

Understanding Unethical Behaviour in the Workplace: The CUBT Model

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**Abstract**

Despite the advances in research on social contagions, personality and contextual factors, there has been no attempt to test the effect of coworker contagion on unethical behaviour in a comprehensive model. There is also a lack of research that attempted to identify a threshold for unethical behaviour. This dissertation provided a framework for testing coworker contagions and unethical behaviour threshold: The Contagious Unethical Behaviour Threshold (CUBT) model. Through a three-study package, the dissertation assessed the theoretical and empirical viability of coworker contagion levels, that is, the number of employees committing unethical behaviour, along with personal values (idealism and relativism) and contexts (risks and rewards) that moderate contagion effects on unethical behaviour. The dissertation also assessed the threshold concept, the point beyond which coworker contagions result in a clear increase in unethical behaviour likelihood. The first study found some support for the existence of a threshold concept based on a qualitative assessment of the effect of coworker contagion levels on unethical behaviour likelihood. Findings from the three studies strongly suggest that coworker contagion levels affected unethical behaviour likelihood. Most statistically significant interactions of personal values and contextual factors involved coworker contagion levels (in the three studies, a total of nine interactions involved coworker contagion levels while a total of three interactions did not involve coworker contagion levels). In all three studies, the contagion effect prevailed over other variables. This work expands on unethical behaviour theory and demonstrates the importance of appreciating the complex interplay among predictors in influencing unethical behaviour.

*Keywords: Unethical behaviour; Social contagions; Personality; Situations; CUBT Model*

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### **Understanding Unethical Behaviour in the Workplace: The CUBT Model**

What does it take for someone to behave “unethically” in a workplace situation? Is it a personality characteristic? Or is context important? Is unethical behaviour something we can “catch” from others? The concept of contagion in social sciences research is similar in meaning to the phenomenon of contagious conditions in the medical literature (Gino, 2015). Whereas contagion in medicine is a term used to refer to the tendency of a disease to spread from one person to another, in social sciences it refers to the propensity of a social behaviour and affect to spread from one person to another (Lindzey & Aronsson 1985). Social contagions encompass interpersonal communication and interactions that are reciprocal in nature where people mirror others’ behaviours and feelings (Burt, 1987).

Many workplace behaviours are contagious, positive or negative behaviours alike— a charismatic leader’s positive affect influences followers who in turn exhibit positive affect (Erez, Misangyi, Johnson, LePine, & Halverson, 2008); coworkers who are open about their job searches implicitly encourage others to follow suit (Felps et al., 2009). Emotional contagions spread from one person to another through mood changing stimuli such as attitudes and behaviours (Barsade, 2002). Although not tested, Andersson and Pearson (1999) suggest that the exposure to workplace incivility leads to incivility spirals that can spread within organizations. Finally, burnout complaints among coworkers predict employee burnout (Bakker, Le Blanc, & Schaufeli, 2005).

One of the recently studied contagions is unethical behaviour (Brass, Butterfield, & Skaggs 1998; Gino, Ayal, & Ariely, 2009a; Gino, Gu, and Zhong, 2009b). People are affected by “bad apples” (Gino et al., 2009a). They behave unethically when they observe a similar behaviour in the workplace (Gino, et al. 2009a; 2009b). The presence of an out-group member – a salient social norm factor that triggers a sense of responsibility and self-categorization to derive security and self esteem – leads to the contrary (Gino, et al., 2009b). That is, people act more ethically when they view an unethical behaviour by an in-group member in the presence of an out-group member. An example of an unethical contagion that spreads through observing others is cheating (Gino et al., 2009a). Aside from spreading through observing others, unethical contagions can spread through physical environments. For instance, the littering literature reveals that people are more likely to litter in an already littered area as compared to a litter-free area (Cialdini, Kallgren & Reno, 1991). In other words, when littering is “the new norm” it entices further littering (Kallgren, Reno, & Cialdini, 2000).

The intensity of the contagions determines whether they can spread through single incidents or not (Foulk, Woolum & Erez, 2016). Low-intensity contagions such as rudeness can spread after an exposure to a single incident, that is, when an individual experiences a single episode of rudeness, they are likely to be rude to others in future interactions (Foulk et al. 2016). The time-lag between exposure to unethical behaviour and its exhibition by the affected person determines unethical behaviour likelihood— for instance, experiencing incivility predicts incivility in subsequent interactions when the time lag between the two incidents is short (Meier & Gross, 2015).



**But When Will People Become Unethical?**

Existing evidence suggests that people are affected by situational factors, the observation of others committing a contagious behavior (Gino, Gu & Zhong, 2009) or the change in their physical environment (Kallgren, Reno & Cialdini, 2000), yet no direct evidence on the incremental effects of various contagion levels had been established to date. Although there is an indication that the intensity of a contagion determines whether it can spread through a single episode or not (Fouk et al. 2016), there is a lack of research to confirm or refute the presence of a threshold for unethical behaviour. Further, dichotomous comparisons in past research do not provide any insight into the threshold after which someone acts unethically.

Because of the lack of a universal definition of unethical behaviour and suggestions that such behaviours depend on what is considered a norm within a given organization, unethical behaviours were defined as *any behaviors that negatively affect co-workers or employers*. In the present research, coworker contagion levels refer to *the increasing number of coworkers acting unethically* and the threshold concept is operationally defined as *the observed number of coworkers that commit unethical behaviour in the workplace before an employee engages or is very likely to engage in the same behaviour*. It is important to note that coworker contagion was conceptualized in numbers rather than proportions because the former requires less mathematical proficiency. This dissertation explored employees working in a wide range of industries and hence it was more appropriate to use numbers. Proportions are more suitable when the studied sample is mathematically proficient. For example, a study by Ames (2008)

asked a sample of university students, many of whom were enrolled in an MBA program, to complete a graphing exercise to indicate the percentage of their self-assertiveness for different outcomes.

Zimbardo published *The Lucifer Effect* to illustrate how some good people “turn evil” or act unethically as they observe others acting unethically (Zimbardo, 2007). Although not empirically tested, Zimbardo presents examples of individual differences in personal values that moderate the effect of punishment contagions on unethical behaviour. Zimbardo also posits that situations, and especially the risks and rewards present in an environment, are the driving force influencing people to perform unusual behaviours. Similarly, Emergent Norm Theory (ENT), suggests that situations redefine how people act by establishing a guide for new norms (Turner & Killian 1987). For instance, integrity is a societal norm and taking unauthorized extended breaks at work is unethical. However, if most employees within an organization take extended lunch breaks, then extended breaks become a norm that disrupts integrity and re-defines what is considered appropriate.

### **The Contagion of Unethical Behaviour Threshold Model**

The present research provides the initial test of a theoretical framework for a threshold for unethical behaviour in the workplace and terms it the Contagion for Unethical Behaviour Threshold (CUBT) model. Because of the complexity of the CUBT model, the role of personal values, contexts, and their interactive effects are separately

discussed to explain their distinct effects. However, these components are simultaneously tested in this dissertation.

**The CUBT components.** There are five components for the CUBT model. The central components are the contagion and threshold concepts, with personal values and contexts serving as regulators of coworker contagion effects and threshold for unethical behaviour.

*1) Unethical behaviour as a contagion.* According to Contagion Theory, individuals engage in unethical behaviour because observing others motivates people to act unethically (Blumer, 1954; Lebon, 1895). For example, as an employee observes a coworker procrastinating, they are exposed to an unethical behavior, which triggers them to compare themselves to the coworker and hence engage in the same behaviour. That is, procrastinating is “contagious,” infecting the other coworkers. As noted earlier, coworker job searching behaviours explained variance in focal employee voluntary turnover (Felps et al., 2009). Similarly, coworker burnout complaints explained employee and group burnout (Bakker et al., 2005). Like Contagion Theory and the empirical evidence supporting its transmission mechanism, the CUBT model suggests that unethical behaviour transmits like a contagion. It also suggests that the strength of the unethical behaviour contagion is dependent on the number of coworkers committing the behaviour (or coworker contagion levels).

*2) Threshold for unethical behaviour.* ENT posits that non-traditional collective action can create a new norm. The new norm opposes traditional norms through a precipitation process. Every precipitation starts with a crisis, an event that leads to a

sense of urgency and uncertainty, such as the need to evacuate a place (Turner & Killian 1987). When a crisis precipitates, it disrupts traditional behaviour and forms emergent behaviour. This behaviour then becomes the new norm and sets the guide for collective action (Turner & Killian 1987). The new norm is established because people feel that their collective action is appropriate and necessary (Turner, 1996). Findings from empirical studies support ENT. A study on unethical behaviours tested whether observing a confederate cheating will influence individual unethical behaviour (Gino, Ayal, & Ariely, 2009b). The participants were asked to perform a timed counting exercise where they had to record their performance on a work slip. Correct counts were rewarded: the higher the number of correct counts, the more the amount of money awarded to the participants. When the participants had an opportunity to cheat, because they were told that no one would check their work slip, they cheated more often than when an in-group member cheated. Gino et. al and colleagues (2009b) concluded that an in-group member serves as a descriptive norm, a situational guide for individuals to cheat. In relation to ENT theory, an in-group member served as a trigger for the new norm of “cheating” by breaking the traditional norm of honesty.

Similar to ENT, the CUBT model posits that unethical norms will guide employee behaviour. However, the CUBT model suggests that the new norms are affected by coworker contagion levels: the number of coworkers who are engaged in unethical behaviour. The CUBT model also suggests that employees will exhibit unethical behaviour when they reach their threshold. For example, when an employee observes colleagues mistreating a “newbie” in an organization, they are likely to perform

the same behaviour as the number of colleagues that mistreat the newbie increases up to a certain number. The mistreatment of the newbie is the emergent behaviour that becomes the new norm guiding employee behaviour.

**3) *The role of personal values.*** Personal values are expected to affect unethical behaviour likelihood, uniquely and interactively, as well as moderate the effect of coworker contagion levels on unethical behaviour likelihood. Two widely studied personal values are idealism and relativism. Idealism is the interest in the welfare of others and avoiding harm to others at all costs (Kim, 2003). Relativism is the value centered on the doubt toward universal rules, such as not stealing and telling the truth, and the view of harm as a necessity to do well in some instances (Forsyth, 1980). Idealism and relativism profiles vary across cultures—low idealism and low relativism is common in Western countries, high idealism and high relativism and low idealism and high relativism are both common in Eastern countries, while high idealism and low relativism and high idealism and high relativism are common in the Middle East (Forsyth, 2008).

Many studies support the impact of idealism on unethical behaviour. In Barnett, Bass and Brown (1996), for example, participants were exposed to a cheating vignette and then asked to complete a questionnaire about it. Barnett and colleagues (1996) found that high idealism was positively related to reporting unethical behaviour. Another study by Kim (2003) used an online study where participants completed a questionnaire related to ethical issues, ethical standards and individual practices. The study found that idealism positively affected the three ethical outcomes.

Someone with high relativism is more likely to commit unethical behaviour as compared to someone with low relativistic values. The evidence to support these expectations stem from the fact that relativism is negatively related to reporting unethical behaviour (Barnett et al, 1996), and positively associated with committing unethical behaviour (Boyle, 2000). With high relativism, the view of harm as a necessity to do well in some instances suggests a tolerance for unethical behaviour that advances oneself at the expense of others. In a study by Boyle (2000), real estate agents were asked to provide an ethical judgement on the unethical behaviour of the practitioner toward consumers in a hypothetical scenario. Compared to low relativists, high relativists judged the practitioner's behaviour in the scenario as being moral. This suggests that high relativism is associated with a higher tolerance for unethical behaviour.

Forsyth and colleagues (2008) encouraged researchers to test the interactions between idealism and relativism in influencing behaviour. Despite this call, there is a dearth of research on the interaction between relativism and idealism with mixed results, some failing to find significant interactions (Hastings & Finegan, 2011) and others finding significant interactions (Henle, Giacalone & Jurkiewicz, 2005). The level at which relativism is assessed determines whether those with low idealism will differ from those with high idealism in terms of predicting unethical outcomes. Because low relativists strictly adhere to moral principles, there are no differences in organizational deviance between low relativists with low idealism and low relativists with high idealism (Henle et al., 2005). Contrarily, high relativists reject moral codes and have higher moral flexibility. Therefore, for those possessing high relativism, low idealism, or low levels of

concern for the welfare of others, increases organizational deviance, as compared to high idealism, or higher levels of interest in the welfare of others (Henle, et al. 2005).

Previous studies have illustrated the effect of vignettes, hypothetical scenarios, and ethical questionnaires on surfacing differences in unethical outcomes between idealists and relativists (Barnett et al, 1996; Boyle, 2000; Kim, 2003). The CUBT extends past findings by suggesting that idealism and relativism will affect the relationship between coworker contagion and unethical behaviour likelihood. These expectations are based on Signalling Theory. Signalling Theory posits the presence of a sender, signal and receiver (Connelly, Certo, Ireland, & Reutzel, 2011). In this case, the senders are coworkers, the signal is unethical contagion, and the receiver is the focal employee affected by the signal. Coworkers send “contagion signals” to enable unethical behaviour likelihood and employees respond to the signal depending on how much they resonate with it. A coworker contagion signal is expected to resonate with low idealists because of its congruence with low levels of concern for others and less so with high idealists because of its incongruence with their concern for the welfare of others (Henle, Giacalone & Jurkiewicz, 2005). In the presence of contagion signals, low idealists are expected to identify with the signals and have higher unethical behaviour likelihood as compared to high idealists. Further, a coworker contagion signal will define a situation where unethical behaviour is normalized and hence resonate with high relativists by tapping into their tendency to rely on situational cues, and less so with low relativists who rely on moral principles, rather than situational cues, to guide their decisions (Forsyth, O’boyle, & McDaniel, 2008). Consequently, upon exposure to coworker

contagion, high relativists are expected to rely on contagion signals to guide their judgement and thus have higher unethical behaviour likelihood as compared to low relativists.

The CUBT extends past research for testing interactions between idealism and relativism through the assertion that idealism and relativism interactions will moderate the relationship between coworker contagion and unethical behaviour likelihood. A central tenet of Signalling Theory is related to the relevance of signals to the receiver. Given that coworker contagion is an unethical signal, low relativists will find the signal inconsistent with their strict moral principles. Therefore, for low relativists, low idealism will not increase receptivity to contagion signals as compared to those high in idealism. However, for high relativists, coworker contagion is a relevant unethical signal that defines unethical behaviour as a norm. Consequently, for high relativists, low idealism which is associated with low levels of concern for the welfare of others, will increase receptivity to contagion signals as compared to high idealism which is characterized by higher levels of concern for others. Therefore, it is expected that coworker contagion will lead to a steeper increase in unethical behaviour likelihood for high relativists with low idealism as compared to high relativists with high idealism.

**4) The role of context.** In the CUBT model, situational effects pertain to the risks and rewards associated with unethical behaviour and their tendency to moderate the effect of coworker contagion on unethical behaviour likelihood. High rewards or low risks are expected to increase unethical behaviour likelihood because they facilitate unethical actions as compared to low rewards or high risks, which are expected to result



in the contrary. Studies have revealed that an assessment of the benefits associated with committing dishonest or unethical behaviour and the risk of getting caught are vital in the decision-making process (Leming, 1980; Michaels & Miethe, 1989; Werbel & Balkin, 2010).

One common reward for unethical behaviour is monetary benefits. For instance, a study by Roman and Munuera (2005) used a questionnaire to assess the influence of several factors on common unethical behaviours among salespeople. They found that if salespeople are paid on a fixed salary basis (compared to a commission basis), they are less inclined to engage in unethical behaviour. In other words, the monetary rewards of higher commissions serve as a perverse incentive that unintentionally encourages unethical behaviour. A frequent risk that is reported in the literature is the chance of getting caught while committing unethical behaviour. For example, a study of corporate managers assessed the effect of several factors on their unethical conduct, for a number of offenses (Smith, Simpson, & Huang, 2008). The participants received a randomly assigned scenario and answered questions about the benefits of committing the unethical behaviour (e.g. advancing within the organization) in the scenario as well as the risks (e.g. dismissal) associated with it. The perceived risk of being associated with the misconduct significantly reduced the likelihood of engaging in the unethical behaviour. Contrarily, the perceived benefit of impressing top management through increasing organizational revenues increased the likelihood for bribing clients to achieve that end. In conclusion, because costs and benefits shape unethical decisions they are expected to increase and decrease unethical behaviour likelihood respectively.

The CUBT model extends the current literature by suggesting that risks and rewards are each expected to moderate the effect of coworker contagion on unethical behaviour. The CUBT model posits that the effect of coworker contagion signals is dependent on the restrictiveness and permissiveness of the context surrounding unethical behaviour. Restrictiveness and permissiveness are assessed by people based on the information on risks and rewards, both of which determine contagion receptivity. Coworker contagion signals are expected to result in a shallower increase in unethical behaviour likelihood in high risk situations as compared to low risk situations. This is expected because a contagion signal is unlikely to enable unethical behaviour when the context for acting unethically is restrictive, that is when risks (or costs) are high. High risks decrease coworker contagion signal receptivity by setting a costly context. Further, coworker contagion signals are expected to result in a steeper increase in unethical behaviour likelihood in high reward situations as compared to low reward situations. This is expected because a contagion signal is likely to enable unethical behaviour when the context is permissive, that is when rewards are high. In other words, rewards enable contagion signal receptivity by setting a permissive context that increases the benefits for acting unethically.

The CUBT model further extends the literature by suggesting that there will be a significant interaction between risks, rewards and coworker contagion in affecting unethical behaviour likelihood. A combination of low risks and high rewards is very permissive and hence represents a situation where contagion receptivity is the highest. In this situation, coworker contagion is expected to result in the steepest increase in

unethical behaviour likelihood. Low risks and low rewards as well as high risks and high rewards represent less permissive situations where coworker contagion is expected to yield a shallower increase in unethical behaviour likelihood. Finally, high risks and low rewards represent a restrictive situation where coworker contagion receptivity is expected to be the lowest. Therefore, a high risk and low reward situation is expected to result in the shallowest increase in unethical behaviour likelihood upon exposure to coworker contagions.

**5) The interactive role of personality and contexts.** The role of personal values and contexts in regulating the effect of coworker contagion on unethical behaviour has been discussed above. However, the more complex and perhaps accurate depiction of the effects of coworker contagion on unethical behaviour is best understood by studying how the interaction between personal values and contexts regulate contagion effects.

It was posited earlier that individuals with high relativism and low idealism resonate with coworker contagion signals more than those with high relativism and high idealism. Also, the position that high rewards increase coworker contagion signal receptivity in high risk and low risk contexts by making a situation more permissive for committing unethical behaviour has already been presented. Because of their tendency to restrict unethical behaviours, certain contextual factor combinations might be too restrictive to allow for any individual level effects on unethical behaviours. Particularly, a high risk (such as getting fired) and low reward (such as low monetary rewards) situation is associated with a high cost and a low benefit for acting unethically and such context is expected to limit individual level variability in responding to contagion effects.

Contrarily, low risk (a small chance of getting caught) and high reward (large monetary rewards) situation is permissive for unethical behaviour. In such a highly enabling context, expected effects of personal values on the relationship between coworker contagions and unethical behaviour likelihood are likely to surface. Low risk and low reward situations as well as high risk and high situations are also expected to allow personal values to affect the relationship between coworker contagions and unethical behaviour likelihood. However, relative to low risk and high reward situations, the differences between personal value groups in responding to coworker contagions are not expected to be pronounced in these two situations. The personal value effects on the relationship between coworker contagion and unethical behaviour likelihood is expected to be in line with the *role of personal values* of the CUBT model: relative to high relativists with high idealism, high relativists with low idealism are expected to exhibit a steep increase in unethical behaviour likelihood with an increase in coworker contagions.

