies studied in previous research were from East Asia, and, to my knowledge, no study had investigated conformity among Middle-Eastern participants. Second, previous cross-cultural research often relied on Asch's visual perception (line) task; I was interested in cultural influences on moral conformity. Investigating this question in Kuwaiti participants is significant for two reasons. First, other research on people's understanding of morality (e.g., Alqahtani et al., 2020) showed that the moral domain of adults from Saudi Arabia is conceptualized more widely than among adults from the UK and involves ingroup, authority, and purity concerns. Thus, domain differences in morality and, potentially, moral conformity effects might be less domain-specific among Kuwaiti than UK participants. Second, because of the influence of religion, actions that would be considered as social-conventional or personal in secular societies are moralized in Middle-Eastern religious cultures (see also Shweder et al., 1991). This, again would indicate that Kuwaiti are less likely than UK adults to differentiate between social domains.

Indeed, the results reported in Chapter 2 showed differences in how adults from the UK and Kuwait conformed with others' judgments across domains. UK participants conformed differently in the decency on the one and the moral and social-conventional domains, with the highest levels of conformity found in the decency domain. Consistent with these findings, UK participants also showed the least conformity regarding risk-taking in the ethical compared to all other risk domains (Chapter 3). Thus, ethical or moral decisions, that

might harm others or violate their rights, might be more impervious to the influence of others' opinions. Participants from Kuwait showed no domain differences in conformity and generally exhibited high levels of conformity across domains in Chapter 2. Kuwaiti, like UK participants, showed domain differences in their risk-taking, taking fewer risks in the ethical than other risk domains. Interestingly, in Kuwait, domain effects in conformity differed for males and females.

Gender was another moderator that I wanted to investigate. While social conformity research has found consistent gender effects with females generally conforming more than males (Eagly, 1987), studies on gender effects in moral conformity were missing. There have been decade-long debates in moral psychological research as to whether there are gender effects in moral functioning. This debate was sparked by Kohlberg's (1984) original finding that females' moral reasoning was most commonly coded on Stage 3, whereas males' was most commonly coded on Stage 4. While subsequent research and reviews (see Walker, 2006) concluded that there were no gender differences in moral reasoning, females are still generally seen as being more interested in preserving harmony in social relationships and being perceived as "a good girl" (see also Gilligan, 1982). From that perspective, one might assume that females would show stronger moral conformity than males, in line with social conformity research.

However, meta-analyses (e.g., Eagly, 1987) also indicated that the effect of gender on conformity is moderated by a number of variables. One of these variables are gender role expectations: During historical times or cultures with more traditional gender role expectations, females tend to conform more than males. This is of particular relevance concerning the comparison of moral conformity in the UK and Kuwait. Kuwait can be seen as a culture with more traditional gender roles than the UK, so I expected a stronger gender

effect on conformity in Kuwait than the UK. Indeed, this was borne out in Chapter 2, where Kuwaiti females showed higher levels of conformity across domains than males, whereas there was no gender difference in the UK. Interestingly, gender differences depended on domain for Kuwaiti participants in Chapter 3: Females were more risk-taking in the social risk domain and also showed more conformity in this domain than males. Investigating what (risky and moral) behaviours are seen as appropriate and complying to gender roles in different societies would be an interesting avenue of future studies to help disentangle this effect.

Unfortunately, the lockdowns associated with the COVID-19 pandemic precluded me to follow-up on the culture effects reported in Chapters 2 and 3 as I was not able to get access to participants in Kuwait. Because I had to rely on convenience samples (often students) to conduct the studies reported in Chapters 4 and 5 online, I was not able to recruit equal numbers of males and females to examine gender effects in moral conformity in more detail. This topic thus still awaits further exploration.

6.4 How do Normative and Informational Influences Affect Moral Conformity?

Theories on social conformity (Asch, 1952; Deutsch & Gerrard, 1955; Kelman, 1958) emphasize two motivations as to why people conform. Normative social influence means that people conform because they want to fit in with and be liked by others. Informational social influence means that people use others as sources of information in situations that are ambiguous. One goal of the research reported in Chapter 4 was to investigate whether these two types of social influences operate in moral conformity by measuring and/or manipulating factors that should be associated with informational and normative social influences.

One variables that should be an indicator of informational social influence in the moral domain is the strength of people's moral convictions. Many moral decisions are

inherently difficult or ambiguous. However, the people who have a strong moral conviction about a topic might find a making a decision about this topic less difficult to make than people with weaker moral convictions. This, in turn, should affect how much we rely on others as sources of moral information (i.e., informational influence). People with strong moral convictions about a topic should thus be less affected by informational social influence than those with weak moral convictions (see Aramovich et al., 2012; Hornsey et al., 2003). In the study reported in Chapter 4, I therefore measured people's moral convictions in the harm, fairness, ingroup, authority, and purity foundations and investigated how strength of moral convictions affected people's conformity with descriptive social norms regarding transgressions in these foundations.

As discussed above, normative social influence operates on the level of people wanting to be part of and being liked by others. It is thus reasonable to assume that if people are given information that they are excluded from a social interaction, they are motivated to be included again. Thus, experiences of social exclusion might increase people's effort to fit in with the group and thus normative social influence (see Williams et al., 2000). I used Williams et al.'s (2000) cyberball paradigm to experimentally manipulate experiences of social exclusion and thus differences in the effect of normative social influence.

Results of the study showed that the strength of moral convictions significantly affected participants' acceptability ratings of transgressions in all five moral foundations. That is, participants were less likely to accept the foundation violation because they more strongly endorsed a foundation-specific moral judgment. This might point to the fact that informational social influence might indeed operate in moral conformity situations.

Concerning the effect of social exclusion experiences on moral conformity, weak moral judgment participants in the social exclusion were more likely to accept the harm

moral violation compared with no exclusion condition. For justice moral violation, in the social exclusion participants were more likely to follow the statistical norm compared with participants in the no-exclusion condition. Thus, normative social influences on moral conformity might be foundation-specific and might be particularly influential for moral judgments in the harm and justice domains.

6.5 How do Others' Moral Reasons Affect Individuals' Own Moral Judgments and Reasoning?

While the previous empirical studies mainly tested the social persuasion link in Haidt's (2001) social-intuitionist model of moral judgment (i.e., whether others' moral judgments affect individual's own moral intuitions and judgments), the study reported in Chapter 5 tested Haidt's proposed reasoned persuasion link, namely whether others' moral reasoning affects a person's moral intuitions and judgments. Even though moral reasoning has been hypothesized and shown to play a role in a number of interventions fostering moral functioning (see Berkowitz & Bier, 2005), very little research exists that tests this reasoned persuasion link directly. Using a diffusion-chain paradigm, I investigated whether the moral arguments used in others' summaries of two moral dilemmas (one moral dilemma akin to Kohlberg's Heinz Dilemma, one moral dilemma in the decency domain) would affect participants' own moral arguments and summaries, their (moral) emotions, and their moral judgments. Overall, I tested a mediation model that was based directly on Hadit's (2001) reasoned persuasion link: The moral arguments received from the other person might affect an individual's moral judgment, either directly or via their own moral intuitions (i.e., the moral arguments they produced themselves and the emotions associated with the moral dilemmas). Overall, I found that this predicted mediation model was only successful for some arguments in the morality dilemma; the were no mediation effects in the decency dilemma.