**Possible mechanisms of processing contagions.** This dissertation is novel and exploratory in terms of the possible mechanisms (rational or unconscious) that underlie contagion processing. The Elaboration Likelihood Model sheds light into two potential routes for processing messages (Petty & Cacioppo, 1981; Petty & Cacioppo, 1986). The model posits that processing messages takes place either automatically through a “peripheral route” or deliberately through a “central route” (O’Keefe, 1990; Petty & Briñol, 2011). Past literature in this realm has demonstrated that some behaviours such as aggression follow peripheral and central processing routes (Douglas et al., 2008). Likewise, unethical contagion messages could follow either processing path. If the

receiver finds the unethical messages motivating or possesses the ability to think about them, then they are likely to follow a central processing route (Petty & Cacioppo, 1984). The CUBT model is relevant here in that coworker contagion could motivate the receiver to act unethically depending on the risks and rewards involved— for instance, low risks and high rewards could motivate the adoption of a central processing route. Contrarily, if contagion messages are ambiguous, attitudinally neutral or lack the tendency to motivate receivers, a peripheral route might be sought by the receiver (Petty & Cacioppo, 1984). Similarly, if the receiver lacks the ability to deliberately process the messages, a peripheral path of processing is likely. Therefore, it is possible that unethical contagion messages are processed peripherally if the receiver finds the contagion signals ambiguous, as in situations with no defined contexts, or the receiver's values are neutral to the contagion message.

At least three theories support automatic or unconscious processing of unethical contagions within the CUBT framework: ENT, Signalling Theory and Prospect Theory, while at least one, Rational Choice Theory, argues for a rational or central processing path. From an ENT perspective, contagion processing follows a non-rational process because it depends on the tendency of contagions to disrupt old norms, precipitate and signal focal employees to act unethically. Risks and rewards regulate unethical contagion precipitation and personal values determine the level of response to contagions. With Signalling Theory people unconsciously respond to contagion signals depending on their strength (number of coworkers acting unethically), the contexts impacting the strength of the signal (such as risks and rewards) and whether or not it is

relevant to them (such as one's level of idealism and relativism). Prospect Theory on the other hand suggests that risk levels determine behavioural outcomes. Loss frame situations could motivate risk seeking and thus encourage response to contagions while gain frame situations could encourage a risk averse stance and subsequent hesitance to respond to contagion signals. Rational Choice Theory, assumes that risks and rewards allow people to rationalize unethical behaviours. The engagement of a person in a deliberate cost-benefit analysis, following exposure to contagions, determines their likelihood to act unethically. The lower the risks and the higher the rewards, the more likely a person is to respond to unethical contagions. The expectations in the CUBT model draw from the key components of these theories (such as cost-benefit analyses from Rational Choice Theory, and signal receptivity from Signalling Theory) but there are not means to predict the "route" (conscious or unconscious) or exact contagion effect patterns. However, the results will be discussed in light of implications for which mechanism is at play.

### **What does the CUBT Model Add?**

Contagion Theory suggests that observing others acting unethically, in the same environment, is a cue for unethical behaviour by individuals. The CUBT model suggests that as individuals observe a progressively increasing number of others performing unethical behaviour, their own likelihood for committing such behaviours will increase. I extend the contagion concept by suggesting that when individuals increasingly observe others performing unethical behaviour, they will reach a threshold and in turn act unethically themselves. Exploring the concept of unethical behaviour threshold and

attempting to understand whether it exists as a discernable phenomenon is an important contribution to the unethical behaviour literature. The CUBT model has five components that will be tested in this dissertation to understand the effect of coworker contagion levels, personal values and situations and their interplay on unethical behaviour likelihood and threshold. Testing these components in the CUBT's comprehensive framework is important to better understand unethical behaviour and provides a novel theoretical contribution to unethical behaviour theory.

Specifically, the CUBT model builds on the concept of a contagion from Contagion Theory, and similar to ENT, suggests that unethical behaviour can become a "new norm" that opposes universal ethical principles. It adds to Contagion Theory and ENT by suggesting that the new norm is established with increasing numbers of coworkers undergoing the unethical behaviour. In relation to Signalling Theory, the CUBT model furthers current knowledge by testing whether contagion signal effects are moderated by personal values and contexts. As for Rational Choice Theory, the CUBT model moves beyond simple cost-benefit analyses by testing contagion effects in conjunction with risks and rewards.

In the CUBT's model, interactions of personal values and contextual factors with coworker contagion levels are likely. However, because past research has not tested similar interactions, it is exploratory which exact interactions will emerge. The exact shape of interactions is also difficult to discern *a priori*. Nevertheless, some theoretical expectations were outlined in the introduction and specific hypotheses are listed under respective studies.

### **The Present Research**

The CUBT model is tested in three studies that examine unethical behaviour likelihood. The three self-report studies include a decontextualized scenario (Study 1), and contextualized scenarios with one behaviour (Study 2) and multiple behaviours (Study 3) to measure unethical behaviour likelihood in the presence and absence of situational variables (i.e., risks and rewards). Scenarios clarify uncertainties in the future (Ringland & Schwartz, 1998), and are therefore appropriate to understand ambiguous phenomena such as the likelihood for engaging in unethical behaviour. For the contextualized experiments (Studies 2 and 3), the scenarios were designed to provide sufficient details to allow participants to assess the risks and rewards associated with unethical behaviours. For the scenarios please see **Appendix A**. All three experiments involved a task where participants reported their likelihood for engaging in unethical behaviour as the number of others performing the same behaviour increased. The purpose of the three-study dissertation was to explore the impact of coworker contagions, personal values and contextual variables on unethical behaviour likelihood and test whether there is a threshold before which employees decide to act unethically.

Figure 1 is a simplified conceptual flow chart revealing the effect of coworker contagions on unethical behaviour likelihood. The box on the left side of the figure represents coworker contagion, referring to the number of coworkers acting unethically. The higher the number of coworkers, the stronger the receptivity towards contagions (middle box). A stronger receptivity leads to a greater increase in unethical behaviour likelihood (bottom right-side box) and lower unethical behaviour threshold (top right-



side box). The receptivity modifiers box depicts the factors that would increase receptivity strength and subsequent increase in unethical behaviour likelihood as well as reduce the threshold for unethical behaviour.

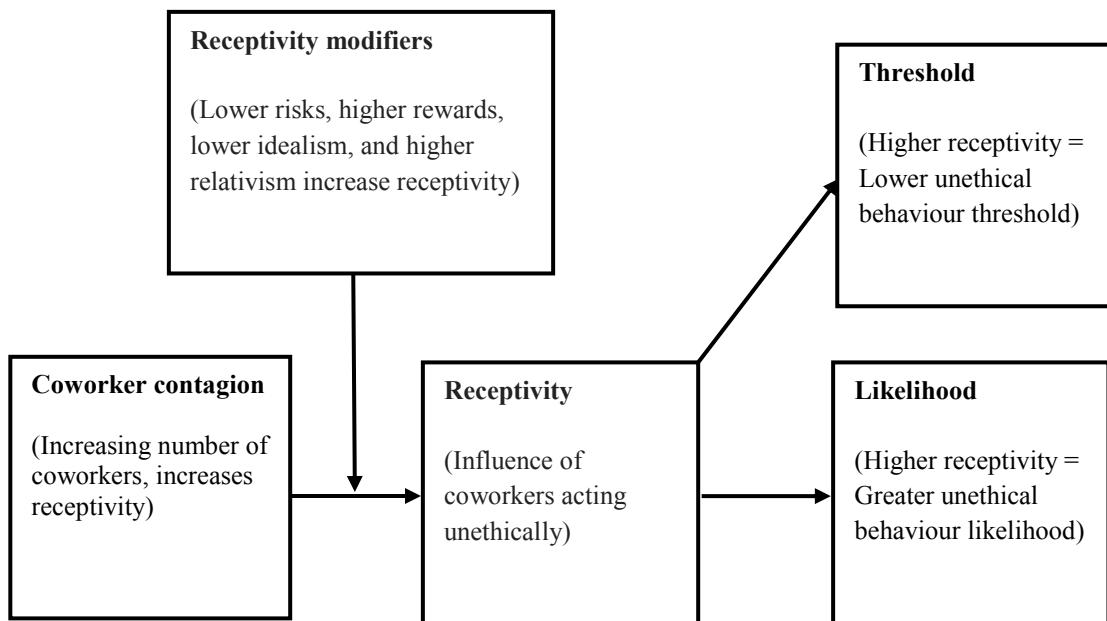


Figure 1. The CUBT framework

### Study 1: Decontextualized Scenario

Study 1 examined unethical behaviour likelihood in a decontextualized scenario. The study tested three components of the CUBT model: 1) *Unethical behaviour as a contagion*—previously tested in the contagion literature (e.g. Bakker, Le Blanc & Schaufeli, 2005; Gino, Ayal & Ariely 2009) but expanded on to test the effect of increasing contagion levels; 2) *Unethical behaviour threshold*; and 3) *the role of personal values*. In Study 1, unethical behaviour was examined by studying how participants rate their own likelihood for engaging in unethical behaviour as a function of the number of others committing the same behaviour, without providing much context. The participants first completed a demographic questionnaire including a question that asked participants to provide an example of minor, moderate and severe unethical behaviour that they have observed in the past. Participants then completed the Ethical Position Questionnaire (EPQ), a scale used to measure individual differences in moral thoughts in two domains, idealism and relativism (Forsyth, 1980). Next, the participants were provided instructions for a decontextualized scenario. They were told that there are many unethical behaviours in the workplace. They were then asked to think of an unethical behaviour in the workplace and rate their likelihood for acting unethically for their chosen behaviour. After a pilot test, the study was modified and instead of asking participants to choose an unethical behaviour and rate it, the participants were asked to rate four behaviours that were derived from the examples provided by the participants during the pilot phase. The four behaviours were: Behaviour 1 = Slacking off at work,

Behaviour 2= Extended or extra unscheduled breaks, Behaviour 3= taking home supplies, and Behaviour 4= leaving work early or calling in sick.

In Study 1, (the decontextualized scenario) there were no situational influences (risks and rewards) to assess, as no specific scenario was described. Participants were simply asked to rate their unethical behaviour likelihood for four listed behaviours at each coworker contagion level. However, personal values were tested in order to allow for an analysis of their potential impact. As noted above, unethical behaviour has been shown to spread like a contagion (Gino et al., 2009). Therefore, coworker contagion level is expected to increase unethical behaviour likelihood:

*H1: Coworker contagion will have a significant effect on unethical behaviour likelihood.*

Based on the role of the personal values component of the CUBT model, personal values will affect unethical behaviour likelihood. High relativists do not adhere to moral standards set by society while low relativists are strict about following moral codes (Forsyth et. al, 2008; Henle et al., 2005). Because of their care about the welfare of others, high idealists perceive ethically questionable behaviour as being immoral, making them more likely to refrain from unethical behaviour as compared to low idealists who do not perceive ethics to be important in governing decisions (Forsyth et. al, 2008; Henle et al., 2005; Vitell et al., 1993). Based on these findings, it is expected that:

*H2: Low idealists will have higher unethical behaviour likelihood as compared to high idealists.*

*H3: High relativists will have higher unethical behaviour likelihood as compared to low relativists.*

Relativism trumps idealism because it defines whether someone adheres to moral codes or relies on their situational judgement of events. In other words, a given level of relativism determines whether there will be differences between low idealists and high idealists in predicting unethical outcomes. Because of the tendency of low relativists to strictly adhere to moral codes of behaviour (Forsyth et al., 2008), it is unlikely to expect a difference between low relativists with low versus high levels of idealism. That is, if two people obey moral principles but one cares about the welfare of others while the other does not, both will have similar likelihoods for acting unethically. In contrast, due to the deviation of high relativists from moral codes and their tendency to make situational judgements (Forsyth, 2013; Hasting et al., 2011), low idealism is expected to result in higher unethical behaviour as compared to high idealism when a person is a high relativist. If someone deviates from moral codes, their level of concern for the welfare of others will determine their likelihood for unethical behaviour. Past research has found no differences between low and high idealists possessing low relativistic values in terms of predicting organizational deviance, while finding higher deviance in low idealists versus high idealists when possessing high relativistic values (Henle et al., 2005). Based on this rationale, it is expected that:

*H4: Relativism and idealism will interact in affecting unethical behaviour likelihood, only for those with high relativism, possessing low idealistic values*

*will result in higher unethical behaviour likelihood in comparison to possessing high idealistic values.*

Coworker contagion is an “unethical signal” that is more congruent with the low integrity of low idealists as compared to the high integrity of high idealists. Given the congruence between low idealism and unethical signals, it is expected that low idealists will resonate with coworker contagion and thus have a higher unethical behaviour as compared to high idealists. However, in the absence of coworker contagions, low idealists will not have a higher unethical behaviour likelihood as compared to high idealists due the lack of an unethical signal to cue low idealists to act unethically.

*H5: Low idealists will be more receptive to coworker contagions in comparison to high idealists.*

Compared to low relativists, high relativists are expected to be more responsive to coworker contagion because it serves as a favorable cue for unethical behaviour by defining a situation where unethical behaviour is the norm. However, in the absence of contagions, no differences are expected between low and high relativists because of the lack of an unethical coworker contagion signal to guide high relativists and differentiate their unethical behaviour likelihood from low relativists. Based on this logic it is hypothesized that:

*H6: High relativists will be more receptive to coworker contagions in comparison to low relativists.*

It was noted earlier that relativism trumps idealism. It is thus reasonable to expect that the differences in coworker contagion receptivity between low and high

idealists will depend on whether they possess low or high relativism. Because low relativists rigidly obey ethical standards, no differences in coworker contagion receptivity are expected between low and high idealists, if both idealist counterparts possess low relativism. However, high relativism increases sensitivity to situational cues for unethical behaviour, including coworker contagion signals, and low idealism increases receptivity to coworker contagion signals because of the congruence between unethical signals and low levels of concern for others. It is thus logical to expect that low idealists will be more receptive to coworker contagion signals as compared to high idealists but only if both groups possess high relativism:

*H7: When possessing high relativism, low idealists will be more receptive to coworker contagions in comparison to high idealists.*

To test the threshold concept at a qualitative level, unethical behaviour likelihood responses were assessed. First, participants were asked to indicate their likelihood for unethical behaviour for an increasing proportion of their coworkers from zero coworkers to ten coworkers. Then their responses were individually graphed where the x-axis was coworker contagion level and the y-axis was unethical behaviour likelihood. Finally, guidelines were set to characterize the shape of unethical behaviour likelihood. This was important due to the novelty of the idea of unethical behaviour threshold and the dearth of qualitative knowledge that can add to our understanding of the concept.

## **Method**

**Procedure.** The study was first pilot tested with 16 participants. After providing their consent, participants were asked to complete a demographic questionnaire that

included questions on sex, age, work status, and number of employees that they work closely with. They were also asked to think of an example of a minor, moderate and severe unethical behaviour. After that pilot participants were asked to complete idealism and relativism questionnaires. Next, pilot participants viewed the instructions for the scenarios. To avoid priming participants to think of the study as an unethical behaviour investigation, they were instructed that there are negative and positive behaviours in the workplace. They were deceptively instructed that they were assigned to the negative behaviours condition, where all the conditions were on unethical behaviour. Participants were then asked to imagine an unethical behaviour that they have experienced or committed in a current or previous work setting and enter their likelihood of committing unethical behaviour at 11 coworker contagion levels, representing a progressively increasing number of coworkers acting unethically by one unit from 0 to 10 individuals. For each coworker contagion level, participants entered a value for their likelihood for engaging in unethical behaviour based on a 1 (Definitely Not) to 5 (Definitely) Likert scale (an approach adapted from a study on assertiveness by Ames, 2008). Next, pilot participants provided feedback on the clarity of the instructions, tasks and participant compensation. When the pilot participants chose a moderate or severe unethical behaviour as their rated behaviour, there was limited variability in unethical behaviour likelihood, depicting a clear floor effect as participants were “Definitely Not” willing to commit unethical behaviour, in each coworker contagion level.

After the pilot, Study 1 was revised and instead of asking participants to think of an example of an unethical behaviour and then rate it, the four most common unethical

behaviours were chosen from the minor unethical behaviours rated by pilot participants: 1) slacking off at work, 2) extended or extra unscheduled breaks, 3) taking home supplies, and 4) leaving work early or calling in sick. Participants were asked to indicate their likelihood for acting unethically for each one of the four behaviours. The participants were not provided any scenario or information on the risks and rewards involved with the behaviours. Finally, the 11 coworker contagion levels were collapsed into five levels (zero, 1-3, 4-6, 7-9, all 10 employees) because the variability was limited within these five categories, that is there was a near negligible change within the five levels.

Because participants were asked about the number of employees they work with prior to completing the scenarios, there was a potential for a priming effect—participants could have misinterpreted the dependent variable as the number of coworkers of their referent group size, rather than the one in the scenario. Therefore, a validation check was performed. First, a size index was computed for each participant as follows, where  $k$  is the number of employees in the highest contagion level (10 employees) and  $n$  is the unique number of coworkers that the participant closely works with:  $\text{Size index} = k/n$ . After computing the size index, it was correlated with the unethical behaviour likelihood at each contagion level. There was no significant correlation between the size index and likelihood at any contagion level (level 1:  $r(277) = .047, p > .05$ ; level 2:  $r(277) = .015, p > .05$ ; level 3:  $r(277) = -.004, p > .05$ ; level 4:  $r(277) = -.027, p > .05$ ; level 5:  $r(277) = -.063, p > .05$ ). This test suggests that participants' unique number of coworkers that they



closely work with did not impact their interpretation of the contagion levels in the tested scenarios.

**Design.** This study used a mixed subjects design, with idealism and relativism as continuous dispositional independent variables, coworker contagion level, the frequency of others that commit the behaviour, as a categorical within-subject variable, from 0 employees to a maximum of 10 employees (level 1: 0 employees, level 2: 1-3 employees, level 3: 4-6 employees, level 4: 7-9 employees, and level 5: all 10 employees), and the likelihood for engaging in unethical behaviour is the dependant variable. After completing the idealism and relativism scales, participants rated their likelihood of committing unethical behaviour at each coworker contagion level. Using the G\*Power 3.0.010 software, the required sample size was estimated for a mixed repeated-between subject design. It was found that a minimum sample size of 172 participants was required to detect a small to medium effect size (Cohen's  $f = .125$ ), for four groups, high/ low idealism and relativism interactions in five repeated coworker contagion levels.

**Participants.** The sample included 283 adults (18 or older), who responded to the likelihood of behaving unethically at five coworker contagion levels (indicating the number of colleagues who are engaged in unethical behaviour). Participants were recruited through two methods: the *sample size* webpage ad for Reddit.com and a bonus-point system at a small Canadian university. Online participants had the option to enter a prize draw for one of four \$100 pre-paid credit cards.