Furthermore, it was apparent that arguments were more successful predictors and mediators as opposed to the emotions associated with the moral dilemmas. This is interesting and in line with the other previous (but limited) research on the reasoned persuasion link (e.g., Gummerum et al., 2008; Kelly et al., 2017). Thus, rational arguments might be more influential than emotional ones in persuading others of one's moral opinion (contrary to laypeople's expectations that emotions might be more morally persuasive). This also mirrors findings on the persuasion literature more generally that has shown that successful persuasive messages are those where communicators take into account the perspectives of the receivers (e.g., Clark & Delia, 1976) as well as persuasive-arguments theory that I discussed in relation to the risky shift in Chapter 3 (e.g., Burnstein, 1982; Vinokur & Burnstein, 1974).

Using the diffusion-chain paradigm also allowed me to investigate whether and which information would be transmitted across the chains. Mixed findings have been reported in previous research, particularly as to whether positively- or negatively-valenced emotional information is more likely to be transmitted and whether type of moral content get transmitted to an equal degree. Unfortunately, the findings of my research do not necessarily clarify these questions. In the morality dilemma, negative emotion ratings tended to decrease with increasing chain position, while positive emotions stay stable. This is tentatively in line with the one previous study that has used diffusion chains to study the transmission of moral information (Stubbersfield et al., 2019). However, in the decency dilemma, there was no difference in the transmission of negatively- nor positively-valenced emotions across chain positions. In both dilemmas, argument type predicted positively- and negatively-valenced emotion ratings in meaningful ways. However, as indicated above, how moral information gets transmitted between individuals and how this might lead to the "cultural evolution" or

moral information remains to be a topic that should continued to be studied in future research (Mesoudi, 2007).

6.6 Theoretical and Practical Implications

The current research combined two research traditions, namely theories about adults' moral functioning and research on social conformity. The findings of this dissertation can speak to both. Concerning moral psychology, my research clearly shows the influence of others' opinions (and potentially reasoning) on individuals' own moral decisions. As I discussed throughout this thesis, social influences have taken a backseat in many of the most influential theories of morality. Even empirical research on Haidt's (2001) social intuitionist model has focused on the "individual" link of the model (i.e., the associations between individual moral intuitions and judgments) and less on the "social" links of the model. Thus, my research presents a necessary and novel contribution to this debate.

Concerning research on social conformity, only relatively recently has this research tradition investigated conformity effects in the moral domains. While my research replicated some of the findings from other conformity tasks used in the literature (e.g., gender and culture effects), it also highlighted that the judgment domain matters as to whether people conform with others' opinions or not. Even within the studies reported here, I found differential effects of culture and gender depending on whether I studied moral judgment more generally or ethical risky decision-making. This emphasizes the fact that moral conformity effects do not exist in the vacuum of the psychology lab, but that people bring their cultural, social, and gender expectations that were shaped outside the lab to the experimental situation. Decision domain thus seems to matter for the size of (moral) conformity effects.

My research also has practical implications, particularly for the teaching and socialization of morality. Indeed, some psychological theories, particularly learning theories (see Chapter 1) and Freud's psychoanalytic theory of the superego (see Tangney & Dearing, 2002) assume that an individual's morality is based on social (learning) processes. Social processes, such as discussions, reinforcement of positive behaviours, and observations of exemplary moral individuals, also feature prominently in moral intervention programmes (see Berkowitz & Bier, 2005, for a review). We know that even young children readily learn new behaviours and cognitions from others (Wood et al. 2013). More recently, research has shown that children also learn prosocial and moral actions from others (e.g., Benozio & Diesendruck, 2016; Ruggeri et al., 2018). Thus, being exposed to others' moral opinions can be one way of teaching morality. However, even young children do not learn information indiscriminately from others, but prefer follow those who have been shown to be more knowledgeable or reliable in the past (wood et al., 2013). Similarly, children do not indiscriminately conform with others' moral actions and opinions, but are less likely to comply when others clearly break a moral norm (Enesco et al., 2016; Engelmann et al., 2016). Thus, future research in this area should not only investigate whether moral conformity can be a tool in moral socialization but might also assess moderating factors (such as the source of moral opinions) in the development of moral conformity.

Individuals' behaviours and public debates about individuals' and group actions do increasingly get moralized, particularly in when it comes to political discourse (see Rozin et al., 1997). As alluded to in Chapter 5, online political, moral, and emotional information is more likely to capture attention and spread online (Brady et al., 2017, 2020) which might lead to the creation of online echo chambers that spread and maintain misinformation and conspiracy theories (as observed during the COVID-19 pandemic, Gkinopoulos et al., 2021).

It might also lead to moral and political discourse to become ever more polarized and associated with a spike in negative emotions (Crockett, 2017). Investigating the basic psychological processes that underlie how moral opinions influence others' judgments, emotions, and reasoning and how they spread can potentially help with understanding how moral echo chambers form and to ameliorate their negative effects.

6.7 Limitations and Future Studies

I have discussed the limitations of the individual studies in the respective chapters throughout this thesis. Here, I would like to take a more bird's eye view of what can be improved in this research more generally.

First, the COVID-19 pandemic and associated lockdown did not allow me to follow-up on the research I presented in Chapters 2 and 3 of this thesis. The studies reported there adopted the main features of the original Asch paradigm to study conformity effects. To my knowledge, most if not all the existing empirical studies implement this paradigm in a laboratory setting to and make the experimental situation as realistic as possible for participants. This helps with maximizing internal validity and believability for participants and with minimizing demand characteristics and social desirability. Because the COVID lockdown closed physical labs, I had to revert to online studies. As a consequence, some of my original research questions (e.g., manipulating the level of social presence and its effect of moral conformity) could not be realized. Similarly, I could not follow-up on my research in Kuwait and extend some of the research questions that ensued from the results of Studies 1 and 2 (e.g., the role of societal gender roles in explaining the gender effects in moral conformity). Hopefully, these questions can be pursued in future research.

Second, all of my measures of moral conformity concerned people's moral opinions or judgments, not their actual moral behaviour. As indicated in Chapter 4, simply complying

with the opinions of others is not costly for participants in terms of financial, emotional, or reputational costs. However, moral behaviour, particularly prosocial and altruistic behaviour is often characterized by people having to forgo personal benefits to uphold moral standards or to benefit another person (Eisenberg, 2000). It is an open question as to whether people would conform as readily with others' moral opinions and recommendations, if conformity entails a personal cost.

Third, I did not investigate whether and for how long the effects of moral conformity last. Do people permanently change their moral judgments after being exposed to others' opinions or do they "revert back" to their pre-exposure moral judgments? Haidt's (2001) social-inuitionist model suggests that others' moral opinions have the potential to permanently change individuals' moral intuitions, but this should be tested in future research. It might be that the permanence of change is moderated by other factors, such as the strength of an individuals' moral convictions (e.g., Hornsey et al., 2003, 2007).

Finally, as I discussed above, in my research I did not vary who "the others" were in the conformity situations. Sources were always anonymous, in Chapter 4 even presented as a statistical descriptive norm. However, how much people conform with and learn from others might depend on who the other person is (see Ruggeri et al., 2018) as we might trust some moral sources more than others. This is a topic that can and should be studied in future research.