In Study 1's sample, the average of idealism was  $M(SD)=6.0(1.49)$  and the average of relativism was  $M(SD)=5.1(1.36)$ . Out of all participants, 53.4% of identified

themselves as females, 43.1% as males, 1.1% as transgender, and 2.4% as “other gender.” The average age of participants was  $M(SD)=25.5(6.92)$ . Most participants, (80.9%) were Caucasian, 13.1% were East Asian/pacific islanders, and 6% listed “other ethnicities.” In terms of residence, 76.5% of participants were from the U.S, 9.7% from Canada, 2.4% from the U.K and 11.3% from other countries. The breakdown of the highest held education level was as follows: 25.5% for high school, 10.1% for college diplomas, 40.2% for undergraduate, 20.5% for graduate and 3.2% for other. The average number of employees with whom participants worked closely was  $M(SD)=12(27.27)$ . Employees worked an average of  $M(SD)=34.5(12.84)$  regular hours and  $M(SD)=2.0(5.62)$  of overtime hours per week. About 81% of participants were employed at the time of the study—40.6% on salary, 56.0% on a per hour basis, 1.4% on commission, and 2.1% on salary and commission.

**Measures.** The coworker contagion level measure consisted of five levels (zero, 1-3, 4-6, 7-9, all 10 employees). Each level represented the number of coworkers acting unethically. The effect of these contagion levels was assessed for each one of the four tested behaviours.

The EPQ was used to measure idealism and relativism (Forsyth, 1980). The scale consists of two subscales with 10 items for each position on a 1 “Completely disagree” to 9” Completely agree” Likert scale, for a total of 20 items (**Appendix B**). The Cronbach alpha is .82 for idealism and .84 for relativism. A sample item for the idealism scale is “a person should make certain that their actions never intentionally harm another even to a small degree” and one for the relativism scale is “What is ethical varies from one

situation to another.” This study included a qualitative analysis to complement the quantitative analyses and visualize unethical behaviour likelihood with increasing contagion effects. The goal of the qualitative analysis was to categorize curves into logical and theoretically sensible unethical behaviour likelihood prototypes by looking at individual unethical behaviour likelihood responses at each coworker contagion level. Therefore, the first step was to draw all individual unethical behaviour likelihood graphs. After that two researchers (Mohammed Al-hamdani and Debra Gilin-Oore) examined a set of 30 curves to develop an initial guideline for categorizing individual unethical behaviour graphs. The two researchers then agreed on the presence of four distinct prototypes and specified the operational definition of each prototype to enable curve coding. Following the establishment of the initial guideline, a set of 30 curves was independently coded by two researchers (Mohammed Al-hamdani and Caitlin Murphy). The researchers then discussed their pilot coded curves and revised the guidelines to include five prototypes. To test the revised guidelines, a second and different set of 30 curves were independently coded by the two researchers (Mohammed Al-hamdani and Caitlin Murphy). After coding the curves using the revised guideline, the two researchers discussed their coded curves and wrote a final guideline that was then used for coding the entire data (See **Appendix C** for the final guideline). Inter-rater reliability was tested for the two pilot coding phases and the final coding phase. After that the two researchers reached consensus on curve prototype categorization to identify the percentage of unethical behaviour graphs that fell under each one of the five prototypes.

**Analysis.** A Confirmatory Factor Analysis (CFA) was completed to determine whether idealism and relativism are distinct constructs. For the main analysis, a repeated measures ANOVA was used for analysis because it is a comprehensive and flexible approach, especially when there is no missing data, the number of observations per participant are equal, and the dependent variable is measured at equal increments (Lininger, Spybrook, & Cheatham, 2015). A three-way repeated ANOVA model was used to test the unique and interactive effects of coworker contagion levels, idealism and relativism. For significant effects, t-tests were used to assess group differences. For inter-rater reliability assessment, Altman's (1991) definition of good strength of agreement based on kappa values of .61-.80 was used as a benchmark for the kappa coefficients in this study. EQS 6.1 was used for the CFA and SPSS version 23 was used for the ANOVA test and inter-rater reliability analysis.

## **Results**

**Confirmatory factor analysis.** There is a limited number of CFAs on idealism and relativism in the past literature. To ensure that idealism and relativism are distinct constructs, a one-factor model where the 20 items of the EPQ scale were loaded was compared to both a correlated and uncorrelated two-factor model. In the two-factor models, the items 1-10 representing were loaded on idealism and items 11-20 were loaded on relativism. Robust statistics were used for each model because of the non-normality found in each model. Table 1 shows the chi-square, CFI, and RMSEA indices as well as the RMSEA 90% confidence intervals for each model. The uncorrelated two-factor model yields better goodness of fit as compared to the one-factor model ( $\chi^2$  diff

(1, N = 340) = 710.93,  $p < .001$ ), as well as higher CFI and lower RMSEA values.

However, there are no differences between the correlated and uncorrelated models ( $\chi^2$  diff (1, N = 339) = 0.065,  $p > 0.001$ ), and therefore the uncorrelated model is preferred for parsimony. While the two factor models demonstrate a better goodness of fit than the one factor model, they nonetheless do not meet the conventions for “good fit” (CFI of .90 or higher, and RMSEA of .06 or lower).

Table 1.

*Fit indices for the 1-factor and 2-factor models (de-contextualized scenario)*

Model	$\chi^2$	<i>df</i>	CFI	RMSEA (90% CI)
1-Factor	1364.68	170	0.44	0.14(0.14,0.15)
2-Factor uncorrelated	653.75	170	0.77	0.09(0.08,0.10)
2-Factor correlated	654.40	169	0.77	0.09(0.08,0.10)

The reliability coefficient Rho for the uncorrelated 2-factor model is 0.845. Table 2 shows the standardized factor loading and robust standard error for the idealism and relativism scale items. Most of items 1-10 (all but item 9) are loading on idealism and most of items 11-20 (all but item 19) load on relativism in the two-factor model, and thus idealism and relativism are two distinct constructs. A LeGrange test suggested a path from item 10 to relativism and item 19 to idealism will improve fit. It seems logical to implement the two modifications, item 10 includes the phrase “most perfection action” thus implying that there are situations that are imperfectly moral and highlighting the potential for some deviance from moral codes which is an aspect of relativism. Similarly, item 19 speaks to “lying” which could harm others, which fits within the content domain

of idealism. However, the EPQ is a published scale with respected reliability values and modifications are inappropriate.

Table 2.

*Factor loadings and standard error for the uncorrelated two-factor model (de contextualized scenario)*

Item	Idealism		Relativism	
	St. $\beta$	SE	St. $\beta$	SE
1	.717*	1		
2	.756*	.088		
3	.791*	.104		
4	.784*	.076		
5	.832*	.081		
6	.836*	.087		
7	.460*	.095		
8	.592*	.088		
9	.624*	.106		
10	.112	.103		
11			.407*	1
12			.578*	.309
13			.788*	.348
14			.623*	.311
15			.849*	.378
16			.688*	.292
17			.691*	.295
18			.491*	.222
19			-.010	.187
20			.466*	.246

\* Standardized loading is significant at  $p < .05$

**Main results.** The percentage of participants who mentioned that they will definitely act unethically was the highest when participants were told that all 10 of their coworkers will act unethically—26.6%, 30.7%, 17.3%, and 38.7% of participants stated that they will perform unethical behaviours 1, 2, 3 and 4 respectively. Table 3 displays the descriptive statistics for the ratings of the likelihood for unethical behaviour for

coworker contagion level of each behaviour. As seen on the table, the ratings of unethical behaviour likelihood progressively increased as the number of employees increased, regardless of the behaviour. Within each behaviour, each coworker contagion level had a higher mean rating as compared to the respective zero level. Further, each coworker contagion level lead to a significant incremental increase in unethical behaviour likelihood as compared to their respective previous level. The coworker contagion levels were compared to the “zero level” as well as the preceding level because of the conceptual focus of the dissertation: whether coworker contagion increases unethical behaviour likelihood and whether each additional level contributes to an incremental increase in unethical behaviour likelihood.

Table 3.

*Descriptive statistics for unethical behaviour likelihood by CC level and behaviour*

CC Level	Behaviour							
	Beh 1		Beh 2		Beh 3		Beh 4	
	<i>(N= 300)</i>		<i>(N= 300)</i>		<i>(N=300)</i>		<i>(N=300)</i>	
	M	SD	M	SD	M	SD	M	SD
Zero	2.17	1.15	1.81	1.09	1.75	1.00	2.36	1.48
1 to 3	2.52* †	1.15	2.18*†	1.13	1.97*†	1.09	2.60*†	1.50
4 to 6	2.91*†	1.16	2.61*†	1.20	2.29*†	1.22	2.88*†	1.57
7 to 9	3.26* †	1.22	3.09*†	1.28	2.56*†	1.35	3.23*†	1.60
All 10	3.56* †	1.27	3.50*†	1.39	2.87*†	1.43	3.45*†	1.61

*Note. Beh1 = Slacking off at work, Beh2= Extended or extra unscheduled breaks, Beh3= taking home supplies, and Beh4= leaving work early or calling in sick. CC= Coworker Contagion*  
 \* Significantly higher than the respective “Zero” level within each behaviour in a simple contrast at  $p < .05$

† Significantly different from previous level within each behaviour in a repeated contrast at  $p < .05$

Table 4 shows the main effects and interactions of the 3-way ANOVA. As expected, coworker contagion level had a significant effect on unethical behaviour likelihood. This supports the contagion component of the CUBT model as well as the first hypothesis. Idealism had a significant effect on unethical behaviour likelihood. Hypothesis 2 was supported because individuals with high idealism ( $M= 2.54$ ,  $SD= .70$ ) were less likely to act unethically as compared to those with low idealism ( $M= 2.79$ ,  $SD= .82$ )  $t(299) = 2.75$ ,  $p < .05$ ,  $CI = .069, .417$ ). However, hypothesis 3 was not supported because relativism did not affect unethical behaviour likelihood. Taken together, the significant effect of idealism but not relativism on unethical behaviour likelihood partially supported the effect of the personal values component of the CUBT model. It is important to note that the effect size for coworker contagion was 13 times stronger than the effect of idealism and 109 times stronger than the effect of relativism.

Table 4

*3-way ANOVA for the effects of CC levels, idealism and relativism*

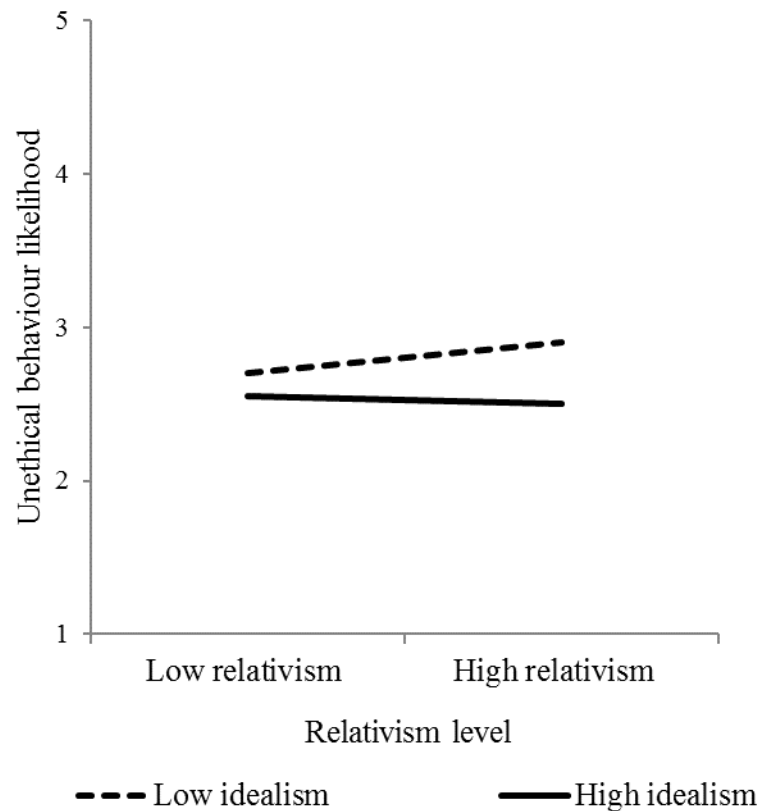
Predictor	Main effects			
	<i>df</i>	<i>F</i>	$\eta^2$	<i>P</i>
CC levels	4	355.21	.545	.001**
Idealism	1	12.91	.042	.002**
Relativism	1	2.38	.005	.123
CC levels x Idealism	4	1.27	.004	.276
CC levels x Relativism	4	2.49	.008	.041*
Idealism x Relativism	1	3.90	.013	.049*
CC levels x Idealism x Relativism	4	1.06	.004	.372

*Note.* CC= Coworker Contagion

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



As expected, the interaction between idealism and relativism was significant. Figure 2 shows that participants with high relativism and low idealism had higher unethical behaviour likelihood ( $M= 2.87$ ,  $SD= .73$ ) as compared to those with high relativism and high idealism ( $M= 2.63$ ,  $SD= .70$ ),  $t(141) = 2.01$ ,  $p < .05$ ,  $CI = .004, .477$ . This supports hypothesis 4 and the role of personal values component of the CUBT model.



*Figure 2.* Interaction between personal values in affecting unethical behaviour likelihood.

Hypothesis 5 is not supported because the interaction between coworker contagion levels and idealism was not significant. As shown in Figure 3, and congruent with hypothesis 6, relativism moderated the effect of coworker contagion levels on

unethical behaviour likelihood such that when no one acted unethically, there was no difference between high and low relativists. However, when a high number of employees committed unethical behaviour, employees with high relativism had a higher unethical behaviour likelihood ( $M= 3.47$ ,  $SD= .93$ ) compared to those with low relativism ( $M= 3.22$ ,  $SD= 1.05$ ,  $t(299) = 2.18$ ,  $p < .05$ ,  $CI = 0.24, .478$ ). The result suggests that high relativism increases coworker contagion receptivity as compared to low relativism. These differences support the role of personal values component of the CUBT model. Unlike expected the three-way interaction, coworker contagion levels x idealism x relativism was not significant. Because of the failure to find a difference in coworker contagion effects between high relativists with low and high idealism, hypothesis 7 was not supported.

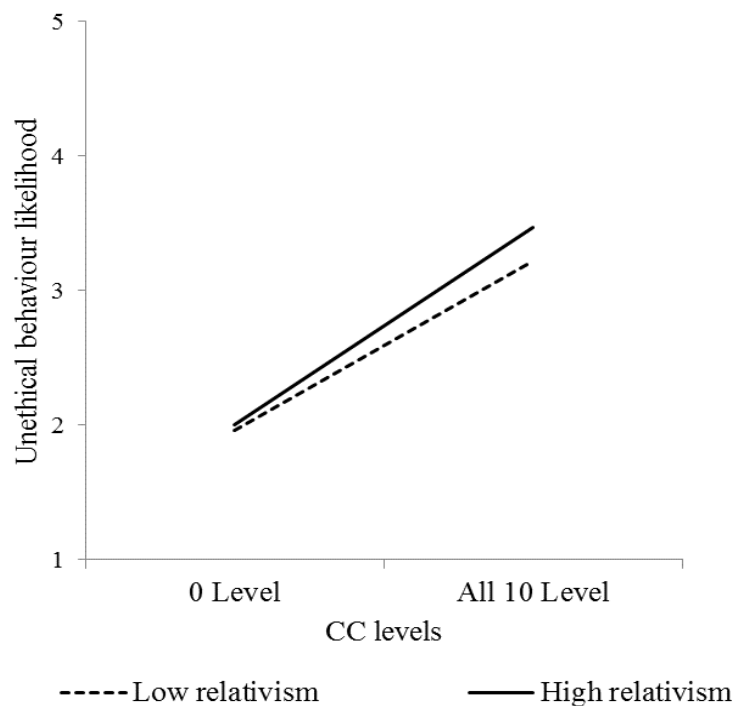


Figure 3. Coworker contagion receptivity for low vs. high relativism.

**Curve characterization.** The initial examination of the individual curves revealed that participants fell into four categories: 1) Persuaded by the crowd: These people have a fairly steady increase in likelihood as the number of coworkers committing the act increases, 2) Threshold: These people show zero, or small, increases in likelihood as number of coworkers committing the act goes up, up to a critical point, at which their likelihood increases substantially, 3) No influence of the crowd or flat line: more coworkers doing the behaviour does not increase their own likelihood, and 4) Other idiosyncratic patterns that do not fit codes 1-3. For the first pilot, Cohen's  $\kappa$  was run to determine if there was agreement between the two raters on whether 30 randomly selected participants fell under the four categories. There was good agreement between the two raters,  $\kappa = .70$ ,  $p < .05$ .

As for the revised guidelines, the operational definitions were refined and a new category was added, "Plateau curves," which are distinguished from the "Persuaded by the crowd" curves because they reach a clear "plateau" after a steady increase. In other words, they are influenced by a crowd but have a point beyond which their likelihood for unethical behaviour plateaus. A second pilot test of another set of 30 randomly selected participants with the revised guidelines were coded and there was good agreement between the two raters,  $\kappa = .748$ ,  $p < .05$ .

Following the second pilot, the final draft of the guidelines was created, where a slight modification of the operational definitions was implemented. For the guideline and its operational definitions, please see **Appendix C**. The final draft of the guidelines was used to code the curves from all participants. For the coding of the full dataset, there was

good agreement between the two raters,  $\kappa = .769$ ,  $p < .05$ . Discrepancies between the two raters were resolved after the raters discussed them and reached a consensus. The percentage of curves that fell under each prototype category was as follows: 20.2% of participants were persuaded by the crowd, 17.2% exhibited an individual threshold, 13.5% exhibited a plateau curve, 26.9% had flat line unethical behaviour ratings, and 21.9% of participants had unexplained curves. Figure 4 shows a curve example for each prototype.

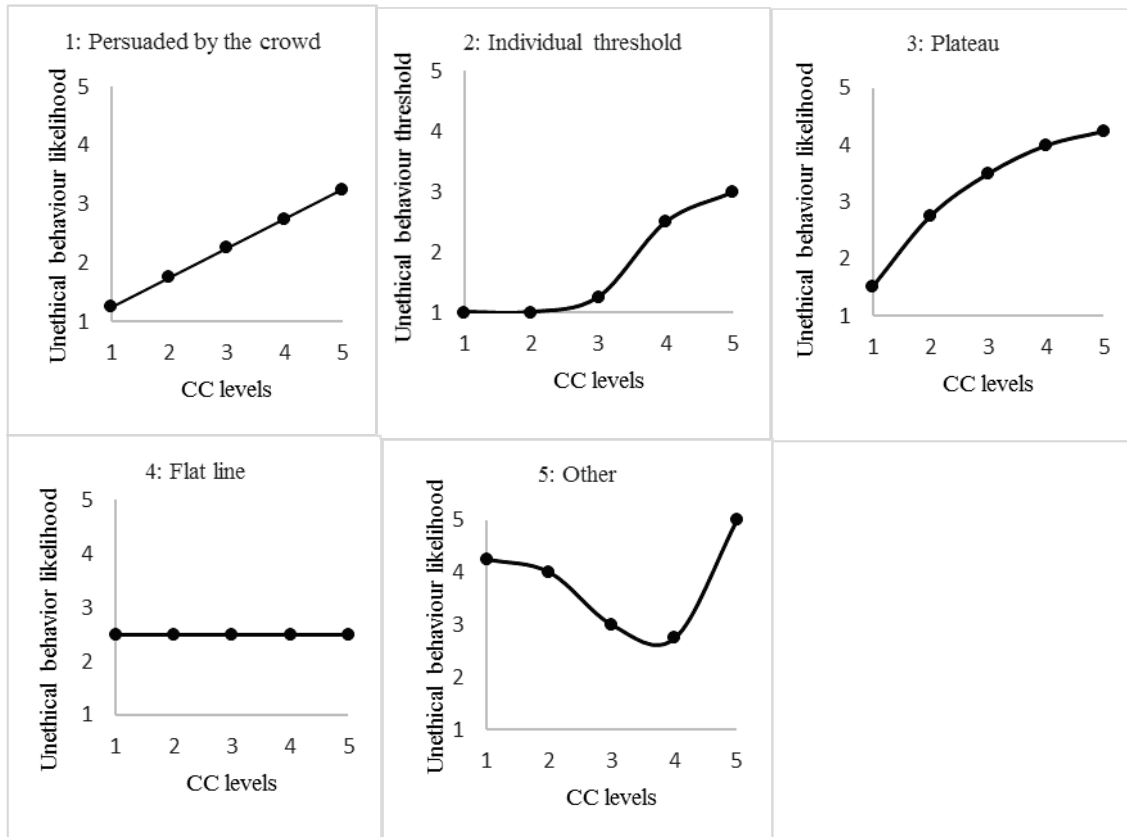


Figure 4. Curve prototypes for contagion effects on unethical behaviour likelihood.

**Meaning of unethical behaviour to the participants.** As mentioned earlier, participants provided examples of minor, moderate and severe unethical behaviour in the

questionnaire that preceded their ratings of the four presented behaviours. Despite some variability in participant responses, there were some convergent examples of what was meant by minor, moderate and severe unethical behaviour. There were also some differences in categorizing unethical behaviour. For instance, stealing inexpensive supplies was considered a minor unethical behaviour by many participants but some participants mentioned it as an example of a moderate unethical behaviour. Below are some definitions formed for minor, moderate and severe unethical behaviour as well as respective examples based on participant responses.

Minor unethical behaviours involved anonymity and minimal benefits to the focal person, with indirect harms to one's coworkers or organization. Three main categories of minor unethical behaviour were evident: 1) time wasted during work unrelated matters (for example: checking someone's phone, texting at work, watching videos, and work unrelated conversations) [N=47], 2) use of work supplies for personal purposes (for example: work-unrelated printing and taking home inexpensive office supplies such as pens), [N=45], and 3) unauthorized breaks, extended breaks and questionable punctuality (for example: taking a long lunch break and taking an unscheduled smoke break, arriving to work late, and leaving work early) [N=39].

Moderate unethical behaviours were characterized with direct harms to coworkers and/or the organization and a tendency to reduce workload. Three main types of moderate unethical behaviours emerged: 1) dishonest behaviour (for example: lying about how many hours someone worked, lying to customers, and lying to get less work) [N=114], 2) incivility (for example: making inappropriate jokes, and being rude to

coworkers) [N=47], and 3) perceived unfairness from management (for example: not getting paid for extra hours, nepotism and forced overtime) [N=33].

Severe unethical behaviours were those that strongly harmed coworkers or organizations and/or largely and directly benefited the person committing the behaviour. Four main categories of severe unethical behaviour were evident: 1) fraud, major regulatory/policy violations or stealing valuable goods (for example: embezzlement, stealing equipment, and failing to comply with health regulations that affect public safety) [N=71], 2) sexual or abusive behaviour (for example: sexual advances, leaving porn open at work for another employee, and constantly yelling at employees) [N=52], 3) discrimination (for example: firing because of race and favoring male employees over female employees) [N=18], and 4) breaking confidentiality (for example: sharing information with coworkers and sharing information with another organization) [N=14].

### **Discussion**

In this study, the effect of coworker contagion levels, the number of employees that a person observes before acting unethically, on unethical behaviour was examined. As expected, coworker contagion level increased the likelihood for unethical behaviour. Past research has found that unethical behaviour can occur when someone observes their colleague acting unethically as compared to not observing anyone (Gino, Gu, & Zhong, 2009). This study contributes to the unethical contagion literature by showing that contagion effects increase with increasing norm-weight of more people engaged in the unethical behaviour, for all four tested behaviours. It also supports the role of contagion component of the CUBT model.

The effect of idealism supported the effect of personal values component of the CUBT model. Previous studies have found that idealism had a direct effect on unethical behaviour—with idealism essentially decreasing unethical behaviour and increasing ethical behaviour (Barnett et al, 1996; Kim, 2003). This study adds to the literature by highlighting the small effect sizes of personal values in comparison to coworker contagions and depicting the relative importance of their effects on unethical behaviour.

Relativism moderated the effect of idealism on unethical behaviour likelihood such that for high relativism, those with low idealism had higher unethical behaviour likelihood as compared to those with high idealism. This result resembles the findings of a study where high relativism with low idealism was associated with higher organizational deviance as compared to high relativism with low idealism (Henle, Giacalone, & Jurkiewicz, 2005).

This study adds an important contribution to theoretical underpinnings of unethical behaviour. The curve categories provide strong support for the contagion concept—the threshold, persuasion by crowd and linear prototypes (approximately 50% of all curves) all reveal that increasing coworker contagion level increases unethical behaviour likelihood— and weak support for a threshold concept as 82.8% of participants did not have a clear threshold. Nevertheless, a phenomenon that exists 17.2% in a decontextualized context is important and worth exploring in future studies to examine whether thresholds are more common under certain contexts or in specific personality profiles.

**Unexpected findings.** There were two unexpected findings. First, there were no significant differences between low and high relativists in unethical behaviour likelihood. High relativists assess situations before acting unethically (Forsyth et. al, 2008; Henle et al., 2005). Given that this study used a decontextualized scenario, there were no “situational factors” to probe high relativists to be more likely to act unethically in comparison to low relativists.

Second, contrary to expectation, no idealism and relativism combination resulted in a differential unethical behaviour likelihood response to coworker contagions. Perhaps the anticipated differences would have emerged in a defined context where the situation for acting unethically is permissive. Study 2 examines whether the expected coworker contagion level x idealism x relativism interaction effects will emerge under permissive rather than restrictive situations.

Altogether, the lack of contagion effect differentials among groups with high/low idealism and relativism, along with the weak effect sizes for idealism and relativism, and their interaction, relative to contagion effects, suggests that coworker contagion has a much stronger effect on unethical behaviour likelihood in comparison to personal values. It also suggests that defining the situation in which unethical behaviour occurs may surface some personal value differences.

**Limitations.** There is at least one limitation for Study 1. The coworker contagion level scale used in this study and the next two studies was essentially ordinal (the intervals were not equal). Therefore, it was not appropriate to model the slope and shape (for example, threshold) of growth curves for unethical behaviour likelihood in response



to higher coworker contagion levels. Future studies should use an interval scale to enable the use of growth curves for examining unethical behaviour threshold. This can be accomplished via using a 1-10 coworker contagion levels scale with 1-point increments then modelling quadratic and cubic curves for unethical behaviour likelihood with coworker contagion levels for different levels of idealism, relativism, risks and rewards. A statistically significant growth in unethical behaviour likelihood with increasing coworker contagion levels accompanied with a distinctively slow growth curve pattern, for a certain personality profile or situation, will indicate the presence of a threshold for unethical behaviour.

### **Study 2: Contextualized Scenario**

Study 2 was similar to Study 1 in that participants completed a demographic questionnaire and an EPQ scale. However, in Study 2, participants read contextualized scenarios which provided insight into whether situational variables, risks and rewards, affect self-reported unethical behaviour likelihood. The scenarios were on three behaviours. The scenarios involved three behaviours that were selected based on participant responses to a question in Study 1 which asked participants to provide an example of a minor unethical behaviour. The examples of minor unethical behaviours provided by participants in Study 1 were reviewed and the three most common behaviours were selected to be used in Study 2 (Behaviour 1: checking the results of an online bet, Behaviour 2: booking a flight at work, and Behaviour 3: an important extended lunch break). The participants received one of four randomly assigned conditions (high and low risks and rewards) to manipulate risks and rewards for each behaviour, and were instructed to input their likelihood for engaging in the unethical behaviour as a function of the number of their coworkers who perform the same behaviour. For details on the instructions for the participants and the scenarios please see **Appendix A.**

The results of Study 1 shaped the purpose and design of Study 2. In Study 1, the effect size of coworker contagion levels was strong relative to personal values. Therefore, Study 2 focused on coworker contagion levels and how risks, rewards affect the relationship between coworker contagion levels and unethical behaviour likelihood. Also, noted in Study 1 was the lack of a three-way interaction among coworker

contagion, idealism and relativism. Therefore, Study 2 examined whether certain risk and reward combinations will allow this interaction to surface. Aside from these two theoretical and empirical goals, any significant interactions involving coworker contagion levels were analyzed and interpreted unless they were qualified by a higher order interaction. The interactions were then tied back to the CUBT model components on an exploratory basis. This approach is adopted because no past literature has examined personal values, contexts and contagions simultaneously and hence no prior knowledge is available to rely on for specifying the exact direction of every possible interaction and its direction.

The CUBT model components tested in this study were: 1) *The role of contagion*, 2) *The role of contexts* and 3) *The interactive role of personality and context*. The risks used in this study were getting caught and punished, both have been reported in previous research to influence unethical behaviour (Peace, Galletta, & Thong, 2003; Smith et al., 2007). The reward was some time off work and money, which have also been reported to effect unethical behaviour (Roman & Munuera, 2005; Smikin & McLeod, 2009).

Because coworker contagion levels had a significant effect on unethical behaviour likelihood with a very large effect size in Study 1, it is expected that coworker contagion levels will have a significant effect on unethical behaviour likelihood under all risk and reward conditions.

*H1: Coworker contagion levels will have a significant effect on unethical behaviour in all four risk and reward situations.*

Contextual effects are expected to differentiate unethical behaviour likelihood response to coworker contagion signals. As noted earlier in the role of contexts component of the CUBT model, a high risk situation is a high cost from a cost-benefit analysis lens. Therefore, high risks will reduce receptivity to coworker contagions in comparison to low risks by setting a restrictive context for acting unethically. Using this line of logic:

*H2: High risk situations will reduce coworker contagion receptivity relative to low risk situations.*

Further, a high reward situation is a high benefit. That said, a high reward situation will increase the receptivity to coworker contagions relative to a low reward situation by setting a permissive context for unethical behaviour:

*H3: High reward situations will increase coworker contagion receptivity relative to low reward situations.*

The permissiveness of a situation for unethical behaviour will determine the strength of coworker contagion receptivity. It is expected that the higher the permissiveness for unethical behaviour, the higher the receptivity for coworker contagion effects, because a highly permissive situation makes a coworker contagion signal more resonant as compared to a less permissive situation. For instance, a cost benefit analysis makes low risk and high reward situations more permissive than low risk and low reward situations. Given this logic:

*H4: The most permissive situation (low risk and high reward), will lead to the strongest coworker contagion receptivity followed by less permissive situations*

*(low risk and low reward/ high risk and high reward) and the least permissive situation (high risk and low reward).*

Because a low risk and high reward context represents the most permissive situation for unethical behaviour, it is expected to strongly allow people with different personal value combinations (low/high idealism and low/high relativism) to differ in terms of coworker contagion receptivity. Low risk and low reward contexts and high risk and high reward contexts are less permissive and hence expected to allow people with different personal value combinations to modestly differ in their receptivity to coworker contagions.

Finally, high risk and low reward contexts will not allow people with different personal values to differ in coworker contagion receptivity because they are restrictive situations, thereby limiting individual level variability in responding to contagion signals:

*H5: The most permissive situation (low risk and high reward), will strongly allow personal value groups to differ in coworker contagion receptivity, less permissive situations (low risk and low reward/ high risk and high reward) will allow for modest differences, and the least permissive situation (high risk and low reward) will restrict personal value differences in coworker contagion receptivity.*

## **Method**

**Procedure.** Like Study 1, participants provided their consent to participate in the study, then completed a demographic questionnaire that included a question on the number of employees that they work closely with. After that participants were asked to complete idealism and relativism questionnaires. Next, participants viewed the

instructions for the scenarios. The participants were randomly assigned into one of four risk and reward situations (low risk high reward, low risk low reward, high risk high reward or high risk low reward) for each one of the three behaviours. Once the participants were assigned to their conditions, they indicated their likelihood of committing unethical behaviour as the frequency of others that commit the behaviour increases.

It was not possible to test the effect of risks and rewards on the average unethical behaviour likelihood ratings for the three behaviours because of the factorial design in Study 2. Each participant received only one randomly assigned risk/reward situation for each behaviour, making it impossible to identify the effect of a specific risk/reward combination on average unethical behaviour. For instance, one participant received high risk and low reward for Behaviour 1, low risk and high reward for Behaviour 2, and high risk and high reward for Behaviour 3, yielding a situation where three different sets of risk/rewards are affecting the average unethical behaviour of the averaged unethical behaviours. It was also not possible to analyze each behaviour separately because participants rated Behaviour 1 first, followed by Behaviour 2 and then Behaviour 3, resulting in order effect issues. Because the sample size was insufficient to allow order to be analyzed as a further grouping variable, the analysis was confined to Behaviour 1, before any such order effects could influence responses.

Because the coworker contagion level scale used in Study 2 had an additional contagion level, it was important to conduct another validation check and test the significance of the correlation between the size index and contagion levels to ensure that

the unique number of employees that a participant works with did not impact their understanding of the coworker contagion levels in the scenarios. There was no significant correlation between the size index and likelihood at each contagion level [level 1:  $r(415) = -.023, p > .05$ ; level 2:  $r(415) = -.052, p > .05$ ; level 3:  $r(415) = -.063, p > .05$ ; level 4:  $r(415) = -.078, p > .05$ ; level 5:  $r(415) = -.089, p > .05$ ; level 6:  $r(415) = -.082, p > .05$ ]. Therefore, participants' unique number of coworkers that they closely work with did not impact their interpretation of the contagion levels in the tested scenarios.

**Design.** The design for this study was a full factorial 6-way mixed measures ANOVA where coworker contagion levels (0, 1-3, 4-6, 7-9, 10-12, all 13 employees) and behaviour type (Behaviour 1: Checking the results of an online bet, Behaviour 2: booking a flight at work, and Behaviour 3: an important extended lunch break) are within-subjects variables, idealism and relativism are continuous dispositional measures, and risks (high or low) and rewards (high or low) are between-subjects variables. G\*Power 3.0.10 was used to estimate the sample size needed. A minimum sample size of 288 participants was required for the repeated-between subject design that included six coworker contagion levels to detect a small to medium effect size (Cohen's  $f = 0.15$ ).

**Participants.** The sample in this study consisted of 400 adults (18 or older). The average of idealism was  $M(SD)=5.9(1.42)$  and the average of relativism was  $M(SD)=5.4(1.37)$ . Out of all the participants, 49.7% identified themselves as females, 49.7% as males, and 1.8% as "other gender". The average age of participants was  $M(SD)=26.33(7.28)$ . The breakdown of the highest held education level at the time of the study was: 23.3% for high school, 12.1% for college diplomas, 40.7% for undergraduate,

21.5% for graduate and 2.5% for other. As for residence, 69.2% of participants were from the U.S, 15.2% from Canada, 5.8% from the U.K and 9.8% from other countries. 83.6% of participants were Caucasian, 11.4% were East Asian/pacific islanders, and 5% listed “other ethnicities”. The average number of employees with whom an employee worked closely was  $M(SD)=12.6(37.51)$ . About 79.8% of participants were employed at the time of the study and 49.2% of them were full-time employees. The participants were recruited using the same methods as Study 1 and entered a prize draw for one four \$100 pre-paid credit cards.

**Measures.** Like Study 1, participants filled a demographic questionnaire, EPQ scale measuring idealism and relativism, and entered their likelihood for acting unethically at each contagion level. All measures were identical to Study 1, except coworker contagion levels. Study 1 showed that there was a significant increase in unethical behaviour likelihood from coworker contagion level 4 (7-9 employees) to level 5 (all 10 employees) for all four behaviours, suggesting that unethical behaviour likelihood does not necessarily plateau at 10 employees, and could continue to increase with additional contagion levels. For this reason, one level was added such that the coworker contagion levels were: zero, 1-3, 4-6, 7-9, 10-12, all 13 employees. To test the variability of unethical behaviour likelihood by risk/reward situation, the responses for the first 80 online participants were evaluated. The expected progressive increase of unethical behaviour likelihood with increasing coworker contagion, in each situation, and the expected differences in unethical behaviour likelihood ratings among risk and reward conditions – high risk and low reward had the lowest unethical behaviour likelihood and



low risk and high reward had the highest unethical behaviour likelihood – provided confidence in proceeding with the study with the new six coworker contagion levels.

**Analysis.** To confirm that idealism and relativism are distinct constructs, a CFA was completed. The main analysis started by running a fully factorial five-way repeated ANOVA model and a significant five-way interaction was found. Therefore, to simplify analyses and facilitate interpretation, a split file by risks and rewards was performed to yield four coworker contagion levels x idealism x relativism models in 1) low risk, low reward, 2) low risk, high reward, 3) high risk, high reward, and 4) high risk, low reward conditions. Each situation was then analyzed through a within-subject effect test. For significant between subject main effects, simple contrasts were used to test for between group differences. For significant interactions, a paired t-test of difference scores (highest contagion level – lowest contagion level) was used to identify whether or not the increase in coworker contagion from the lowest level to the highest level differs between personal value groups and risk and reward conditions. EQS 6.1 was used for the CFA analysis and SPSS version 23 was used for the ANOVA analysis.

## **Results**

**Confirmatory factor analysis.** Because Study 2 examined idealism and relativism in a contextualized situation, it was important to conduct another CFA of idealism and relativism to compare the one-factor and two-factor models. The fit indices for the 1-factor and 2-factor (uncorrelated and correlated) models are displayed in Table 5. The table shows that the two-factor models have much better CFI and RMSEA values in comparison to the 1-factor model and the chi-square difference test shows that the

uncorrelated two-factor model is associated with a significantly better fit as compared to the 1-factor model ( $\chi^2 \text{ diff}(1, N = 340) = 1040.01, p > 0.001$ ), and the two 2-factor models have equivalent goodness of fit ( $\chi^2 \text{ diff}(1, N = 339) = 0.04, p > 0.001$ ). As in Study 1, despite demonstrating better fit than the one factor model, the two factor models do not meet the conventions for “good fit” (CFI of .90 or higher, and RMSEA of .06 or lower). The reliability coefficient Rho for the uncorrelated 2-factor model is 0.871. As expected, Table 6 shows that items 1-10 are loading on idealism and items 11-20 are loading on relativism. A LeGrange test suggested that a path from item 14 to idealism will improve fit but the modification was not implemented because the EPQ is a published scale.

Table 5.

*Fit indices for the 1-factor and 2-factor models (contextualized scenario)*

Model	$\chi^2$	<i>df</i>	CFI	RMSEA (90% CI)
1-Factor	1879.15	170	0.43	0.14(0.14,0.15)
2-Factor uncorrelated	839.01	170	0.78	0.09(0.08,0.09)
2-Factor correlated	839.04	169	0.78	0.09(0.08,0.09)

Table 6.