6.8 Conclusion

The main goal of this research was to experimentally investigate social influences on adults' moral judgments. I combined theories and methods from moral, social, and experimental psychology to answer this question. I found that others' moral opinions reliably affected individuals' own moral judgments, but that this effect was moderated by judgment

domain, culture, gender, arguments and emotions, and social and normative influences. Overall, given the importance of understanding how people make moral decisions, my research significantly contributes to century-old efforts by philosophers, psychologists, evolutionary scientists, and educators to uncover the factors that might help and hinder people making moral decisions that benefit themselves, others, and society at large.

Appendix A

Participants consent form, debrief, and questionnaires for studies 1 and 2.

A.1 Consent form

UNIVERSITY OF PLYMOUTH

FACULTY OF HEALTH AND HUMAN SCIENCES

Human Ethics Committee Consent Form

CONSENT TO PARICIPATE IN RESEARCH PROJECT

Hessah Alshaalan, hessah.alshaalan@plymouth.ac.uk
Michaela Gummerum, 01752 584 828; michaela.gummerum@plymouth.ac.uk

Making decisions in groups in computer-mediated versus real-life

environments

_____

What is the study about?
The goal of the study is to investigate whether the way people make decisions in groups differs between real-life and in online situations.

Why am I being approached?
You have been approached to participate in this study, because you have signed up to the School of Psychology Participant Pool at the University of Plymouth

What will happen during the study?
You will be asked to make decisions with three other group members, either in real-life, facing the other group members, or with group members interacting over the computer. You will be presented with 36 scenarios for which you will be asked to make decisions in groups and then, again, individually. All tasks will be presented in random order to you.
Please note that the group interactions will be video-recorded.

Before you start the decision tasks, you will be asked to provide your date of birth and gender.
You will receive course credit (1 point per 30 minutes) or money (£4 per 30 minutes) for your participation. This study will take no longer than 1 hour.

Do I have to take part?
Your participation is completely voluntary. There are no known risks for the participants of this study.

Can I withdraw?
You can withdraw at any time (before, during, or after the study) without any penalty.

Will it affect my relationship with the University?
This research is separate from any assessments. Research participation and performance does not relate to any of your assessments. You can withdraw at any time, without affecting your relationship with the University.

Is the information collected confidential?
All information obtained in this study will be kept strictly confidential. All answers will be recorded on a computer. Only the investigator will have access to this data. All data (including videotapes) will be stored in a password-protected file on a password-protected computer. Data will be destroyed ten years after publication of the results of this study.

Will I be identifiable in any way?
All participants will create a personal identification number. All decisions and answers in the questionnaire can be traced only to this personal identification number and not to the participant.

Who can I contact for further information?
If you have any questions about this study, please do not hesitate to contact us at the e-mail listed above.

If you are dissatisfied with the way the research is conducted, please contact the principal investigator in the first instance: 07479792817 or Whats app 0096566989206. If you feel the problem has not been resolved, please contact the secretary to the Faculty of Health and Human Sciences Ethics Committee: hhsethics@plymouth.ac.uk

• I have read and understood the information about the research
• I have had the chance to find out more about the study if I wished to.
• I know what my part will be in the study and I know how long it will take.
• I have been told if there are any possible risks.
• I understand that personal information is strictly confidential
• I freely consent to be a participant in the study. No one has put pressure on me.
• I know that I can stop taking part in the study at any time.
• Refusal to take part will make no difference to my university studies.
• I know that if there are any problems I can contact the researchers listed above.

Under these circumstances, I agree to participate in the research.

Name: ………………………………….

Signature: ....……………..   Date: ....……………..

Debriefing

Thank you very much for participating in this study.

Now I would like to inform you in more detail about the study.

In this study we are interested in how people make group decisions in real-life versus online environments. You were presented with 36 decision tasks. Sixteen tasks involved a decision as to whether an (im)moral or (un)conventional action was okay or not okay for an actor to perform. Ten tasks investigated whether you choose a sure or a risky option in a lottery. Another 10 tasks presented you with 10 risk scenarios and asked you to judge how likely you were to take the risk in this situation.

You made decisions on these tasks in a group of four, either in real life or on the computer. The other group members you were interacting with were briefed by the experimenter on how to respond beforehand (that is, they were confederates of the experimenter). That way, we could find out whether your decisions in the group context were influenced by what the other group members said.

Previous research has shown that in real-life group situations, people are influenced by what others say when it comes to social conventions. Social conventions are rules that structure the interactions of groups or institutions. Previous research has also shown that group members are less influenced by what others say when it comes to moral decisions. Furthermore, groups tend to make more risky decisions than individuals in real-life group situations. So far, we do not know whether the same findings emerge when groups make decisions over the computer rather than in real life.

 I want to remind you that you have the right to withdraw from the study at any time during and after the study and the data will be destroyed and will not be used for analysis.

If you have any questions please feel free to ask the experimenter now.
In case you have any questions at a later point in time please feel free to contact the experimenter.

If you are dissatisfied with the way the research is conducted, please contact the principal investigator in the first instance: 07479792817 or Whats app 0096566989206. If you feel the problem has not been resolved please contact the secretary to the Faculty of Health and Human Sciences Ethics Committee: hhsethics@plymouth.ac.uk.

Thank you again for your participation and have a nice day.

Hessah Alshaalan   Michaela Gummerum
Hessah.alshaalan@plymouth.ac.uk   01752 584 828
                                                               Michaela.gummerum@plymouth.ac.uk

A.3 Questionnaires of studies 1 and 2 (Part1)

Gender:………………………… Date of birth: ………………………

create a personal ID code:…………………………

Scenarios were taken from Lahat et al. (2012), Lisciandra et al. (2013), and domain-specific risk-taking scale (DOSPERT, Weber et al., 2002)

Please indicated how much you approve or disapprove

		disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve
Michael woke up and started getting ready for school. He decided to go over to his sister's closet. He saw a dress and he tore it.		disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve
Drinking heavily at a social function.	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
A man got a blood transfusion of 1 pint of disease-free, compatible blood from a convicted child molester.	Strongly disapprove	disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve
Walking home alone at night in an unsafe area of town.	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
Riding a motorcycle without a helmet.	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
Revealing a friend's secret to someone else.	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
Not returning a wallet you found	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely

	Strongly disapprove	disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve
that contains £200.							
Susan usually eats cereals for breakfast. One morning she realizes she finished her favourite cereal. She only has an old pack with grubs and insects inside. She puts them in a bowl and microwaves it first to kill any germs. Then she eats it.	Strongly disapprove	disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve
Jennifer was very bored during class. She wanted to be somewhere else. When her teacher asked her a question she decided to hit her	Strongly disapprove	disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve
Leaving your young children alone at home while running an errand	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
Going camping in the wilderness	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
Sunbathing without sunscreen.	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
George was a very short boy. He wanted to be a few inches taller. He found his mother's high heels and decided to wear them	Strongly disapprove	disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve

Mary went to eat lunch at the cafeteria. The line was very long. She decided to cut in line	Strongly disapprove	disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve
Speaking your mind about an unpopular issue in a meeting at work.	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
Admitting that your tastes are different from those of a friend.	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
Bungee jumping off a tall bridge.	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
Sara makes cruel remarks to Jessica, who is overweight, about her appearance.	Strongly disapprove	disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve
A brother and sister like to kiss each other on the mouth. When nobody is around, they find a secret hiding place and kiss each other on the mouth, passionately.	Strongly disapprove	disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve
Passing off somebody else's work as your own.	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
Engaging in unprotected sex.	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
Starting a new career in your mid-thirties.	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely

David and Ben were in the library studying for an important test on the next day. They realized it was late, and they were running out of time. While they were still in the library and had a couple of more hours to study they decided to cheat.	Strongly disapprove	disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve
Lisa is in the cinema but really bored with the movie she is watching. She takes out her phone and makes a phone call to her best friend.	Strongly disapprove	disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve
Going whitewater rafting at high water in the spring	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
Driving a car without wearing a seat belt.	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
Ed created a performance art piece in which he and all participants have to act like animals for 30 minutes, including crawling around naked and urinating on stage.	Strongly disapprove	disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve
In Sharon's school students should address their teachers by	Strongly disapprove	disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve

their title or last name, but not by their first name. Sharon saw her teacher, Dr. Jason Smith, in the hallway and said: "Hello Jason."							
Having an affair with a married man/woman	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
A family's dog was killed by a car in front of their house. They had heard that dog meat was delicious, so they cut up the dog's body and cooked it and ate it for dinner.	Strongly disapprove	disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve
Disagreeing with an authority figure on a major issue.	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
Moving to a city far away from your extended family.	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
Piloting a small plane.	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
Liam, Isaac, and Robert are in the pub together. Liam buys the second round of drinks for everybody. When they have finished their second round of drinks, Robert walks to the bar and buys a drink only for himself.	Strongly disapprove	disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve

Taking a skydiving class.	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
Choosing a career that you truly enjoy over a more secure one.	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
Going down a ski run that is beyond your ability	Extremely unlikely	Rather unlikely	Unlikely	Neutral	Likely	Rather likely	Extremely likely
Ted kicked a dog in the head, hard.	Strongly disapprove	disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve

Examples items of part 2 in studies 1 and 2

Please indicate how much you approve or disapprove:

A man got a blood transfusion of 1 pint of disease-free, compatible blood from a convicted child molester.

	Strongly disapprove	Disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve

A family's dog was killed by a car in front of their house. They had heard that dog meat was delicious, so they cut up the dog's body and cooked it and ate it for dinner.

	Strongly disapprove	Disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve
(parrot)	Strongly disapprove	Disapprove	Slightly disapprove	**Neutral**	Slightly approve	Approve	Strongly approve
(horse)	Strongly disapprove	Disapprove	Slightly disapprove	Neutral	**Slightly approve**	Approve	Strongly approve
(frog)	Strongly disapprove	Disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve

Appendix B

Participants information sheet, consent form, questionnaires, debrief for study 3.

C.1 Information sheet

Department of Psychology, University of Warwick
Participant Information Sheet

Title of Project: Judging others' actions
Name of Researcher: Hessah Alshaalan
Name of Supervisor(s): Michaela Gummerum, and Jesse Preston

Invitation
The goal of the study is to investigate whether you agree or disagree with the actions of others. Overall, we are interested in how you judge others' actions compared to other participants. I am conducting this research as part of my PhD dissertation.

This study has been reviewed and approved by the Department of Psychology Research Ethics Committee at the University of Warwick.
Please take the time to read the following information carefully. Please ask us if there is anything that is not clear or if you would like more information.

What will happen?
You will first a questionnaire with 15 items, with each item describing the action of another

person. We will ask you how much you agree or disagree with these actions. Reading about some of these actions may be unpleasant.

You will then interact with anonymous others to play a short ball-tossing game online for 90 seconds. After the game, you will again be asked about the actions of the players.

Then, you will again be given a description of five actions conducted by other people and be asked to rate how much you agree or disagree with these actions.

At the end of the study, we will ask you information about your age and gender, but you can decide not to disclose this demographic information.

This study will take no longer than 20 minutes.

Participant rights

Your participation is voluntary and you are free to leave the study at any point without explanation and without any of your medical, social care, education, or legal rights rights being affected. You have the right to omit or refuse to answer or respond to any question that is asked of you. You have the right to ask that any data you have supplied to that point be withdrawn/destroyed.

If you wish to withdraw during the study, please close your browser. If you want to withdraw after the study, please send your ID code to the researchers, and any data associated with this ID will be deleted.

Benefits and risks

As indicated above, some of the actions presented to you might be unpleasant. Otherwise, there are no known benefits or risks beyond everyday life for you in this study.

Expenses and payments

Participants who take part in the study will be paid according to Prolific rates.

Confidentiality

Research data will be anonymised as quickly as possible after data collection and it will not be possible to withdraw your data after this point. Your data may be withdrawn from the study up until the end of the data collection period following the completion of the experiment. Please contact the researcher Hessah.alshaalan@warwick.ac.uk by 31/August/2021 quoting your Prolific ID number and time of participation to request withdrawal of your data. After this date we will de-identify data. Then it will no longer be possible to remove your data but nor will it be possible to identify it or link it to you.

Your data will be stored securely on password-protected servers. The data will only be accessed by the researchers and supervisors named above and will not be shared with any other organisations.

What will happen to the data collected about me?

We will be using information from you in order to undertake this study and will act as the data controller for this study.This means that we are responsible for looking after your information and using it properly. We will use your data in the ways needed to conduct and analyse the research study. We are committed to protecting the rights of individuals in line with data protection legislation.

The University of Warwick will keep the data associated with this study for 10 years, until August 2031. After that date, it will be destroyed.

Data sharing

Your data will not be shared outside the University.

Your rights to access, change or move your information are limited, as we need to manage your information in specific ways in order for the research to be reliable and accurate. The University of Warwick has in place policies and procedures to keep your data safe. This data may also be used for future research following review and approval by an independent Research Ethics Committee, and subject to your consent at the outset of this research project.

Further information can be found in the University's Privacy notice for research, here:https://warwick.ac.uk/services/idc/dataprotection/privacynotices/researchprivacynotice, or by contacting the Information and Data Compliance Team at GDPR@warwick.ac.uk.

What will happen to the results of the study?

The results of this study will be reported in the named researcher's PhD dissertation and in journal publications/conference presentation. The project does not involve or report comparisons or evaluations of individuals; the results will be reported anonymously. Anonymised data will be submitted to journals/open science repositories.

Who should I contact if I want further information?

If you have any questions about this study, please contact the named researcher *Hessah Alshaalan (Hessah.alshaalan@warwick.ac.uk)* or their supervisor for this project: Michaela Gummerum(michaela.gummerum@warwick.ac.uk), and Jesse Preston (j.preston@warwick.ac.uk).

Who should I contact if I wish to make a complaint?

Any complaint about the way you have been dealt with during the study or any possible harm you might have suffered will be addressed. Please address your complaint to the person below, who is a senior University of Warwick official entirely independent of this study:

Head of Research Governance   Email: researchgovernance@warwick.ac.uk
Jane Prewett   Tel: 024 76 522746
Research & Impact Services
University House
University of Warwick
Coventry
CV4 8UW

If you wish to raise a complaint on how we have handled your personal data, you can contact our Data Protection Officer who will investigate the matter: DPO@warwick.ac.uk.
If you are not satisfied with our response or believe we are processing your personal data in a way that is not lawful you can complain to the Information Commissioner's Office (ICO).