*Factor loadings and standard error for the uncorrelated two-factor model (contextualized scenario)*

Item	Idealism		Relativism	
	St. $\beta$	SE	St. $\beta$	SE
1	.685*	1		
2	.726*	.077		
3	.747*	.089		
4	.809*	.079		
5	.834*	.080		
6	.778*	.107		
7	.359*	.087		
8	.555*	.068		
9	.576*	.102		
10	.318*	.084		
11			.466*	1
12			.654*	.189
13			.755*	.233
14			.678*	.180
15			.744*	.214
16			.698*	.177
17			.624*	.266
18			.480*	.138
19			.531*	.171
20			.510*	.164

\* Standardized loading is significant at  $p < .05$

**Main results.** There was a notable difference among risk and reward conditions in the percentage of participants who stated that they would definitely act unethically at the highest coworker contagion level (all coworkers acting unethically): low risk high reward: 59.4%, low risk low reward: 49.9%, high risk high reward: 34.7% and high risk low reward: 24.3%. Table 7 and 8 show the main effects and interactions for all between and within subject variables.

*Between subject effects.* The between subject effects refer to combined effects that were obtained from averaging all coworker contagion levels. Table 7 shows that idealism had a significant effect on unethical behaviour. Low idealists ( $M = 3.29$ ,  $SD = 1.42$ ) had higher unethical behaviour likelihood as compared to high idealists ( $M = 2.83$ ,  $SD = 1.43$ ,  $p < .05$ ). Similarly, risk and reward situations had a significant effect on unethical behaviour likelihood. High risk conditions ( $M = 2.68$ ,  $SD = 0.74$ ) were associated with lower unethical behaviour likelihood as compared to low risk conditions ( $M = 3.51$ ,  $SD = 0.78$ ,  $p < .05$ ). High reward conditions ( $M = 3.24$ ,  $SD = 0.76$ ) were associated with higher unethical behaviour likelihood as compared to low reward conditions ( $M = 2.96$ ,  $SD = 0.76$ ,  $p < .05$ ). Idealism, relativism and rewards had small effect sizes while risks had a medium effect size. The effect size for idealism was six times stronger than that of relativism and the effect size for risk was more than seven times stronger than the one for rewards. None of the between-subject two-way, three-way or four-way interactions had a significant effect on unethical behaviour likelihood.

Table 7.

*Between subject effects and interactions of idealism, relativism, risks and rewards*

Predictor	Main effects		
	<i>F</i>	$\eta^2$	<i>P</i>
<i>Idealism</i>	19.84	.044	.001**
<i>Relativism</i>	2.82	.007	.09
<i>Risks</i>	59.07	.121	.001**
<i>Rewards</i>	6.77	.016	.01*
<i>Idealism x Relativism</i>	2.56	.006	.11
<i>Idealism x Risks</i>	.00	.000	.95
<i>Idealism x Rewards</i>	.81	.002	.36
<i>Relativism x Risks</i>	3.35	.008	.06
<i>Risks x Rewards</i>	.15	.000	.69
<i>Relativism x Rewards</i>	.94	.002	.33
<i>I x R x Ri</i>	.01	.000	.90
<i>I x R x Re</i>	2.72	.006	.09
<i>I x Ri x Re</i>	.00	.000	.93
<i>R x Ri x Re</i>	.06	.000	.80
<i>I x R x Ri x Re</i>	.02	.000	.88

Note. I= Idealism, R= Relativism, Ri- Risk, Re=Reward

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

**Within-subject effects.** Table 8 reveals that coworker contagion levels had a significant effect on unethical behaviour likelihood and Table 9 shows that this effect was significant under all risk and reward situations, which supports hypothesis 1. Further, one two-way interaction (coworker contagion levels x risk) and two three-way interactions (coworker contagion levels x reward x idealism; coworker contagion levels x reward x relativism) had significant effects on ethical behaviour likelihood. Hypothesis 2 suggested that high risk situations will reduce coworker contagion receptivity. However, there was no difference in the effect of coworker contagions on unethical likelihood

between low and high risk situations and so hypothesis 2 is not supported. Hypothesis 3 suggested that high reward situations will increase coworker contagion receptivity. However, the interaction between coworker contagion levels and reward was not significant and hence hypothesis 3 is not supported. Hypothesis 4 suggested that risk and reward combinations will moderate coworker contagion effects on unethical behaviour. However, the three-way interaction between coworker contagion risks and rewards was not significant and hypothesis 4 is not supported. The two three-way interactions between (coworker contagion levels x relativism x rewards, and coworker contagion level x idealism x rewards) were significant. However, the qualifying five-way interaction was significant. Therefore, detailed interpretation of interactions was focussed on the highest order interaction.

Table 8.

*Within-subject effects of CC levels by idealism, relativism, risks and rewards*

Predictor	Main effects		
	<i>F</i>	$\eta^2$	<i>p</i>
<i>CC levels</i>	134.42	.239	.001**
<i>CC levels x Idealism</i>	.90	.002	.476
<i>CC levels x Relativism</i>	2.04	.005	.070
<i>CC levels x Risks</i>	3.13	.007	.008**
<i>CC levels x Rewards</i>	.58	.001	.712
<i>CC levels x I x R</i>	1.72	.004	.126
<i>CC levels x I x Ri</i>	.34	.001	.883
<i>CC levels x I x Re</i>	4.17	.010	.001**
<i>CC levels x R x Ri</i>	.37	.001	.864
<i>CC levels x R x Re</i>	2.58	.006	.024*
<i>CC levels x Ri x Re</i>	.59	.001	.705
<i>CC levels x I x R x Ri</i>	.63	.001	.672
<i>CC levels x I x R x Re</i>	.50	.001	.775
<i>CC levels x I x R x Ri x Re</i>	3.16	.007	.008**

*Note.* CC= Coworker Contagion, I= Idealism, R= Relativism, Ri=Risk, Re=Reward

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

**Main effects and interactions by situation.** Table 5 shows the within subject main effects and interactions after splitting the data by risk and rewards situations. Unlike coworker contagion effects, personal values had less consistent significant effects and with small effect sizes— idealism had significant effects in the two high reward situations, and relativism had a significant effect in the high risk and high reward situation. As shown in Figure 5, as coworker contagion level increases, unethical behaviour likelihood increases in each one of the four situations.

Table 9.

3-way ANOVA for CC levels, idealism, and relativism for each situation quadrant

Predictor	Main effects			
	<i>df</i>	<i>F</i>	$\eta^2$	<i>p</i>
<i>Low risk low reward</i>				
CC levels	5	22.766	0.174	.001**
Idealism	1	2.774	0.025	.099
Relativism	1	1.097	0.010	.297
Idealism x Relativism	1	2.935	0.026	.090
CC levels x Idealism	5	1.428	0.013	.212
CC levels x Relativism	5	1.200	0.011	.308
CC levels x Idealism x Relativism	5	0.063	0.001	.997
<i>Low risk high reward</i>				
CC levels	5	29.154	0.231	.001**
Idealism	1	7.540	0.072	.007**
Relativism	1	5.434	0.053	.022*
Idealism x Relativism	1	0.001	0.000	.972
CC levels x Idealism	5	0.816	0.008	.539
CC levels x Relativism	5	3.740	0.037	.002**
CC levels x Idealism x Relativism	5	4.334	0.043	.001**
<i>High risk low reward</i>				
CC levels	5	38.225	0.263	.001**
Idealism	1	3.248	0.029	.074
Relativism	1	0.194	0.002	.661
Idealism x Relativism	1	2.307	0.021	.132
CC levels x Idealism	5	1.624	0.015	.152
CC levels x Relativism	5	0.675	0.006	.642
CC levels x Idealism x Relativism	5	1.076	0.010	.372
<i>High risk high reward</i>				
CC levels	5	51.373	0.305	.001**
Idealism	1	7.796	0.062	.006**
Relativism	1	0.106	0.001	.746
Idealism x Relativism	1	0.000	0.000	.988
CC levels x Idealism	5	1.979	0.017	.080
CC levels x Relativism	5	0.642	0.005	.667
CC levels x Idealism x Relativism	5	0.920	0.002	0.920

Note. CC= Coworker Contagion. \*  $p < .05$ , \*\*  $p < .01$



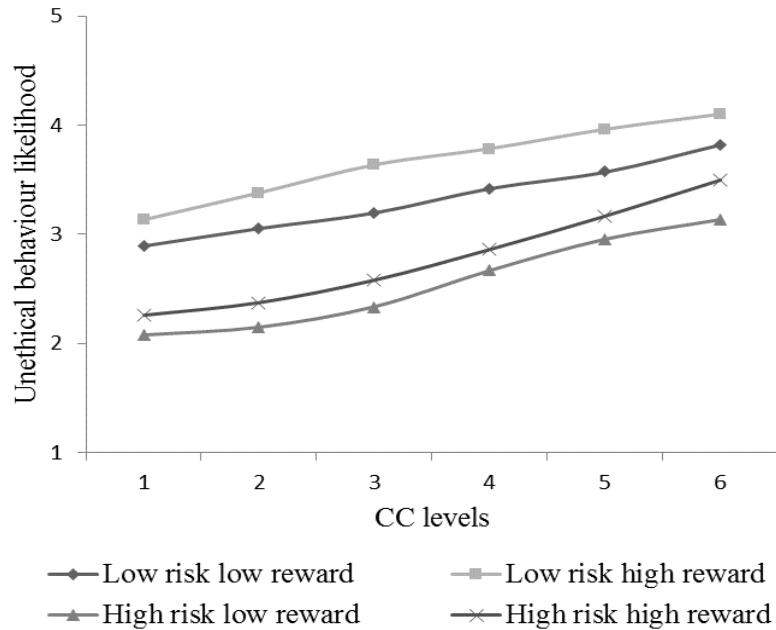


Figure 5. Means for each risk and reward quadrant by CC levels.

Hypothesis 5 suggested that low risk and high reward situations will allow personal values to strongly moderate the effects of coworker contagions on unethical behaviour, while low risk and low reward as well as high risk and high reward situations will allow personal values to less strongly moderate coworker contagion effects, and high risk and low reward situations will completely restrict the moderation. Table 9 shows that hypothesis 5 is partially supported because low risk and high reward situations permitted personal values to moderate the relationship between coworker contagions and unethical behaviour likelihood, and high risk and low reward situations did not allow for an interaction between idealism, relativism and coworker contagions in affecting unethical behaviour likelihood. However, against expectation, low risk and low reward and high

risk and high reward situations did not allow for significant interactions between idealism, relativism and coworker contagions in affecting unethical behaviour likelihood. As the three-way interaction between idealism, relativism and coworker contagion was significant in low risk and high reward situations, further analysis of how personal values moderate contagion effects was needed. First, a median split of idealism and relativism was completed. After that a difference score for unethical behaviour likelihood between level 6 (all 13 coworkers acting unethically) and level 1 (0 coworker acting unethically) was obtained. Then the data was split by risks, rewards and relativism. Finally, a t-test was used to compare unethical behaviour likelihood difference scores for low idealists and high idealists for people with low and high relativism in the low risk and high reward quadrant. Figure 6 shows the three-way interaction between idealism, relativism and coworker contagion in low risk and high reward situations.

***Low risk and low reward situations.*** As shown in Table 9 coworker contagion levels had a significant within-subject effect on unethical behaviour likelihood [ $F(5, 585) = 22.76, p < .05, \eta^2 = 0.174$ ]. Table 10 outlines the means and standard deviations for coworker contagion levels in each risk and reward condition. Compared to coworker contagion level 1 corresponding to 0 employees, and their respective preceding levels, levels 2, 3, 4, 5, and 6, corresponding to 1-3, 4-6, 7-9, 10-12, and 13 coworkers, had higher unethical behaviour likelihood.

***Low risk and high reward situations.*** Table 9 shows that coworker contagion levels had a significant within subject effect on unethical behaviour likelihood [ $F(5, 585) = 29.15, p < .05, \eta^2 = 0.231$ ]. As shown in Table 10, compared to coworker contagion

level 1, and their respective preceding level, levels 2, 3, 4, 5, and 6, had higher unethical behaviour likelihood. Idealism had a significant effect on ethical behaviour likelihood  $F(1, 97) = 7.540, p < .05, \eta^2 = 0.072$ , and so did relativism  $F(1, 97) = 5.434, p = 0.02, \eta^2 = 0.053$ . Participants with low idealism ( $M = 4.03, SD = 1.10$ ) had higher unethical behaviour than those with high idealism ( $M = 3.35, SD = 1.32$ ),  $t(603) = 6.54, p < .05, CI = .224, .645$ ). Further, participants with high relativism ( $M = 3.77, SD = 1.32$ ) had higher unethical behaviour than those with low relativism ( $M = 3.53, SD = 1.32$ ),  $t(603) = 2.22, p < .05, CI = .027, .450$ ).

The interaction between coworker contagion levels x idealism x relativism interaction in low risk and high reward situations was significant. Figure 6 depicts a three-way interaction with simple contrasts. As shown in Figure 6, coworker contagion levels increase unethical behaviour likelihood for three of the four idealism x relativism lines. As expected, low risk and high reward situation allowed for a coworker contagion x idealism x relativism interaction. In this situation, high relativism with low idealism lead to a steep increase in unethical behaviour likelihood from 0 contagion level to the highest contagion level, as compared to high relativism and high idealism but only at a significance level of .10, ( $t(52) = 1.82, p = .074, CI = .073, 1.72$ ).

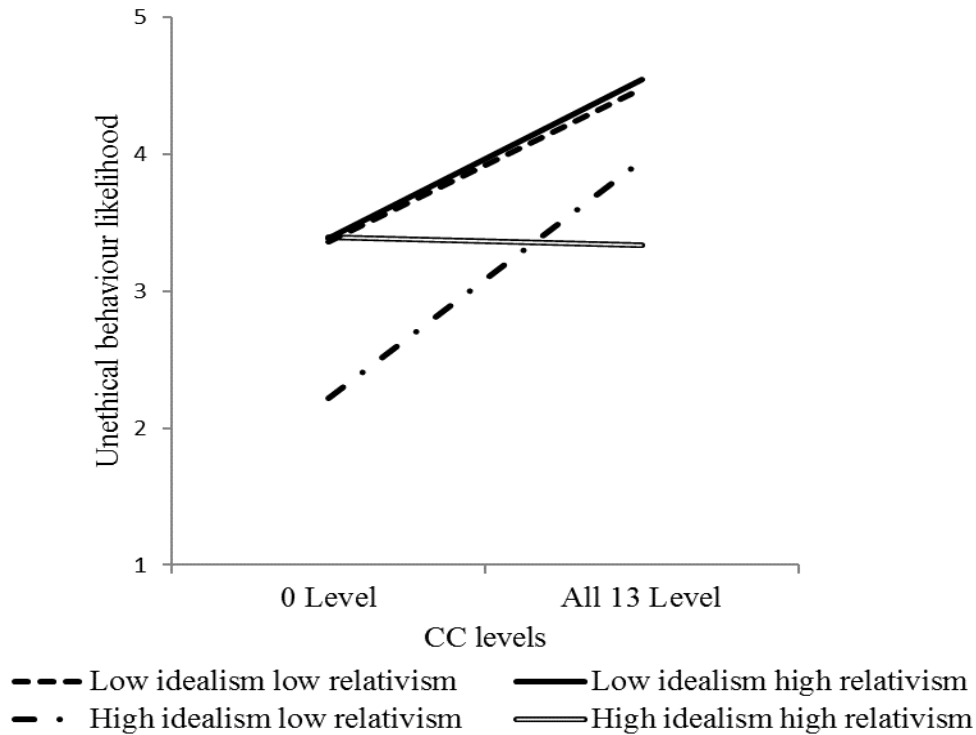


Figure 6. Idealism x relativism x CC levels for the low risk and high reward situation.

**High risk and high reward situations.** Coworker contagion levels had a significant within subject effect on unethical behaviour likelihood [ $F(5, 585) = 51.37, p < .05, \eta^2 = 0.305$ ]. Table 10 shows that levels 3, 4, 5 and 6 had higher unethical behaviour likelihood as compared to level 1 and their respective preceding level. Idealism also had a significant effect on unethical behaviour likelihood [ $F(1, 117) = 7.79, p < .05, \eta^2 = 0.062$ ]. Those with low idealism ( $M = 3.07, SD = 1.37$ ) had higher unethical behaviour than those with high idealism ( $M = 2.51, SD = 1.38$ ),  $t(723) = 6.54, p < .05, CI = .368, .769$ ).

**High risk and low reward situations.** Coworker contagion levels had a significant within subject effect on unethical behaviour likelihood [ $F(5, 585) = 38.23, p$

<.05,  $\eta^2= 0.263$ ]. Levels 3, 4, 5 and 6 had higher unethical behaviour likelihood as compared to level 1 and their respective preceding level.

Table 10.

*CC level contrasts for each situation*

Level	Low risk low reward (N= 112)		Low risk high Reward (N=101)		High risk high reward (N=121)		High risk low reward (N= 111)	
	M	SD	M	SD	M	SD	M	SD
1	2.89	1.33	3.13	1.28	2.26	1.31	2.07	1.23
2	3.05	1.34	3.38*†	1.24	2.37	1.26	2.14	1.23
3	3.20*†	1.34	3.63*†	1.27	2.58*†	1.24	2.33*†	1.27
4	3.42*†	1.32	3.78*†	1.31	2.86*†	1.32	2.67*†	1.3
5	3.57*†	1.38	3.96*†	1.27	3.17*†	1.39	2.96*†	1.43
6	3.82*†	1.45	4.10*†	1.36	3.50*†	1.5	3.14*†	1.53

Note. 1 = 0 coworkers, 2= 1-3 coworkers, 3= 4-6 coworkers, 4= 7-9 coworkers, 5 = 10-12 coworkers, 6= all 13 coworkers.

\* Significantly higher than the respective "Zero" level within each situation in a simple contrast at  $p<.05$

† Significantly different from previous level within each behaviour in a repeated contrast at  $p<.05$

## Discussion

The purpose of Study 2 was to build on the findings of the first study and test coworker contagion effects on unethical behaviour while accounting for differences in values as well as risk and reward contexts. Specifically, Study 2 attempted to identify the effect of risk and rewards on unethical behaviour alone and in the presence of coworker contagion effects and personal values. There are three results that are worth noting.

First, like the findings in past studies, risks and rewards affected unethical behaviour. In support of the CUBT model, increasing benefits (or rewards) and minimizing costs (or risks), increases unconventional behaviour likelihood (Becker,

1968; James, 2005; Li-Ping et al., 2005; Roman & Munuera; 2005; Sandmo, 1972; Smith, Simpson, and Huang, 2008). This finding corroborates previous studies that found similar results where risks deter unethical behaviour and rewards encourage unethical behaviour (Leming, 1980; Michaels & Mieth, 1989; Werbel & Balkin, 2010).

Second, as predicted by hypothesis 1, coworker contagion affected unethical behaviour under all risk and reward situations. Each additional coworker contagion level, where increasing numbers of employees were observed committing unethical behaviour, led to a progressive increase in focal unethical behaviour likelihood. As such the finding is congruent with the past literature on workplace contagions and supports the manifestation of unethical behaviour as a contagion (Bakker et al., 2005; Gino, Ayal, & Ariely, 2009). The finding also extends on Study 1 and contributes novel evidence by suggesting that coworker contagion effects on unethical behaviour are robust to situational changes. Finally, the finding is aligned with the CUBT model's contagion concept.

Third, as predicted by the fifth hypothesis, low risk and high reward situations set a permissive context for acting unethically and thus surfaced individual differences in responding to coworker contagions. Study 1 suggested that high relativists with low idealism will exhibit a steeper increase in unethical behaviour likelihood upon exposure to coworker contagion as compared to high relativists with high idealism. Study 1 did not find the hypothesized personal value and coworker contagion interactive effects. However, Study 2 found the expected effects in the most permissive context for acting unethically, that is, low risk and high reward situations. This finding clarifies the rejected

hypothesis in Study 1 by suggesting that personal value groups differ in their coworker contagion receptivity but only under certain contexts. It adds to the contagion literature by suggesting that personal values moderate the relationship between coworker contagion and unethical behaviour likelihood. It also adds to the crime literature by suggesting that cost-benefit analyses surface personal value differences in responding to unethical signals.

**Unexpected findings.** There were two unexpected findings. First, unlike what was expected in hypotheses 2 and 3, high risks did not attenuate coworker contagion receptivity as compared to low risks, and high rewards did not strengthen coworker contagion receptivity as compared to low rewards. Perhaps, the examination of the separate effects of risks and rewards on the relationship between coworker contagion and unethical behaviour likelihood is simplistic and their combined effect on coworker contagion levels better explains how risks and rewards influence coworker contagion receptivity.

Second, against what was predicted by the fourth hypothesis, risk and reward combinations did not yield differences in coworker contagion receptivity. There are two potential explanations for this result. The first explanation suggests that risks and rewards do not directly affect the relationship between coworker contagions and unethical behaviour likelihood. Instead, risks and rewards set a context that permits or restricts personal values from exhibiting differences in sensitivity to contagion signals as evident from the significant 5-way interaction between coworker contagions, idealism, relativism, risks and rewards in affecting unethical behaviour likelihood. If a situation is

permissive, then coworker contagion will serve as a signal that will affect individuals based on their personal values. However, if a situation is restrictive, coworker contagion becomes a less meaningful cue for anyone regardless of individual ethical positions. A competing explanation is based on the fact that risks and rewards were measured between subjects. Therefore, the effect sizes of interactions involving risks and rewards in Study 2 were not strong enough to moderate the effect of coworker contagion on unethical behaviour likelihood.

**Limitations.** There are at least two limitations to Study 2. First, although three behaviours were surveyed in Study 2, the analysis was confined to *Behaviour 1: Checking the results of an online bet at work* because the order of the behaviours was not randomized and the sample size was not sufficient to test for order effects. Therefore, the pattern of results observed might be unique to this behaviour or its perceived severity and the results are thus not generalizable. Future studies should examine multiple behaviours to determine whether the observed patterns are unique to certain behaviours.

Second, the graph of coworker contagion level effects under each risk and reward situation did not provide insight on whether or not the threshold for unethical behaviour differs by situation. Rather they provide the pattern of averaged coworker contagion effects. To study threshold differences, growth curve tests are needed to identify patterns of flat unethical behaviour likelihood at low contagion levels followed by sudden increases in likelihood at higher contagion levels. It was not statistically appropriate to use growth curve tests in the present studies because they used an ordinal scale which precludes the use of regression-based methods to study curve shapes. Future studies



should use interval coworker contagion scales to appropriately test growth curves and better understand unethical behaviour threshold.

### **Study 3: Individual Likelihood Under All Conditions**

The first two studies established evidence for the presence of a coworker contagion level effect on unethical behaviour and suggested that CUBT is a viable model to explain the effects of personality, context, and coworker contagion level on unethical behaviour likelihood. The coworker contagion level effect was strong across varying risk and reward contexts. The second study attempted to examine multiple behaviours, but the study was underpowered to test for order effects. Due to this limitation, only the first behaviour was analyzed (Behaviour 1: Checking the results of an online bet at work). To test whether the CUBT model is robust when tested with multiple behaviours and to add stability to the risk and reward effects, Study 3 tested each participant's unethical behaviour likelihood response to all four situations (Low risk high reward, low risk low reward, high risk high reward, and high risk and low reward) for one out of three randomly assigned behaviours (Behaviour 1: Checking the results of an online bet, Behaviour 2: booking a flight at work, or Behaviour 3: an important extended lunch break).

It was clear from Study 2 that the effect size for coworker contagion levels was 2-25 times higher than those for idealism, relativism, risks and rewards. In addition, risks and rewards had higher effect sizes as compared to idealism and relativism. Further, the effect sizes of risks and rewards and their interactions are expected to be larger if tested within subjects. Therefore, the hypotheses for Study 3 were confined to coworker contagion levels, risks and rewards, all measured within subjects. Study 3 attempted to answer two questions: 1) Does coworker contagion continue to effect unethical

behaviour likelihood when risks and rewards are measured within subjects? and 2) Will risk and rewards moderate coworker contagion effects? It is important to note that three behaviours are tested in Study 3 and their scores were averaged. If behaviour type had interactions with coworker contagion levels, risk and/or rewards, the results were interpreted in parallel to the hypotheses. For instance, if the interaction between coworker contagion level, risks, and behaviour type was significant, a split by behaviour was performed. After that the effect of coworker contagion on unethical behaviour likelihood was compared in low risk and high situations in light of a hypothesis that posited an interaction between coworker contagions and risks where coworker contagion leads to a shallower increase in unethical behaviour likelihood in high risk situations in comparison to low risk situations. Based on the evidence cited for the CUBT model components and Study 2 and its findings, four hypotheses from Study 2 were re-tested in Study 3, in a within subject design:

*H1: Coworker contagion levels will have a significant effect on unethical behaviour in all four risk and reward situations.*

*H2: High risk situations will reduce coworker contagion receptivity relative to low risk situations.*

*H3: High reward situations will increase coworker contagion receptivity relative to low reward situations.*

*H4: The most permissive situation (low risk and high reward), will lead to the strongest coworker contagion receptivity followed by less permissive situations*

*(low risk and low reward/ high risk and high reward) and the least permissive situation (high risk and low reward).*

## **Method**

**Procedure.** After providing their consent, and completing a demographic questionnaire and the idealism and relativism scales, participants rated their likelihood for unethical behaviour at each contagion level for all four low/high risk and reward situations in random order, for one of three randomly assigned behaviours.

**Design.** The design was a full factorial 6-way repeated measures ANOVA where coworker contagion level (0, 1-3, 4-6, 7-9, 10-12, all 13 employees), risks (high and low), rewards (high and low) were within-subject variables, idealism and relativism were continuous dispositional measures, and behaviour type (Checking the results of an online bet, booking a flight at work, or an important extended lunch break) was a between-subject variable. Each participant was randomly assigned one of the three behaviours, and received four all risk and reward situations (low risk high reward, low risk low reward, high risk high reward, and high risk low reward) for that behaviour in a random order. Once the participants were assigned to their behaviour, they indicated their likelihood of committing unethical behaviour as the frequency of others that commit the behaviour increases under all four risk and reward situations. A power analysis using G\*Power 3.0.10 was used to estimate the sample size needed. A minimum sample size of 180 participants was required to detect a small to medium effect size (Cohen's  $f = 0.15$ ).

**Participants.** The sample consisted of 339 adults. The average of idealism was  $M(SD)=5.9(1.33)$  and the average of relativism was  $M(SD)=5.3(1.23)$ . About 53.6%

were male, 45.8% were females, and .7% identified themselves as other. The rest of the demographic characteristics were comparable to those in Study 2. Participants were recruited and compensated in the same manner as in studies 1 and 2.

**Measures.** Like in Study 2, a demographic questionnaire and the idealism and relativism scale were used. Participants also rated their likelihood for unethical behaviour in six coworker contagion levels. In Study 3, participants rated all risk and reward situations for their randomly assigned behaviour.

**Analysis.** As mentioned above, Study 3 examined a four-way model: coworker contagion levels, risks, rewards, and behaviour type. In this model, the focus was on the main effect of coworker contagion levels and interactions of coworker contagions with risks and rewards for averaged behaviour ratings. Further, if the hypothesized interactions were not significant, the expected effects were tested for unique behaviours, if behaviour type was significant in a relevant interaction. For significant interactions, paired t-tests of the difference scores between the highest contagion level (all 13 level) and lowest contagion level (0 level) for coworker contagion level in each high or low risk and/or reward situation were used to compare coworker contagion response across situations.

## **Results**

As was found in Study 2, the percentage of participants who suggested that they would “definitely” engage in unethical behaviour likelihood (that is, gave a rating of “5” on a 1-5 Likert scale), when all coworkers acted unethically in each situation was in the following descending order: low risk and high reward: 49%, low risk and low reward:

35.1%, high risk and high reward: 31.2% and high risk and low reward: 16.7%. Between and within subject effects are outlined in Table 11. However, as the purpose of Study 3 was to test coworker contagion levels, risks and rewards, only the results of these three within-subject factors were analyzed and interpreted. Further, only interactions involving coworker contagion levels are discussed as the focus of Study 3 was to test whether risks and rewards moderate the relationship between coworker contagion and unethical behaviour likelihood.

**Main results.** Table 11 reveals that all main effects were significant: coworker contagion level, risk, and reward. Coworker contagion level had a significant effect on unethical behaviour likelihood, and so hypothesis 1 was accepted and the contagion component of the CUBT model was supported. High risk situations ( $M= 2.41$ ,  $SD= 1.13$ ) were associated with lower unethical behaviour likelihood as compared to low risk situations ( $M= 3.18$ ,  $SD= 1.20$ ,  $p<.05$ ), and high reward situations ( $M= 3.01$ ,  $SD= 1.11$ ) were associated with higher unethical behaviour likelihood as compared to low reward situations ( $M= 2.59$ ,  $SD= 1.13$ ,  $p<.05$ ). It is important to note that the within subject design in Study 3 doubled the effect size of coworker contagion levels and quadrupled the effect sizes for risks and rewards in comparison to Study 2. Further, all three variables, coworker contagion levels, risks and rewards have large effect sizes in Study 3, where coworker contagion level was the only one of three variables with a strong effect size in Study 2.

As shown in Table 11 there were four significant 2-way interactions: coworker contagion level x behaviour category, coworker contagion level x risk, risk x behaviour

category, and reward x behaviour category. There were also two significant 3-way interactions: coworker contagion level x risk x behaviour category and coworker contagion level x risk x reward.

Table 11.

*4-way ANOVA for the effects of CC levels, risks, rewards and behaviour type*

Predictor	Main effects		
	<i>F</i>	$\eta^2$	<i>p</i>
<i>CC levels</i>	245.70	.420	.001**
<i>Risk</i>	281.83	.454	.001**
<i>Reward</i>	150.03	.307	.001**
<i>Beh_type</i>	11.06	.061	.001**
<i>CC levels x risk</i>	2.82	.008	.015*
<i>CC levels x reward</i>	1.31	.004	.254
<i>CC levels x beh_type</i>	10.70	.059	.001**
<i>Risk x reward</i>	.51	.002	.472
<i>Risk x beh_type</i>	6.3	.036	.002**
<i>Reward x beh_type</i>	10.07	.056	.001**
<i>CC levels x risk x reward</i>	9.28	.027	.001**
<i>CC levels x risk x beh_type</i>	3.98	.023	.001**
<i>CC levels x reward x beh_type</i>	.20	.001	.996
<i>Risk x reward x beh_type</i>	.01	.000	.987
<i>CC levels x risk x reward x beh_type</i>	.92	.005	.505

*Note.* CC= Coworker Contagion, beh\_type = behaviour category

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

As the coworker contagion levels x risk interaction was significant it was analyzed to test hypothesis 2. Coworker contagion levels x risk did not yield a significant difference in coworker contagion effects under high and low risk conditions. The coworker contagion levels x risk x behaviour type interaction was analyzed to check whether the hypothesized differences between coworker contagions in high and low risk

situations are observed for a specific behaviour. After splitting the interaction by behaviour, coworker contagion levels at low and high risk conditions were compared for each behaviour. There was a significant difference in unethical behaviour likelihood response to coworker contagion between low and high risk conditions for Behaviour 2: booking a flight at work),  $t(115) = -3.15, p < .05, CI = -.505, -.115$ ). Figure 7 shows that high risk increased unethical behaviour likelihood response to coworker contagion as compared to low risks, which is contrary to expected and hence hypothesis 2 was rejected. Hypothesis 3 suggested that coworker contagion levels will yield a steeper increase in unethical behaviour likelihood under high reward situations in comparison to low reward situations. Because the interaction between coworker contagion level and rewards was not significant, hypothesis 3 was also rejected.



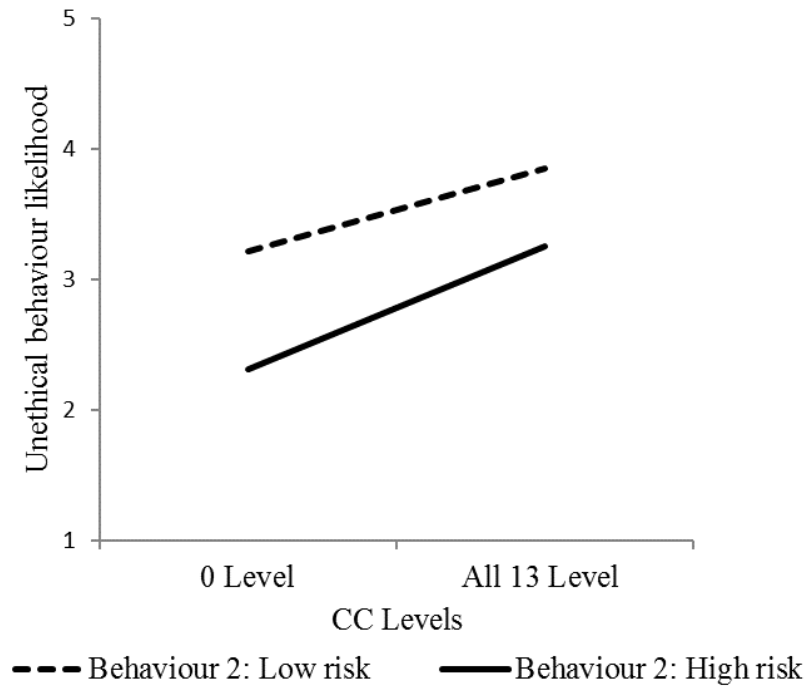


Figure 7. Coworker contagion receptivity for low vs. high risk situations for behaviour 2.

The three-way interaction between coworker contagion levels, risks and rewards was significant. Figure 8 depicts the three-way interaction. Hypothesis 4 suggested that the more permissive the situation, the stronger the receptivity to coworker contagions. Some elements of this hypothesis were rejected and others were accepted. Contrary to hypothesis 4 there was a shallower increase in unethical behaviour likelihood for low risk and high reward situations as compared to low risk and low reward situations  $t(351) = -2.63, p < .05, CI = -.238, -.035$ , and high risk and high reward situations  $t(346) = -3.38, p < .05, CI = -.364, -.096$ ). However, in support of hypothesis 4, coworker contagion lead to a steeper increase in unethical behaviour likelihood for high risk and high reward

situations as compared to high risk and low reward situations  $t(348) = 2.86, p < .05, CI = .049, .266$ ).

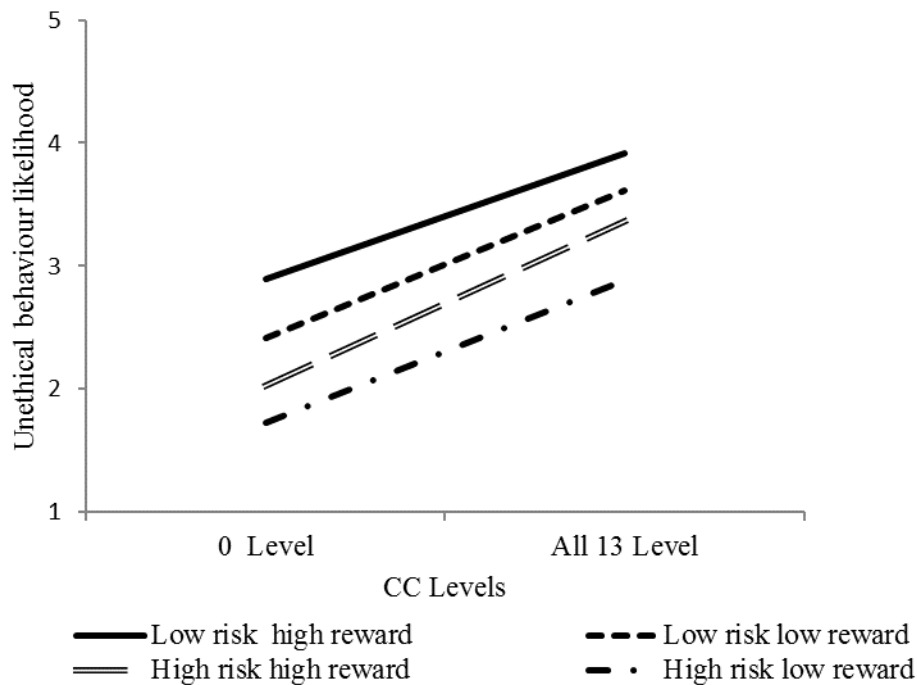


Figure 8. CC levels effect by risk and reward situations.

## Discussion

There are two key findings in Study 3. First, like Study 2, Study 3 found that coworker contagions as well as risk and rewards affect the likelihood for unethical behaviour. However, the effects of all three variables were stronger in Study 3, possibly due to testing all risk and reward within each participant. This suggests that future studies on unethical behaviour contagions should test the three factors due to the consistency of their effects in studies 2 and 3, preferably in a within subject design. Other studies have found that contagions, risks and rewards affect unethical behaviour likelihood but did not

simultaneously study the three factors (Gino, Schweitzer, Mead & Ariely 2011; Tang, & Chen, 2008; Tang & Chiu, 2003).

Second, risk and reward combinations affect coworker contagion receptivity. However, the expected differences in coworker contagion effects across situations were only observed when holding high risks constant and varying rewards. When risks were high, high rewards lead to a steeper increase in unethical behaviour likelihood with an increase in coworker contagion as compared to low rewards. This is consistent with Rational Choice Theory and Signalling Theory as increasing the benefits associated with an unethical behaviour leads to a more enabling situation that increases the receptivity to coworker contagion signals. In other words, people are more likely to be motivated to act unethically when observing others committing unethical behaviour, when the rewards for unethical behaviour are sufficiently high to justify acting unethically. This finding adds to the contagion literature (Erez et al., 2008; Foulk et al., 2008; Gino et al., 2009a; Gino et al; 2011), by suggesting that risk and reward combinations moderate coworker contagion effects on unethical behaviour likelihood. Specifically, Study 3 suggests that risks supersede rewards by dictating how low vs. high rewards influence coworker contagion receptivity—when risks are high, high rewards increase coworker contagion receptivity in comparison to low rewards, but no such differences are observed when risks are low.

**Unexpected findings.** There are three unexpected findings for Study 3. First, like Study 2, Study 3 failed to find a significant difference in coworker contagion effects in low versus high risk situations. However, Study 3 found a significant interaction

between coworker contagion level, risk and behaviour type. When the behaviours were individually analyzed, *Behaviour 2: booking a flight at work* showed that high risks were associated with a stronger coworker contagion receptivity as compared to low risks. This result was opposite to expected, as low risks were hypothesized to yield a weaker response to coworker contagion by setting a permissive context. A potential explanation for this finding is perhaps related to the idea that low risks were too permissive, resulting in high unethical behaviour likelihood when no one was observed acting unethically. Therefore, an increase in coworker contagion level will produce a modest increase unethical behaviour likelihood in low risk situations, reaching a ceiling effect. But this finding poses the question of why this pattern was observed in Behaviour 2 only. Behaviour 2 was associated with high urgency and direct benefits, Behaviour 1 was associated with low urgency and direct benefits, and Behaviour 3 was associated with high urgency and indirect benefits. This suggests that the difference in coworker contagion receptivity between low risk and high risk situations depends on both the urgency and direct benefits associated with a behaviour. For an urgent behaviour with direct benefits, in a low risk situation, unethical behaviour likelihood will be high regardless of the presence or lack of contagion signals, since urgency, direct benefits and low risks are already strong motives for acting unethically. However, high risks deter unethical behaviour in the absence of a contagion signal, but unethical behaviour likelihood will increase in the presence of a coworker contagion signal. Other studies have found that behaviour urgency and direct benefits serve as motivates for unethical behaviour (Halbesleben & Wheeler 2015; Kerber & Buono, 2005). This study adds to the

literature by suggesting that the difference in coworker contagion effects in low and high risk situations depends on the behaviour in question.