Thank you for taking the time to read this Participant Information Sheet

C.2 consent form

Department of Psychology, University of Warwick
Consent form for online studies

Title of Project: Judging others' actions
Name of Researcher(s): Hessah Alshaalan
Name of Supervisor(s): Michaela Gummerum, and Jesse Preston

By checking the box below, I confirm that:
1.   I confirm that I have read and understand the information sheet (version 1, 25/10/2020) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
2.   I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my rights being affected.
3.   I understand that my data collected during the study, may be looked at by the researcher (Hessah Alshaalan) and their supervisors (Michaela Gummerum, and Jesse Preston) from The University of Warwick. I give permission for these individuals to have access to my data.
4.   I understand that my data may be used in future research.
5.   I agree to take part in the above study.

By agreeing to participate you are indicating that: you have read and agree with the points above, and confirm that you are 18 years old or older.
   o   Yes, I have read the brief and agree to participate in the study.
   o   I don't want to participate in the study. Please return your submission on Prolific by selecting the 'Stop without completing' button."

Please enter your Prolific ID

Moral Foundations Questionnaire
By: Graham et al. (2011)

How much do you agree with the statements below?

	Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree
Compassion for those who are suffering is the most crucial virtue.						
One of the worst things a person could do is hurt a defenseless animal.						
It can never be right to kill a human being.						
When the government makes laws, the number one						

principle should be ensuring that everyone is treated fairly.					
Justice is the most important requirement for a society.					
I think it's morally wrong that rich children inherit a lot of money while poor children inherit nothing.					
I am proud of my country's history.					
People should be loyal to their family members, even when they have done something wrong.					
It is more important to be a team player than to express oneself.					
Respect for authority is something all children should learn.					
Men and women have different roles to play in society.					
If I were a soldier and disagreed with my commanding officer's orders, I would obey anyway because this is my duty.					
People should not do things that are disgusting, even if no one is harmed.					
I would call some acts wrong on the grounds that they are unnatural.					
Chastity is an important and valuable virtue.					

Online game Cyberball
By: Williams and Jarvis (2006)

On the next page, you will play a ball-tossing game with two other players. You and the other two players are represented by manikins. The goal of the game is to throw a ball to either of the three players.

If you have the ball, you can decide to throw it either to Player 2 or Player 3. Please click on the Player you want to throw the ball to.

The game will last about two minutes. You will be playing until the screen shows "Game Over", then you can click the button in the right corner and continue the experiment.

Perception of exclusion
By: Juanchich et al. (2018)

Please rate your perception of the ball game

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I felt included					
I felt excluded.					

Please rate the percentage of time you had the ball.
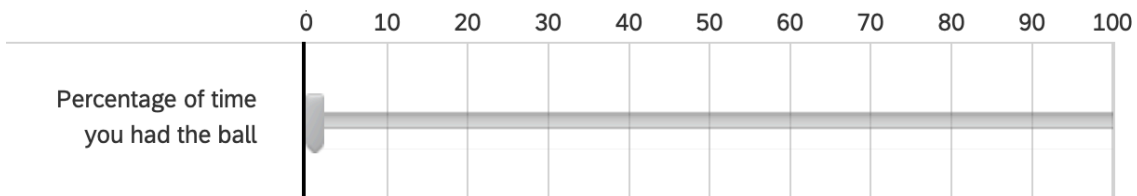
Moral violations Items were taken from Graham et al. (2009, Study 3)

Permissible conditions:

Please rate the action below.

	Strongly disapprove	Moderately disapprove	Slightly disapprove	Neutral	Slightly approve	Moderately Approve	Strongly approve
Making cruel remarks to an overweight person about their weight.							

Please rate the action below.

	Strongly disapprove	Moderately disapprove	Slightly disapprove	Neutral	Slightly approve	Moderately Approve	Strongly approve
Say no to a friend's request to help them move to a new appartment after they helped you move the month before.							

Please rate the action below

	Strongly disapprove	Moderately disapprove	Slightly disapprove	Neutral	Slightly approve	Moderately Approve	Strongly approve
Breaking off all communications with your immediate and extended family for 1 year.							

Please rate the action below.

	Strongly disapprove	Moderately disapprove	Slightly disapprove	Neutral	Slightly approve	Moderately Approve	Strongly approve
Curse your parents, to their face (you can apologize to them later).							

Please rate the action below.
80% of participants in a previous study approved of this action.

	Strongly disapprove	Moderately disapprove	Slightly disapprove	Neutral	Slightly approve	Moderately Approve	Strongly approve
Get a blood transfusion of 1 pint of compatible, disease-free blood from a convicted child molester.							

Condemnable condition:

Please rate the action below.
73% of participants in a previous study disapproved of this action.

	Strongly disapprove	Moderately disapprove	Slightly disapprove	Neutral	Slightly approve	Moderately Approve	Strongly approve
Making cruel remarks to an overweight person about their weight,							

Please rate the action below.
71% of participants in a previous study disapproved of this action.

	Strongly disapprove	Moderately disapprove	Slightly disapprove	Neutral	Slightly approve	Moderately Approve	Strongly approve
Say no to a friend's request							

to help them move to a new appartment after they helped you move the month before.							

Please rate the action below
75% of participants in a previous study disapproved of this action.

	Strongly disapprove	Moderately disapprove	Slightly disapprove	Neutral	Slightly approve	Moderately Approve	Strongly approve
Breaking off all communications with your immediate and extended family for 1 year.							

Please rate the action below.
69% of participants in a previous study disapproved of this action.

	Strongly disapprove	Moderately disapprove	Slightly disapprove	Neutral	Slightly approve	Moderately Approve	Strongly approve
Curse your parents, to their face (you can apologize to them later).							

Please rate the action below.
80% of participants in a previous study disapproved of this action.

	Strongly disapprove	Moderately disapprove	Slightly disapprove	Neutral	Slightly approve	Moderately Approve	Strongly approve
Get a blood transfusion of 1 pint of compatible, disease-free blood from a convicted child molester.							

It is the last part of the experiment, some personal information will be collected. You have the right to choose not to disclose

Your gender
- o   Male
- o   Female
- o   Other (Please describe as you wish)
- o   I'd prefer not to answer

Your age
- o   I am (please enter your age)
- o   I'd prefer not to answer

C.3 debrief

Thank you very much for participating in this study.
Now I would like to inform you in more detail about the study. Please remember to click the "next" button to indicate that you have completed the study in Prolific.

In this study, we want to find out how people form opinions about moral topics and make moral judgments about whether an action is right or wrong. Previous research (e.g., Kelly et al., 2017; Lisciandra et al., 2013) have shown that adults conform to others' moral opinions. Indeed, just presenting adults with a descriptive norm (i.e., how many people previous agreed or disagreed with an issue) influenced participants' judgments in moral and decency dilemmas. On the other hand, Hornsey et al. (2003) found that participants who had strong convictions regarding a moral issue showed less conformity with others' moral opinions.

In this study, I extended previous research and wanted to know whether participants conform with others' opinions when the moral or immoral actions cover different moral topics, such as doing harm or violating fairness. You were presented with five different moral violations and information how much others agreed or disagreed with these actions in previous research. We want to find out whether just presenting others' acceptability judgments affects your own judgments of these actions.

We also wanted to know whether feeling socially excluded increases the influence of others' opinions. Previous research (e.g., Williams et al., 2000) indicated that this might be the case, but previous studies did not look at the effect of social exclusion on moral opinions. We predict that those participants who felt socially excluded would be more likely to agree with others' opinions about (im)moral actions.

I want to remind you that you have the right to withdraw from the study at any time. If you want to withdraw after the study, please email the researcher by 01/09/2021. After this date, all data will be anonymized. Withdrawn data will be destroyed and will not be used for analysis. If you have any questions please feel free to ask the experimenter now. In case you have any questions at a later point in time please feel free to contact the experimenter.

Thank you again for your participation and have a nice day.

Hessah Alshaalan
Hessah.alshaalan@warwick.ac.uk

Michaela Gummerum
Michaela.gummerum@warwick.ac.uk

- **Please watch the short clip below**

We thank you for your time spent taking this survey.

Your response has been recorded.

Appendix C

Participants information sheet, consent form, debrief, and articles for study 4.

C.1 Participant's information sheet

Department of Psychology, University of Warwick
Participant Information Sheet

Title of Project: The social transmission of information
Name of Researcher: Hessah Alshaalan
Name of Supervisor(s): Michaela Gummerum, and Jesse Preston

Invitation
You are invited to take part in a research study on social processes in the transmission of morally-relevant information. I am conducting this research as part of my PhD dissertation.This study has been reviewed and approved by the Department of Psychology Research Ethics Committee at the University of Warwick. Please take the time to read the following information carefully. Please ask us if there is anything that is not clear or if you would like more information.

What will happen?
You will be given a piece of text. This piece of text is either about a court case between pharmaceutical companies and the government of South Africa about access to HIV medication or a Russian performance artist who nailed himself to the Red Square in Moscow. As such, the piece of text you receive might contain information that is unpleasant. You will be asked to write a summary of this piece of text, which will then be given to another anonymous person. You will also be asked to evaluate the main protagonists of the texts you receive and rate your emotions. We will also ask you for information about your age and gender, but you can decide not to disclose this information. This study will take no longer than 30 minutes.

Participant rights
Your participation is voluntary and you are free to leave the study at any point without explanation and without any of your medical, social care, education, or legal rights rights being affected. You have the right to omit or refuse to answer or respond to any question that is asked of you. You have the right to ask that any data you have supplied to that point be withdrawn/destroyed. If you wish to withdraw during the study, please close your browser. You will create a Personal ID code based on information only known to you. If you want to withdraw after the study, please send this ID code to the researchers, and any data associated with this ID will be deleted.

Benefits and risks
There are no known benefits or risks beyond everyday life for you in this study.

Expenses and payments
Participants who take part in the study will get a course credit.

Confidentiality
Research data will be anonymised as quickly as possible after data collection and it will not be possible to withdraw your data after this point. Your data may be withdrawn from the study up until the end of the data collection period following the completion of the experiment. Please contact the researcher Hessah.alshaalan@warwick.ac.uk by [1/April/2021] quoting your participant ID number and time of participation to request withdrawal of your data. After this date we will de-identify data. Then it will no longer be possible to remove your data but nor will it be possible to identify it or link it to you. Your data will be stored securely on password-protected servers. The data will only be accessed by the researchers and supervisors named above and will not be shared with any other organisations.

What will happen to the data collected about me?
We will be using information from you in order to undertake this study and will act as the data controller for this study.This means that we are responsible for looking after your information and using it properly. We will use your data in the ways needed to conduct and analyse the research study. We are committed to protecting the rights of individuals in line with data protection legislation. The University of Warwick will keep the data associated with this study for 10 years, until April 2031. After that date, it will be destroyed.

Data sharing
Your data will not be shared outside the University. Your rights to access, change or move your information are limited, as we need to manage your information in specific ways in order for the research to be reliable and accurate. The University of Warwick has in place policies and procedures to keep your data safe. This data may also be used for future research following review and approval by an independent Research Ethics Committee, and subject to your consent at the outset of this research project.

Further information can be found in the University's Privacy notice for research, here:https://warwick.ac.uk/services/idc/dataprotection/privacynotices/researchprivacynotice, or by contacting the Information and Data Compliance Team at GDPR@warwick.ac.uk.

What will happen to the results of the study?
The results of this study will be reported in the named researcher's PhD dissertation and in journal publications/conference presentation. The project does not involve or report comparisons or evaluations of individuals; the results will be reported anonymously. Anonymised data will be submitted to journals/open science repositories.

Who should I contact if I want further information?
If you have any questions about this study, please contact the named researcher Hessah Alshaalan (Hessah.alshaalan@warwick.ac.uk) or their supervisor for this

project: Michaela Gummerum(michaela.gummerum@warwick.ac.uk), and Jesse Preston (j.preston@warwick.ac.uk).

Who should I contact if I wish to make a complaint?
Any complaint about the way you have been dealt with during the study or any possible harm you might have suffered will be addressed. Please address your complaint to the person below, who is a senior University of Warwick official entirely independent of this study:
Head of Research Governance   Email: researchgovernance@warwick.ac.uk
Jane Prewett   Tel: 024 76 522746
Research & Impact Services
University House
University of Warwick
Coventry
CV4 8UW

If you wish to raise a complaint on how we have handled your personal data, you can contact our Data Protection Officer who will investigate the matter: [DPO@warwick.ac.uk.](mailto:DPO@warwick.ac.uk)
If you are not satisfied with our response or believe we are processing your personal data in a way that is not lawful you can complain to the Information Commissioner's Office (ICO).

Thank you for taking the time to read this Participant Information Sheet

C.2 Consent form

Department of Psychology, University of Warwick
Consent form for online studies

Title of Project: The social transmission of information
Name of Researcher(s): Hessah Alshaalan

Name of Supervisor(s): Michaela Gummerum, and Jesse Preston

By checking the box below, I confirm that:

1. I confirm that I have read and understand the information sheet (version 1, 25/10/2020) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my rights being affected.

3. I understand that my data collected during the study, may be looked at by the researcher (Hessah Alshaalan) and their supervisors (Michaela Gummerum, and Jesse Preston) from The University of Warwick. I give permission for these individuals to have access to my data.

4. I understand that my data may be used in future research.

5. I agree to take part in the above study.

<check box here> I have read and I agree with the points above.

<check box here> I confirm that I am 18 years old or older.

C.3 morality articels and questionnaires

By agreeing to participate you are indicating that: you have read and agree with the points above, and confirm that you are 18 years old or older.
- o   Yes, I have read the brief and agree to participate in the study.
- o   I don't want to participate in the study (close your browser window now).

- • Create personal ID code:

First letter of mother's first name:_____

First letter of father's first name:_____

Second letter of participants's first name:_____

House number:_____

- • What is your gender?
    - o   Male
    - o   Female
    - o   Prefer not to say
    - o   Type your age in years (or leave blank):

The text below is taken from an article originally published in the guardian. Please read this text carefully. On the next page, we will ask you to summarize this article in your own words.

Petr Pavlensky: why I nailed my scrotum to Red Square

He has wrapped himself in barbed wire, sewn his lips shut and caused the world to wince with his now-onfamous stunt in Moscow. As the Russian authorities circle around Petr Pavlensky, the protest artist explains why he's not afraid.

On a snowless but chilly afternoon early in the Moscow winter, a 29-year-old man with a gaunt, emaciated face stepped on to the vast expanse of Red Square. He made his way to a spot on the cobblestones not far from the marble mausoleum housing the waxy corpse of Vladimir Lenin, and began to undress. In less than a minute, he was naked.
A video take using a handheld camera and posted online moments later shows tourists gawping as he sits on the ground. A police car arrives, and an officer orders the man to get up. But the man cannot get up – because he is attached to the icy cobbles with a single, long

nail that is driven through his scrotum and into the stones below.