Second, like Study 2, Study 3 did not find differences in coworker contagion effects between low and high reward situations. To explain this unexpected finding, it is important to answer a framing question: *How do individuals tend to interpret situations that provide an opportunity to engage in unethical behaviour?* Kahneman and Tversky's (1979) Prospect Theory is apropos here as it suggests that risks outshine rewards in what individuals perceive as "loss situations", so a gain in loss situations is less important than a loss in a loss situation. Perhaps participants in this study perceived the tested behaviours and their situations as "loss situations." Based on the underpinnings of Prospect Theory, future studies should compare the impact of rewards on unethical behaviour likelihood in "loss situations" and "gain situations."

Third, contrary to expectation, a low risk and low reward situation resulted in a steeper increase in unethical behaviour likelihood with increased coworker contagion as compared to a low risk and high reward situation. This suggests that the way risks and reward moderate coworker contagion effects on unethical behaviour is possibly more than just a permissive vs. restrictive situation assessment. As a post-hoc theoretical framework, I suggest that sensitivity to coworker contagion depends on the balance between risks and rewards in three conditions: *laissez-faire*, *control*, and *balanced*. A *laissez-faire* condition refers to a strongly permissive situation (low risk and high reward) that leads to a high unethical behaviour likelihood in the absence of a coworker contagion. Consequently, a contagion signal has little to add in terms of incremental

unethical behaviour likelihood. A *control* condition refers to a strongly restrictive situation (high risk and low reward) that leads to a low unethical behaviour likelihood prior to the exposure to coworker contagions. In this situation, a contagion signal has a modest effect in terms of incrementally increasing unethical behaviour likelihood because the situation is too controlling. *Balanced* conditions refer to situations with balanced risks and rewards (low risks and low rewards or high risks and high rewards). These two situations yield an initially moderate unethical behaviour likelihood, and allow coworker contagion to assert its highest effects relative to *laissez-faire* and *control* situations. The pattern of coworker contagions results in Study 3 supports this proposed framework as low risk and high reward situations (*laissez-faire condition*) and high risk and low reward situations (*control condition*) were associated with shallower increases in unethical behaviour likelihood upon exposure to coworker contagions relative to low risk and low reward and high risk and high reward situations (*balanced conditions*).

### **General Discussion**

This research provided an initial test of the CUBT model – a model designed to assess the contagion for unethical behaviour in the workplace while examining differing personal values and contexts. The three studies revealed that coworker contagion influences unethical behaviour likelihood beyond personal values or situational factors. Coworker contagion effects remained consistent across different situations and behaviours. In all three studies, personal values, namely idealism and relativism did not have consistent effects. However, Studies 2 and 3, both of which examined contextual effects, revealed that risk and reward situations show more consistent effects on unethical behaviour, independently but less so in conjunction with contagion effects. Study 1 presented some qualitative evidence for the presence of a threshold for a small percentage of the sample studied. Study 3 demonstrated that the interaction between risks and coworker contagion level depends on the type of behaviour studied.

The initial CUBT model proposed that coworker contagion, personal values (idealism and relativism), and contexts (risks and rewards), uniquely and interactively affect unethical behaviour. The coworker contagion effect was consistent in all three studies. In Study 1, coworker contagion affected unethical behaviour likelihood in a decontextualized situation. In studies 2 and 3, coworker contagion affected unethical behaviour likelihood in contextualized situations and across different behaviours. The coworker contagion effect remained significant with strong effect sizes. Therefore, the coworker contagion effect represents the most robust component of the CUBT model and

suggests that future examination of unethical behaviour should account for coworker contagion effects.

Idealism had unique effects on unethical behaviour likelihood in decontextualized (Study 1) and contextualized situations (Study 2), while relativism did not have a unique effect on unethical behaviour likelihood in both studies. Idealism and relativism also had a combined effect on unethical behaviour likelihood. In Study 1, high relativists with low idealism had higher unethical behaviour as compared to high relativists with high idealism. This finding mimics the findings of a past study that found that high relativism with low idealism is associated with higher organizational deviance than high relativism with high idealism (Henle et al., 2005). Considering the dearth of knowledge on the effect of personal values interactions on unethical behaviour, Study 1 adds an important confirmation for the existence of these effects. However, it is important to note that the effect sizes for both personal values were weak relative to coworker contagion levels, suggesting that coworker contagion effects are more important than personal values.

Unlike decontextualized situations (Study 1), when tested in contextualized situations (Study 2), idealism and relativism did not exhibit an interactive effect on unethical behaviour. Given this inconsistency in effects between the two studies and the small effect sizes of idealism and relativism as well as their interactions, the role of personal values and their interactions in affecting unethical behaviour likelihood is modestly supported. An equally valid conclusion is that the role of personal values on unethical behaviour likelihood is important in decontextualized scenarios where there is an absence of information on the risks and rewards associated with unethical behaviour.



In real workplaces, an ambiguous situation might resemble a decontextualized scenario, where little information is provided on how much risk and reward is involved in committing a certain behaviour. However, future research on the effect of personal values in ambiguous vs. non-ambiguous contexts is needed before confirming this conclusion.

In Study 1, relativism had a complex effect on unethical behaviour likelihood, where high relativism was associated with higher unethical behaviour likelihood at a high contagion level. However, the effect size of this interaction was small. Nevertheless, this finding is novel and adds to the unethical contagion literature by suggesting that relativism regulates coworker contagion effects on unethical behaviour likelihood.

The effect of risks and rewards on unethical behaviour likelihood were consistent when one behaviour (Study 2) and multiple behaviours (Study 3) were analyzed. The size of risk and reward effects on unethical behaviour likelihood was considerably larger when the effects of risks and rewards were studied within subjects (Study 3). Risks and rewards did not individually moderate the effect of coworker contagion on unethical behaviour likelihood. However, risk and reward combinations, moderated the effect of coworker contagion on unethical behaviour. Study 3 found that at high risk situations, high rewards lead to a steeper increase in unethical behaviour likelihood with an increase in coworker contagion, as compared to low rewards. This suggests that high risk contexts are too- restrictive, therefore the sensitivity to coworker contagions is enhanced with an increase in rewards. The direction of the results did not match expectation for low risk

situations, where low rewards increased the effect of coworker contagion on unethical behaviour likelihood as compared to high rewards.

Study 3 ended with a discussion for recommending a three-condition framework to understand how risks and rewards moderate coworker contagion effects on unethical behaviour likelihood: *laissez-faire*, *control*, and *balanced*. A *laissez-faire* condition is too permissive because it is characterized with high risks and low rewards. This condition is expected to result in a very high likelihood for acting unethically in the absence of coworker contagion. The presence of coworker contagion signals will thus result in a small incremental increase in unethical behaviour likelihood in a *laissez-faire* condition because unethical behaviour has already precipitated prior to the presence of a contagion signal. *Balanced* conditions on the other are moderately permissive (low risks and low rewards and high risks and high rewards). Both balanced conditions will result in a moderate unethical behaviour likelihood in the absence of a contagion signal and depict a steep increase in unethical behaviour likelihood upon exposure to coworker contagions. Finally, a *control* condition is too restrictive resulting in a low unethical behaviour likelihood in the absence of coworker contagions. The presence of coworker contagion will result in a small incremental increase in unethical behaviour likelihood because the situation is too restrictive to allow people to respond to the contagion signal. In Study 3, this post-hoc framework explains the unexpected results. Specifically, *balanced* conditions (low risk and low reward as well as high risk and high reward situations) both depicted a sensitivity to contagion signals as evident from their steeper increases in

unethical behaviour likelihood upon exposure to coworker contagions in comparison to *laissez-faire* and *control* conditions.

Study 2 revealed that a low risk and high reward condition is the only situation that allows idealism and relativism to moderate coworker contagion effects. This supports the interactive role of personal values on contexts in moderating coworker contagions. It also adds to the contagion literature by demonstrating that the effect of coworker contagion on unethical behaviour likelihood is regulated by personal values but only under the most enabling situations (low risk and high reward).

In this dissertation, the processing mechanism of contagion signals was examined on an exploratory basis. Looking at the results of the effects of risk and reward on coworker contagion receptivity sheds light into the mechanism of contagion processing, depicting that unethical behaviour is non-rational and follows an automatic peripheral route, rather than a deliberate central route. In other words, the results follow the principles of Prospect Theory more closely than Rational Choice Theory. Rational Choice Theory suggests that decisions follow a calculation of risks and rewards through a cost-benefit analysis. The lower the risk-benefit ratio, the higher the likelihood for choosing an option. Unlike Rational Choice Theory, which is based on the psychological assessment of value and risks, Prospect Theory is based on risk-oriented decisions. Prospect Theory rejects the tenets of rational action such as invariance and dominance.

Invariance suggests that different framing modes will not impact one's preference for a certain choice and dominance suggests that when a certain option is better than another in one situation, it will remain the dominant option in other situations. However,

Tversky and Kahneman (1986) provide examples that illustrate how the principles of invariance and dominance are violated. For instance, they demonstrate that presenting losses and gains in disaggregated vs. aggregated form or survival vs. mortality form changes people's preferred option, thus refuting invariance. Another example is one where participants only chose a dominant option when the losses and gains were transparent, and contrarily chose the dominated option in situations where the dominant option was masked. By refuting the concepts of invariance and dominance, Tversky and Kahneman (1986) suggest that choices are non-rational in nature, they depend on framing which yields either risk averse or risk-taking patterns and the transparency of wins and losses. In a gain frame situation, people tend to exhibit risk aversion and in a loss frame situation people tend to exhibit risk seeking.

In Study 2, a low risk (gain frame) situation lead to weak coworker contagion receptivity (risk aversion) as compared to a high risk (loss frame) situation. Similarly, in Study 3, low risk and high reward situations (gain frame), participants demonstrated weak receptivity (risk aversion) to coworker contagions, while in high risk and low situations (loss frame), participants demonstrated stronger receptivity (risk seeking) to contagions, thereby fitting a more non-rational decision paradigm rather than a rational and calculative cost-benefit analysis which would have yielded opposite results in both studies. As for the five-way interaction in Study 2, participants exhibited some level of invariance in all situations, except for low risk and high reward contexts. This is incongruent with the invariance principle of rational choices. However, from a Prospect Theory lens, loss frame situations increase the propensity for stronger agreements and

gain frame situations decrease agreements which explains the individual level variability by personal values in low risk and high reward situations (gain frame) and lack thereof in high risk and low reward situations (loss frame). Overall, the results followed Prospect Theory and non-rational risk-based decisions rather than Rational Choice Theory and rational cost-benefit analysis.

Given the stronger congruence of the results with Prospect Theory and peripheral processing routes, future studies should test the CUBT model as a framework of non-rational unethical behaviour. The core idea would be to test the questions: 1) how do gain frame and loss frame situations impact risk seeking and risk aversion towards contagions? Another important question is: how do risk averse and risk raking individuals respond to contagions in differing frames (loss vs. gain)? It is expected that loss frame situations will increase risk seeking, and risk averse dispositions will limit risk seeking in a loss frame situation. The design for the future would be one where contagions affect unethical behaviour and framing (loss and gain) and risk orientation (risk seeking or risk averse) regulate contagion receptivity. Aside from idealism, relativism, risks and rewards, framing effects and risk orientation may be additional independent predictors of contagion response that warrant future investigation.

Altogether, the results of the three studies provide strong support for the contagion and contextual components of the CUBT model, but weak support for the personal value effects hypothesized in the CUBT model. A three-factor model of coworker contagion level, risk, and reward provided the best explanation for the contagion phenomenon. This finding serves as a starting point for future research to

compare the effectiveness of this model to competing models of unethical behaviour in efforts to better refine the CUBT model. The CUBT model paints a comprehensive picture of the relative effects of various factors and expands on the past literature that tends to independently examine personal values (e.g Kim, 2003), situational effects (e.g Kish-Gephart et al., 2009), or contagion effects (e.g Gino et al., 2009).

### **Implications**

Workplace unethical behaviour is an important topic in both industrial and organizational psychology research and practice. From an organizational psychology perspective, it is important to identify and understand how unethical behaviour spreads in different organizational contexts to prevent it from establishing a new unethical norm with an organization that traditionally values ethics codes.

The dissertation provides the first examination of the effect of coworker contagion conceptualized as the incremental increase of coworker numbers acting unethically on unethical behaviour, for differing personal values in decontextualized and contextualized scenarios. Previous research has provided convincing evidence on the importance of unethical behaviour in the workplace and the need to reduce it. Previous research has also formulated theories (e.g: Rational Choice Theory, ENT, and Contagion Theory) that helped understand the factors that influence unethical behaviour. Some studies showed that contagions affect unethical behaviour (Gino et al., 2009a 2009b) but did not demonstrate the effect of different contagion levels on unethical behaviour. They also tended to study contagion effects separate from personal value effects. A second set of previous studies tested the effects of personal values or

contextual effects separately and interactively but in isolation from contagion effects (e.g. Greenberg, 2002). This dissertation addresses such gaps by providing a comprehensive examination of the effect of multiple contagion levels while accounting for personal value effects in both contextualized and decontextualized scenarios. It provides an important contribution to organizational psychology by demonstrating the relative effects of contagions, personal values and contextual factors on unethical behaviour as well as their complex interplay in affecting unethical behaviour. The findings overall suggest that the size of contagion effects is strong in all risk and reward situations.

The evidence for a presence of a threshold in Study 1 stems from the qualitative analysis of unethical behaviour likelihood which sheds light into the presence of a clear threshold, a period of negligible increase in unethical behaviour likelihood followed by an evident increase, at least for 17.2% of the sample. Given that a clear threshold was observed for 17.2% of the sample in a decontextualized context, the dissertation provides a novel contribution that provides an initial test of the concept and encourages future tests where personal-level variable and situational factors could demonstrate a higher prominence of the phenomenon.

The first study suggests that unethical behaviour is affected by relativism such that high relativism increases unethical behaviour likelihood at the high contagion zone, when a high number of colleagues commit unethical behaviour. Also, a combination of high relativism and low idealism was associated with higher unethical behaviour likelihood as compared to high relativism and high idealism. From a personnel selection view, it might be enticing to select for employees with low relativism and high idealism,

especially in environments where the potential for unethical behaviour is high. Therefore, this study could add support for the existence evidence on the usefulness of using integrity tests for employee screening (e.g. Ones & Viswesvaran, 2001). Although the legal defensibility of using personal values as a basis for selection could be challenging, similar measures to test for honesty are sometimes used in practice (Catano, 2010).

Traditionally, managers control unethical behaviour by adopting policies that aim to increase the ramifications and reduce the rewards associated with unethical behaviour. These policies are essential but insufficient, because findings in this dissertation suggest that unethical coworker contagions have a strong effect on unethical behaviour likelihood even in high risk situations. When policies fail to stop the spread of unethical behaviour, managers need to shift to a new paradigm of thinking, one where contagion is the model and swift as well as decisive responsiveness to transgressions is the principal method of limiting unethical behaviour from transmitting from one employee to another. Simultaneously, ethics codes need to be in place to de-normalize unethical behaviour and encourage reporting unethical behaviour. Further managers should foster a caring and respectful yet strict climate to reduce unethical behaviour (Martin & Cullen, 2006; Peterson, 2002; Vardi, 2001).

### **Limitations and Future Directions**

Although the dissertation provided some support for the effect of coworker contagion in decontextualized and contextualized situations, it has a number of limitations that could be addressed in future research. First, the studies were based on self-reports using online studies which are associated with social desirability bias, so



their applicability to organizations might be limited. The results might be different if actual unethical behaviours were examined in the workplace. To alleviate the issue, minor unethical behaviours were selected and pilot tested, and participants were encouraged in the instructions to answer truthfully.

Second, in all three studies intention (unethical behaviour likelihood) rather than actual behaviour was measured. While intention is a good predictor of behaviour, it is not a substitute for it. Therefore, future investigations of the effects of coworker contagion on actual behaviour are warranted. Nevertheless, intention is a good predictor of behaviour when moral norms are taken into consideration (Godin, Conner, & Sheeran, 2005). The assessment of idealism and relativism in this dissertation thus ameliorates the issue of using an intention measure.

Third, moderate and severe unethical behaviours were not tested. However, it was not possible to do that using self-reports because the pilot tests suggested limited variability in the responses and most participants indicated that they will not perform moderate and severe unethical behaviours. Future studies should examine unethical behaviour likelihood for moderate and severe behaviours in a real work setting to overcome the issue of social desirability bias.

Fourth, although the dissertation provided some evidence of the influence of personality and situational variables on unethical behaviour likelihood, it did not pinpoint the most accurate model for explaining unethical behaviour. Future studies should consider testing the fit of several models to identify the most accurate way of depicting the moderators of unethical behaviour likelihood.

Fifth, 10 was chosen as the maximum number of observed individuals in the first study and 13 in the second and third studies. In the second and third studies, unethical behaviour likelihood ratings continued to increase from 10 to 13. There is no evidence that the same will happen if 15 employees or higher was set as the maximum value for the coworker contagion levels variable. Future studies should test higher values of coworker contagion level to determine the point at which an increase in employee number has negligible effects on unethical behaviour likelihood. Alternatively, coworker contagion can be operationalized in proportions rather than numbers because work group sizes considerably vary from one organization to another. Proportions standardize reference group sizes and correct for this issue. However, coworker contagion proportions should be pilot tested to ensure that the research sample in question possesses the mathematical proficiency to understand proportions.

Sixth, the use of unequal scale increments for coworker contagion levels deemed the coworker contagion scale ordinal. Because of that it was not possible to compute growth curves and derive regression equations to sketch unethical behaviour likelihood under varying contexts and personal value profiles. This precluded testing for threshold differences between personal value groups and risk and reward levels. Growth curves allow for detailed depictions of changes of tested outcomes in varying situations. Equal increment scales should be used in future investigations of coworker contagion to allow for growth curve modelling.

Seventh, personalized scenarios were not used to examine behaviours, risks, and rewards that are relevant to each participant. The use of personalized scripts in cue-

sensitivity paradigm, although in the realm of addiction studies, has been shown to increase personal relevance and response to cues (e.g. Sinha et al, 2009; Tull et al., 2011). Future studies should use personalized unethical behaviour scenarios to increase personal relevance to the participants in terms of customizing the coworker contagion level variable depending on the number of coworkers in close proximity to the participant, and using meaningful risks and rewards as determined by the participants' description of their work environment.

Eighth, the samples used in three studies were predominately from the U.S. Cultural differences in terms of defining ethical and unethical behaviour and its acceptability in the workplace varies across countries (e.g. Cullen, Parboteeah, & Hoegl, 2004). Future studies should attempt to study cross cultural effects on unethical behaviour threshold.

Ninth, contagion Theory, ENT Theory, Signalling Theory, and Rational Choice Theory formed the basis of the CUBT model. However, other theories are pertinent to this dissertation. For instance, Social Learning Theory posits that people learn from others through the observation of actions, modelling and imitation (Bandura, 1977). According to the theory, social learning involves the reciprocal interaction between cognition, behaviour and the environment. Key factors that determine effective modelling include attention and motivation (Grusec, 1992). In this dissertation, the participants imagined their likelihood for unethical behaviour as they observed a progressively increasing number of coworker acting unethically. This contagion phenomenon caught their attention. They were motivated to act unethically by the

increasing strength of the contagion effect, and their personal values as well as situational rewards and risks regulated their response to the contagion. In this manner, Social Learning Theory could explain the contagion, personal values, and contextual effects of the CUBT model. Specifically, the theory emphasizes that learning from others' experiences, memory of past events, and observation are key factors in determining one's actions. Thus, the consequences of coworker actions (for instance: getting punished, getting rewarded, or not getting caught) could influence an employee's decision to act unethically. Future research should examine whether observing coworker unethical behaviour consequences influences contagion receptivity, in a Social Learning Theory framework, to expand the scope of the CUBT model.

Another theory germane to this dissertation is Social Values Orientation (SVO) theory (Eek and Gärling, 2008). The theory posits that SVO determines how a person distributes valuable things between themselves and others. People can possess cooperative, competitive, or individualistic values. Those who are cooperative are prosocial, they maximize their own benefit in addition to others. However, those who are competitive maximize their benefits and minimize the benefits of others, and those who are individualists focus on maximizing their benefits with little regard to others; both competitive and individualistic values are proself values (Messick & McClintock, 1968; Van Lange, 1999). In this dissertation, idealism and relativism explained how personal values affect coworker contagion receptivity. Likewise, prosocial and proself orientations may provide a valid basis for explaining how personal values moderate contagion receptivity, and expand knowledge on individual dispositions that determine the level of

contagion receptivity. Individualistic values could increase coworker contagion sensitivity relative to prosocial values because responding to the contagion would mean acting unethically and thus maximize one's benefits without any regard for others. However, individualists could also be less receptive or equally receptive to contagions in comparison to those prosocial values to protect themselves from the risks of acting unethically. Those with competitive values on the other hand could be strongly receptive to contagions if they perceive the potential benefit of acting unethically as a scarce resource that could diminish. Alternatively, they might resist contagions and get coworkers to act unethically if they perceive the risks associated with the behaviour to be high and hence intend to get their coworkers to act unethically and in turn face hefty consequences for such actions. Future research is needed to confirm the effects of contagion receptivity for those with proself and prosocial values.

### **Conclusion**

This dissertation provides an important contribution to unethical behaviour theory—the CUBT model yielded evidence of strong coworker contagion effects under varying risk and reward situations and allowed for testing such effects in a complex and informative model. The CUBT model revealed some evidence on the effects of personal values, contexts, and their interactions on moderating coworker contagion effects. The threshold phenomenon was also evident in a small subset of one of the three studies. Future examinations of unethical behaviour likelihood should focus on contagion effects, personal values, risks, and rewards to increase our understanding of unethical behaviours in the workplace and appreciate the unique and complex effects of these factors on

unethical behaviour. Future investigations should also test whether unethical behaviour threshold is more evident in specific personality profiles and under different contexts.

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## Appendices

### Appendix A: Scenarios for the three studies

#### Study 1

Dear participant

*Please read the following instructions carefully and then answer the questions that follow on the next few pages:*

Every day, people engage in positive and negative behaviours in the workplace. We are looking to better understand these behaviors.

There are two conditions in this study, a positive behavior condition and a negative behavior condition.

You have been randomly assigned to the negative behavior condition. Negative behaviors in the workplace are any behaviors that negatively affect co-workers or employers.

Imagine a situation in which you are working with ten other co-workers. Next, rate the likelihood that you would engage in each one of the four mild negative behaviours below while imagining that zero to 10 (all) of your co-workers are doing the behaviour as specified on the five scenarios on the next page.

**Please answer truthfully. Your answers will not be linked to your email, if you enter the prize draw, and all results will be reported in group form with no identifiable data.**

**I have read the instructions:**

Yes

No

**Behaviour 1: Slacking off at work (examples: Facebook, Netflix, or chatting with co-workers)**

**1 (Definitely Not) 2 (Probably Not) 3 (Maybe) 4 (Probably) 5 (Definitely)**

If 0 of your 10 co-workers slack off at work, would YOU still do it?

If 1 to 3 of your 10 co-workers slack off at work, would YOU do it?

If 4 to 6 of your 10 co-workers slack off at work, would YOU do it?

If 7 to 9 of your 10 co-workers slack off at work, would YOU do it?

If all 10 co-workers slack off at work, would YOU do it?

**Behaviour 2: Extended lunch break or extra unscheduled breaks (such as smoking or socializing)**

**1 (Definitely Not) 2 (Probably Not) 3 (Maybe) 4 (Probably) 5 (Definitely)**

If 0 of your 10 co-workers take an extended lunch break or unscheduled break, would YOU still do it?

If 1 to 3 of your 10 co-workers take an extended lunch break or unscheduled break, would YOU do it?

If 4 to 6 of your 10 co-workers take an extended lunch break or unscheduled break, would YOU do it?

If 7 to 9 of your 10 co-workers take an extended lunch break or unscheduled break, would YOU do it?

If all 10 co-workers take an extended lunch break or unscheduled break, would YOU do it?

**Behaviour 3: Taking home supplies (such as pens, notebooks) or product (food or drink)**

**1 (Definitely Not) 2 (Probably Not) 3 (Maybe) 4 (Probably) 5 (Definitely)**

If 0 of your 10 co-workers take home supplies or product, would YOU still do it?

If 1 to 3 of your 10 co-workers take home supplies or product, would YOU do it?

If 4 to 6 of your 10 co-workers take home supplies or product, would YOU do it?

If 7 to 9 of your 10 co-workers take home supplies or product, would YOU do it?

If all 10 co-workers take home supplies or product, would YOU do it?

**Behaviour 4: Leaving work early or calling in sick**

**1 (Definitely Not) 2 (Probably Not) 3 (Maybe) 4 (Probably) 5 (Definitely)**

If 0 of your 10 co-workers leave work early or call in sick, would YOU still do it?

If 1 to 3 of your 10 co-workers leave work early or call in sick, would YOU do it?

If 4 to 6 of your 10 co-workers leave work early or call in sick, would YOU do it?

If 7 to 9 of your 10 co-workers leave work early or call in sick, would YOU do it?

If all 10 co-workers leave work early or call in sick, would YOU do it?

**Studies 2 and 3**

***NOTE: The instructions differed for the two studies due to their different designs. For study 2, participants received one risk and reward situation for each behaviour. For study 3, participants received four risk and reward situations for a randomly assigned behaviour.***

**Behaviour 1: Checking the game score for an online bet**

**Low risk and high reward**

Imagine that you are at work. You are doing your usual tasks. However, you entered a \$500 online bet for the National Football League (NFL), and there is a game between the New England Patriots and the Denver Broncos playing now. If New England wins, you win \$25,000! If they lose, you win nothing. All of your co-workers entered the same bet. You are beyond anxious to know how the game will go. Who would not be its \$25,000! You are not supposed to check the results of the game at work. However, your boss is not around. You only have one co-worker who is known to rat people out and tell the boss everything, but he is busy with work today. Even if you get reported, it will be a matter of a meeting with your boss to tell you not to do it again.

#### **High risk and high reward**

Imagine that you are at work. You are doing your usual tasks. However, you entered a \$500 online bet for the National Football League (NFL), and there is a game between the New England Patriots and the Denver Broncos playing now. If New England wins, you win \$25,000! If they lose, you win nothing. All of your co-workers entered the same bet. You are beyond anxious to know how the game will go. Who would not be its \$25,000! You are not supposed to check the results of the game at work. Your boss has been going around checking on everyone's work. Your boss likes to make sure that no one is slacking off as she tends to be fiery and have been known to fire employees who slack off on the spot.

#### **High risk low reward**

Imagine that you are at work. You are doing your usual tasks. However, you entered a \$10 online bet for the National Football League (NFL) and there is a game between the

New England Patriots and the Denver Broncos playing now. If New England wins, you win \$100! If they lose, you win nothing. All of your co-workers entered the same bet.

You are a little anxious to know how the game will go.

You are not supposed to check the results of the game at work. Your boss has been going around checking on everyone's work. Your boss likes to make sure that no one is slacking off as she tends to be fiery and have been known to fire employees who slack off on the spot.

**Low risk low reward**

Imagine that you are at work. You are doing your usual tasks. However, you entered a \$10 online bet for the National Football League (NFL) and there is a game between the New England Patriots and the Denver Broncos playing now. If New England wins, you win \$100! If they lose, you win nothing. All of your co-workers entered the same bet.

You are a little anxious to know how the game will go.

You are not supposed to check the results of the game at work. However, your boss is not around. You only have one co-worker who is known to rat people out and tell the boss everything, but he is busy with work today. Even if you get reported, it will be a matter of a meeting with your boss to tell you not to do it again.

If 0 of your 13 co-workers check the game score, would YOU still do it?

If 1 to 3 of your 13 co-workers check the game score, would YOU do it?

If 4 to 6 of your 13 co-workers check the game score, would YOU do it?

If 7 to 9 of your 13 co-workers check the game score, would YOU do it?

If 10 to 12 of your 13 co-workers check the game score, would YOU do it?

If all 13 co-workers check the game score, would YOU do it?

### **Behaviour 2: Booking a flight at work**

#### **Low risk and high reward**

Imagine that you are at work. Your boss is on vacation so it's only you and your co-workers at work. Your co-workers tend to mind their own business and it's unlikely that one of them will report you if you are not doing your work.

You decide to quickly check Lufthansa airlines' website after a customer yells out loud "I can't believe that Lufthansa has 75% off their flights today! I have got to book mine now"! This is your chance to fly with your partner to your favorite destination in the world. The flights are selling out so quickly. No wonder, the sale is crazy good!

Only thing is that booking the ticket will take you 30 minutes because the airlines website is so jammed with people trying to book their flight and you and your co-workers have deadlines.

#### **High risk and high reward**

Imagine that you are at work. Your boss is just in a bad mood today and looking for a reason to take it out on someone. He has fired people before when he is pissed off about something.

You decide to quickly check Lufthansa airlines' website after a customer yells out loud "I can't believe that Lufthansa has 75% off their flights today! I have got to book mine now"! This is your chance to fly with your partner to your favorite destination in the world. The flights are selling out so quickly. No wonder, the sale is crazy good!

Only thing is that booking the ticket will take you 30 minutes because the airlines website is so jammed with people trying to book their flight and you and your co-workers have deadlines.

### **High risk low reward**

Imagine that you are at work. Your boss is just in a bad mood today and looking for a reason to take it out on someone. He has fired people before when he is pissed off about something.

You decide to quickly check Lufthansa airlines' website after a customer whispers to someone else "Lufthansa has 15% off their flights today! I think it's a good deal" This is your chance to fly with your partner to your favorite destination. The flights are selling out quickly.

Only thing is that booking the ticket will take you 30 minutes because the airlines website is so jammed with people trying to book their flight and you and your co-workers have deadlines.

### **Low risk low reward**

Imagine that you are at work. Your boss is on vacation so it's only you and your co-workers at work. Your co-workers tend to mind their own business and it's unlikely that one of them will report you if you are not doing your work.

You decide to quickly check Lufthansa airlines' website after a customer whispers to someone else "Lufthansa has 15% off their flights today! I think it's a good deal" This is your chance to fly with you partner to your favorite destination. The flights are selling out quickly.

Only thing is that booking the ticket will take you 30 minutes because the airlines website is so jammed with people trying to book their flight and you and your co-workers have deadlines.

If 0 of your 13 co-workers book the sale flight at work, would YOU still do it?

If 1 to 3 of your 13 co-workers book the sale flight at work, would YOU do it?

If 4 to 6 of your 13 co-workers book the sale flight at work, would YOU do it?

If 7 to 9 of your 13 co-workers book the sale flight at work, would YOU do it?

If 10 to 12 of your 13 co-workers book the sale flight at work, would YOU do it?

If all 13 co-workers book the sale flight at work, would YOU do it?

### **Behaviour 3: Important extended lunch break**

#### **Low risk and high reward**

Imagine that you work in a busy place. There are no scheduled breaks and you feel like you are constantly working. You have a strict 30-minute lunch break. Today is Valentine's day! You forgot your sweetheart's gift and you need to grab it before the end of your workday. The gift you want to get your partner is in a shop that is 25 minutes away, 50 minutes in total. You know for sure that it's the only one gift that will make your partner extremely happy.

Today is a good chance to take an extended lunch break because the front desk lady, who keeps track of when everyone goes in and out of work, has a sick day. Your boss hates unscheduled breaks and extended lunch breaks, and the front desk lady is his trusted informant.

#### **High risk and high reward**



Imagine that you work in a busy place. There are no scheduled breaks and you feel like you are constantly working. You have a strict 30-minute lunch break. Today is Valentine's day! You forgot your sweetheart's gift and you need to grab it before the end of your workday. The gift you want to get your partner is in a shop that is 25 minutes away, 50 minutes in total. You know for sure that it's the only one gift that will make your partner extremely happy.

However, you have to watch out for the front desk lady who keeps track of when everyone goes in and out of work. Your boss trusts the front desk lady and has fired people based on her reports of unscheduled breaks or extended lunch breaks.

#### **High risk low reward**

Imagine that you work in a busy place. There are no scheduled breaks and you feel like you are constantly working. You have a strict 30-minute lunch break. Today is Valentine's day! You forgot your sweetheart's gift and you need to grab it before the end of your workday. The gift you want to get your partner is in a shop that is 25 minutes away, 50 minutes in total. You know for sure that your partner will love that gift, but is easy going about holidays and won't be too upset if you don't have a gift.

However, you have to watch out for the front desk lady who keeps track of when everyone goes in and out of work. Your boss trusts the front desk lady and has fired people based on her reports of unscheduled breaks or extended lunch breaks.

#### **Low risk low reward**

Imagine that you work in a busy place. There are no scheduled breaks and you feel like you are constantly working. You have a strict 30-minute lunch break. Today is

Valentine's day! You forgot your sweetheart's gift and you need to grab it before the end of your workday. The gift you want to get your partner is in a shop that is 25 minutes away, 50 minutes in total. You know for sure that your partner will love that gift, but is easy going about holidays and won't be too upset if you don't have a gift.

Today is a good chance to take an extended lunch break because the front desk lady, who keeps track of when everyone goes in and out of work, has a sick day. Your boss hates unscheduled breaks and extended lunch breaks, and the front desk lady is his trusted informant.

If 0 of your 13 co-workers take an extended lunch break, would YOU still do it?

If 1 to 3 of your 13 co-workers take an extended lunch break, would YOU do it?

If 4 to 6 of your 13 co-workers take an extended lunch break, would YOU do it?

If 7 to 9 of your 13 co-workers take an extended lunch break, would YOU do it?

If 10 to 12 of your 13 co-workers take an extended lunch break, would YOU do it?

If all 13 co-workers take an extended lunch break, would YOU do it?

**Appendix B: *The Ethics Position Questionnaire***

Please indicate if you agree or disagree with the following items. Each represents a commonly held opinion and there are no right or wrong answers. We are interested in your reaction to such matters of opinion. Rate your reaction to each statement by writing a number to the left of each statement where:

- 1 = Completely disagree
- 2 = Largely disagree
- 3 = Moderately disagree
- 4 = Slightly disagree
- 5 = Neither agree nor disagree
- 6 = Slightly agree
- 7 = Moderately agree
- 8 = Largely agree
- 9 = Completely agree

1. People should make certain that their actions never intentionally harm another even to a small degree.
2. Risks to another should never be tolerated, irrespective of how small the risks might be.
3. The existence of potential harm to others is always wrong, irrespective of the benefits to be gained.
4. One should never psychologically or physically harm another person.
5. One should not perform an action which might in any way threaten the dignity and welfare of another individual.
6. If an action could harm an innocent other, then it should not be done.
7. Deciding whether or not to perform an act by balancing the positive consequences of the act against the negative consequences of the act is immoral.
8. The dignity and welfare of the people should be the most important concern in any society.
9. It is never necessary to sacrifice the welfare of others.
10. Moral behaviors are actions that closely match ideals of the most "perfect" action.
11. There are no ethical principles that are so important that they should be a part of any code of ethics.

12. What is ethical varies from one situation and society to another.
13. Moral standards should be seen as being individualistic; what one person considers to be moral may be judged to be immoral by another person.
14. Different types of morality cannot be compared as to “rightness.”
15. Questions of what is ethical for everyone can never be resolved since what is moral or immoral is up to the individual.
16. Moral standards are simply personal rules that indicate how a person should behave, and are not be applied in making judgments of others.
17. Ethical considerations in interpersonal relations are so complex that individuals should be allowed to formulate their own individual codes.
18. Rigidly codifying an ethical position that prevents certain types of actions could stand in the way of better human relations and adjustment.
19. No rule concerning lying can be formulated; whether a lie is permissible or not permissible totally depends upon the situation.
20. Whether a lie is judged to be moral or immoral depends upon the circumstances surrounding the action.

Reference:

Forsyth, D. R. (1980). A taxonomy of ethical ideologies. *Journal of Personality and Social Psychology*, 39, 175-184.

### Appendix C: Final curve coding guideline

\*\*\*NOTE: x-axis = levels (1-5), y-axis = likelihood for unethical behaviour (0-5)

Code 1: “Persuaded by a crowd”: Steadily increasing likelihood of unethical behaviour:

These people have a fairly steady increase in likelihood as the number of coworkers committing the act increases.

- Operational definition: each additional ‘level’ shows likelihood increasing some amount, the total amount of increase from lowest to highest levels is **1.0 or more** points on the likelihood scale, and the increase is reasonably constant across the range of levels.

Code 2: “Individual threshold”: These people show zero, or small, increases in likelihood as number of coworkers committing the act goes up, up to a critical tipping point, at which their likelihood increases substantially (operationally defined as **1.0 or more** on the 5-point likelihood scale). May look like a flat line and sudden uphill, or more of an “s” shape, but many people head of an arrow, others are more of an “s” shape.

- Operational definition: **Plateau first (not increasing more than 1-point total), then a threshold/ tipping point (the slope increases and the likelihood goes up by 1 or more on the 5-point likelihood scale fairly rapidly), possible second plateau (not increasing more than 1 point total).**

Code 3: “Plateau”: These people are influenced by the crowd. However, they are distinguished from the “code 1 group” because they reach a clear “plateau” after a steady increase. So they are influenced by a crowd but still have a threshold beyond which their likelihood for unethical behaviour flat lines.

- Operational definition: **A steady increase for three or four levels (for a total increase of 1 or more on the likelihood scale for the first three/four levels combined), after which a plateau is reached where there is a clear flat line (an increase of 0.25 or less on the likelihood scale) for the last one or two levels.**

Code 4: “No influence of the crowd”: Flat line—more coworkers doing the behaviour does not increase their own likelihood.

- Operational definition: **line goes up by less than 1 point on the likelihood scale across the range of “levels”**

Code 5: “Other idiosyncratic patterns” that do not fit codes 1-4, for example, those likelihood ratings that **\*decrease\*** by 1 or more points on a 5-point likelihood scale at any point over the number of ‘levels’ (coworkers).