This was only the third piece of protest art in the oeuvre of St Petersburg native Petr Pavlensky, but he has already made a name for himself as one of the most intriguing figures on the contemporary Russian art scene. Tapping into the instincts that drove Pussy Riot, and their progenitors, the Voina art collective, Pavlensky fuses risque performance with a deep disdain for the current political environment in Russia. Having previously wrapped himself naked in a coil of barbed wire, and sewn his lips together, this third wince-inducing stunt attracted international attention.

In a statement released to coincide with the performance, Pavlensky said his action, titled Fixation and timed to coincide with Russia's annual Police Day, was "a metaphor for the apathy, political indifference and fatalism of modern Russian society". Pavlensky had a blanket thrown over him by the confused police officers and was eventually detached from the stones and taken to hospital. He was discharged that evening, and released by the police without charge – only for them to open a case of "hooliganism motivated by hatred of a particular social, ethnic or religious group" a few days later. It is the same article of the law that was used against Pussy Riot and can carry a jail sentence of several years.

A fortnight later, Pavlensky is at the railway station in St Petersburg, about to take the night train back to the capital, where he has been summoned by police for questioning the next day. There are rumours in the media that he may be arrested. We meet just before midnight, before he boards his train, and it is hard not to notice the rather forlorn canvas rucksack slung over his shoulder. He appears to have surprisingly few possessions with him for someone who could end up spending months behind bars.

"What do you mean?" he says, matter-of-factly. "I've got socks, pants, everything. I'm ready for anything."

He sounds relaxed and confident, although there is a nervous intensity in his eyes. Escaping the long arm of Russian justice by going on the run was never an option for Pavlensky. "I think that would have discredited everything I'd done before, if at the first sign of danger I'd gone into hiding. So I decided to take a position of strength, because there is nothing to be afraid of. You can be afraid if you feel you are guilty of something and I don't. Anything the authorities do against me means discrediting themselves. The more they do with me, the worse they make it for themselves."

He says the same impulse informs his art: "Whenever I do a performance like this, I never leave the place. It's important for me that I stay there. The authorities are in a dead-end situation and don't know what to do. They can't ask the person to leave a square, because he's nailed to the square. And they can't do anything with a man inside barbed wire."

The influential gallery owner and critic Marat Guelman called Pavlensky's act "the artistic equivalent of setting yourself on fire" and said it was a gesture of hopelessness and desperation. "It was a message to society," he told the Calvert Journal. "We all more or less share his position. People have been forced into a corner – the choice is between leaving, going to prison, or joining up with those in power."

But, in Pavlensky's mind, his action was less a helpless cry of anguish than an aggressive statement of defiance. His performances are not only a protest against the system, but also a protest against people's apathy. "When I did the Carcass piece with the barbed wire, I was not just saying how wonderful our legal system is – people are inside this wire, which torments them, stops them from moving, and they feel pain from every movement. I was also saying people themselves are this barbed wire and create the wire for themselves."

Pavlensky was born in St Petersburg and studied at art college, which he describes as a "disciplinary institution that aims to make servants out of artists". He left in 2012, without

completing the course. He says he has a broad range of artistic influences. "I am very interested in Caravaggio, even though he worked with canvas and oils. He had a very serious life project, though: he made works with the theme of self-harm, where he translates real events on to the bodies of his subjects. He isn't a decorative artist. I am very critical of any decorative art as an idea, the idea of ornamentalism and concealment. Everything that does the opposite, that brings things out and reveals how things actually are, this is what interests me."

Pavlensky says it was during the Pussy Riot trial that he first began to understand the need for a more radical approach to art. "Their trial affected me more than many things in my own life. I started looking at other people and wondering why they were not doing anything. And that is when I had the important realisation that you should not wait for things from other people. You need to do things yourself."

The idea for his most recent performance came when he was briefly held in a cell after the Carcass stunt. A fellow prisoner regaled him with stories of the Gulag, where prisoners had sometimes nailed their scrotums to trees in an act of protest at the inhumane conditions and miserable existence. "I didn't think much of it at first but then, when I began thinking that the whole country is becoming a prison system, that Russia is turning into a big prison and a police state, it seemed perfect."

In the end, Pavlensky was not arrested at his questioning the following day in Moscow, but the charges against him still stand, and he remains under investigation. In late January, officers arrived at the cable channel TV Rain and demanded to be given a recording of an interview Pavlensky had given them, saying they needed to examine it as part of a "psychological-linguistic expert analysis" that was being carried out as part of the case against him.

Despite the real threat of a jail term, Pavlensky does not plan to stop, and says his unusually painful brand of art comes from an imperative impulse towards radicalism: "It was a very important step for me – to understand what happens when a person becomes an artist, when a person becomes stronger than their indifference and overcomes their inertia. I don't think an artist can exist without this and just be isolated and contemplative. An artist has no right not to take a stand."

Please summarize the article you have just read in your own words. Please write a minimum of 100 words.

Please rate how much you approve of the actions of the main protagonists in the article.

	Strongly disapprove	disapprove	Slightly disapprove	Neutral	Slightly approve	Approve	Strongly approve
How much do you approve of the actions of the Russian artist Petr Pavlensy?							
How much do you approve of the actions of the Russian State?							

Please rate how reading the article made you feel by rating these 10 emotions.

	Not at all	Slightly	Moderately	Very	Extremely
Angry					
Calm					
Scared					
Happy					
Fearful					
Peaceful					
Irritated					
Sad					
Joyful					
Upset					

C.4 debrief form

Debriefing

Thank you very much for participating in this study.
Now I would like to inform you in more detail about the study. You will receive additional debriefing as part of your PS113/114 Research Experience.

In this study I interested in information transmission of moral information. I investigated the processes of social transmission of moral information and what types of arguments (rational, emotional) get transmitted between people. I compared the transmission of information for two moral dilemmas (between-subject variable). One of the most famous moral dilemmas is Kohlberg's Heinz dilemma, which pits the two moral norms of life and ownership against each other. A real-life version of the Heinz dilemma emerged in the 1990s when African countries pushed for producing cheaper generica medicines to handle the AIDS crisis in their countries thereby violating the licenses and patents of pharmaceutical companies. I label this dilemma the "rational" dilemma. The second moral dilemma I used is a decency dilemma, an affective story with disrespectful or disgusting actions that "feel" disgusting and wrong but are harmless. Adults usually strongly reject these decency violations, but cannot generally

come up with a moral reason as to why these violations are wrong (nobody gets harmed), a phenomenon that Haidt et al. (1993) call moral dumbfounding.

People in the first position of the transmission chain read original articles and wrote their message for the next position. From position 2 to 6, participants read the message of the previous position and wrote their own message. All participants also rated the evaluations of the protagonists of the articles and their emotions while reading the article. I want to find out what information gets transmitted from person to person in the transmission chain and whether the information transmitted affects the evaluations people make about the protagonists.

I want to remind you that you have the right to withdraw from the study at any time during and after the study and the data will be destroyed and will not be used for analysis. If you have any questions please feel free to ask the experimenter now. In case you have any questions at a later point in time please feel free to contact the experimenter.

If you are dissatisfied with the way the research is conducted, please email the principal investigator in the first instance. If you feel the problem has not been resolved, please contact the secretary to the Ethics Committee: Ethics.Psychology@warwick.ac.uk

<p style="text-align:center">Thank you again for your participation and have a nice day.</p>

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c.5 decency article and questionnaire

By agreeing to participate you are indicating that: you have read and agree with the points above, and confirm that you are 18 years old or older.

- o Yes, I have read the brief and agree to participate in the study.
- o I don't want to participate in the study (close your browser window now).

Create personal ID code:

First letter of mother's first name:_____

First letter of father's first name:_____

Second letter of participants's first name:_____

House number: _____

- What is your gender?
    - o Male
    - o Female
    - o Prefer not to say
    - o Type your age in years (or leave blank):

South Africa fights Aids drug apartheid

Access to cut-price HIV pills would save millions of lives worldwide. Why do rich pharmaceutical firms refuse them, asks Nick Mathiason.

Zackie Achmat a 38-year-old black South African, is probably the world's most extraordinary drug smuggler. As far as anyone can tell, he's the only illegal importer of drugs who has ever voluntarily handed himself in, offered a video of himself clearing Customs and given over all receipts of his transactions to the authorities. Last October, Achmat, who has the Aids-related virus, HIV, flew to Thailand and bought 5,000 pills to treat people dying of Aids. He then flew back to South Africa and handed his drugs over to his country's government. The drug was Biozole, an anti-fungal treatment whose patent is owned by pharmaceuticals giant Pfizer. To buy a Pfizer pill over the counter in South Africa would cost about £9. In Thailand, Achmat scored the same generic drug for 15p. In trade-law-speak, Achmat's 'parallel importation' of Biozole is a vivid symbol of a growing healthcare scandal of epic proportions. Aids is sweeping through Africa much like the Black Death plague that wiped out so much of medieval Europe. Eminent African doctors are now saying that HIV will do more harm to Africans than slavery did.

Of the world's 34 million people infected with HIV, 25 million live in sub-Saharan Africa. Yet only 25,000 Africans (0.001 per cent of those infected) receive the drugs known as anti-retrovirals which prolong the lives of people with HIV and are freely available in the developed world.

Last week, Achmat was badly ill. Speaking in a whisper from his home, he said: 'Hundreds of people are dying every day in our country because they can't get access to the right drugs. The only thing that is stopping them is the price. I think it's immoral that people are dying just because they're poor.' Controlling the distribution of HIV drugs are some of the world's most powerful pharmaceuticals companies which, combined, make profits running into tens of billions of pounds. But in a move that will make Achmat's 'crime' seem utterly insignificant, the might of the world's drug industry, including the UK's GlaxoSmithKline, will, on 5 March, take the South African Government to court over alleged violation of intellectual property rights - essentially, the same principle that got Achmat into trouble. The constitutional case, which has been rumbling since 1997, will be heard at the Pretoria High Court and could, if appeals are exercised, run for years. Whoever eventually loses will not face damages, but costs running into tens of millions of pounds. At the heart of the case is a law passed by former President Nelson Mandela giving his country the right to buy huge amounts of generic drugs and sell them cheaply in South Africa. In addition, South Africa could compulsorily license HIV drugs and manufacture them within its borders, undercutting the multinational pharmaceuticals companies. The threat of legal action has so far prevented South Africa acting on this right. Pharmaceuticals companies believe these measures represent a threat to their balance sheets although, at present, just 1 per cent of drug revenues come from the entire African continent. But money lost through cheap generic could, drug

firms say, be ploughed into more research and development which may ultimately lead to a cure for HIV. Sanctioning cheap HIV drugs may also irritate hard- pressed health authorities in the western world, which spend up to 10 times more on their anti-retrovirals, and also alert the public as to the true - low - cost of medical drugs. Furthermore, argue the drugs firms, it is no good farming out cheap pills to countries that don't have robust health infrastructures. Drugs have to be monitored with scans and therapies. If that can't be done, drugs are useless. But African HIV campaigners argue that drug companies are putting their profits before the health of a whole region. For the South African government, eager to play a leading role in the global economy, court action is the last thing it wants. South Africa is a fully paid up member of the World Trade Organisation and signed the Trade Related Aspects of Intellectual Property Rights (Trips) agreement, which forces national governments to respect the rights of patent holders. Within the South African government there are major tensions between the health and trade ministries. 'This country has no intention of perpetrating a wholesale violation of intellectual property rights,' said Mark Heywood, head of the Aids Law Project at the University of Witwatersrand. 'It doesn't want to be seen as the Mugabe of the South. But the South African government has a duty to provide care for its citizens, and this is why they passed this law.' Even a leading pharmaceuticals analyst in the City last week said leading drug firms could afford to sanction cheap drugs tomorrow without it impacting on their balance sheets. Preferring to remain anonymous, he said: 'It does depend on the amount of usages and the amount given away. These programmes would be phased so that it didn't hit them that hard.' This court case, which has paralysed HIV healthcare in South Africa, highlights the problems of the entire continent. Many African countries rely on the generosity of overseas governments and pharmaceuticals companies to subsidise HIV drug prices. So far, that aid has been sparing. Throughout the Nineties, a series of high-level meetings with executives of leading pharmaceuticals companies and Western governments discussed dropping the prices of drugs. But the cost was deemed too high High-profile offers of cheap Aids treatment from Clinton's administration came with strings. A £700m offer of cheap drugs from the United States last year turned out to be export-import loans, at commercial interest rates, to buy American drugs at market prices. This offer, not surprisingly, was turned down. But progress is now discernible. Last May, five of the biggest drug companies agreed to begin talks with African nations to reduce the price of their drugs if countries agreed to health action plans drawn up by a leading business consultancy, McKinsey.

So far agreements have been reached with Uganda and Senegal. Others are set to follow. But rumours suggest that drug companies have sanctioned an increase in drug production to save thousands, rather than millions, of lives.

The British Government has done little to lobby for cheap drugs. Last November, Trade Minister Richard Caborn refused to sanction African nations circumventing Trips by citing 'national emergency' - which they are within their rights to do. 'I don't believe that this or related measures such as parallel importing are the answer here,' Caborn wrote to Ben Jackson, director of London-based Action for Southern Africa (Actsa), last November. Clare Short, the Minister for International Development, has no substantial initiatives planned in this area. 'Imagine witnessing devastating plague and sitting on a cure for fear of incurring shareholder revolt,' said Ben Jackson of Actsa. 'That essentially is the position of drug companies. Sure healthcare infrastructures have to be in place but it is not an either-or argument. These things can be done simultaneously.' Within a decade the number of people infected with HIV could reach more than 50 million, the equivalent of the population of

France or the UK. With the South African court case scheduled to begin in less than two months, the calls for pharmaceutical companies to move faster on dropping the prices of HIV drugs to developing countries are sure to get louder.

Please summarize the article you have just read in your own words. Please write a minimum of 100 words.

Please rate how much you approve of the actions of the main protagonists

	Strongly disapprove	*disapprove*	*Slightly disapprove*	*Neutral*	*Slightly approve*	*Approve*	*Strongly approve*
How much do you approve of the actions of the South African government?							
How much do you approve of the actions of the pharmaceutical companies?							

Please rate how reading the article made you feel by rating these 10 emotions.

	Not at all	Slightly	Moderately	Very	Extremely
Angry					
Calm					
Scared					
Happy					
Fearful					
Peaceful					
irritated					
Sad					
Joyful					

Upset					

C.2 debrief form

Debriefing

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Thank you again for your participation and have a nice day.

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