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# Moral Identity, Moral Disengagement, and Online Behaviour from Adolescence to Young Adulthood

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Moral Identity, Moral Disengagement, and  
Online Behaviour from Adolescence to Young Adulthood

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by

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THESIS

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Wilfrid Laurier University

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## Abstract

Information and Communication Technologies (ICT) have become the most popular medium for social communication amongst adolescents and young adults. However, there is growing concern surrounding heightened ICT use and the development and activation of influential social constructs such as moral identity and moral disengagement. The importance of moral ideals to oneself (i.e., moral identity) and the distancing of oneself from these moral ideals (i.e., moral disengagement) are often contextual and may differ in online domains when compared to traditional face-to-face interactions. Developing youth consistently report high moral identity adherence within family and friend contexts during moral development, yet these constructs have not been assessed within an online setting. This investigation reports that self-reported online moral identity was significantly lower when compared to family and friend contexts. This effect remained stable across early adolescent ( $n = 97$ ), middle to late adolescent ( $n = 170$ ), and young adult ( $n = 112$ ) age groups. Further, moral disengagement was significantly higher within online interactions when compared to face-to-face contexts and online moral disengagement significantly mediated the relationship between online moral identity and immoral online behaviours (i.e., pirating, trolling, & hacking). Male participants reported significantly higher moral disengagement and all forms of antisocial behaviours, while female participants reported significantly higher online moral identity.

*Keywords:* Moral Identity, Moral Disengagement, Immoral Online Behaviour, ICT

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Moral Identity, Moral Disengagement, and  
Online Behaviour from Adolescence to Young Adulthood

“I think that the internet is broken” states Twitter founder, Evan Williams (Streitfeld, 2017): a succinct quotation that summarizes a prevailing attitude towards online usage in the 21st century. For Williams and others, the online world has become akin to the “wild-west” where face-to-face rules of decorum and propriety do not consistently apply (Timm, 2012; Gellman, & Poitras, 2013; Mozur, 2017; Asher, 2016). This concern is well represented in online behaviours such as: trolling, pirating, and hacking, which parallel face-to-face actions such as harassing, stealing, and harming other’s materials. These online behaviours have drawn global attention as internet entrepreneurs, policy makers, and government establishments are increasingly concerned with the prevalence and the regulation of such immoral behaviour within online platforms (Gellman & Poitras, 2013; Asher, 2016; Timm, 2018). In addition to these concerns there has also been an intensifying spotlight on multi-national corporations that have been accused of using online platforms and devices in an inappropriate manner (Swain, 2018). The implication of such events is beginning to appear within developmental and social psychology literature, as the assessment of moral conduct and other social interactions within an online settings has recently gained more empirical traction (Buote, Wood, & Pratt, 2009; Gross, 2004; Maria, Vossen, & Valkenburg, 2015; Macey, & Hamari, 2018). Specifically, developmental psychologists have begun to assess differences in online and face-to-face interactions within early adolescence and young adulthood. For example, recent studies that have assessed the prevalence of daily online interactions (Leung, 2013), the associations between online engagement and psychological well-being (Shakya & Christankis, 2017), as well as cyber-bullying rates (Wang, Yang, Yang, Wang, & Lei, 2015). This developmental focus is important to highlight as younger populations are the



most frequent users of online media for communicative means and entertainment purposes (Quorus Consulting Group Inc., 2012; Lobel, Engels, Stone, Burk, & Granic, 2017). Further, technological advances such as Wi-Fi and data packages have cemented functions such as texting, emailing, and video-messaging as daily social functions as users are no longer tethered to a wired internet connection to use these services. However, in spite of recent investigations into online behaviour, the question still remains: are online interactions different from face-to-face interactions and are these prevalent online interactions detrimental to morally relevant constructs, especially those that seem to predict prosocial and antisocial behaviour? And further, are there any conceptual or developmental explanations for these possible contextual differences?

As these online functions and interactions have come to replace and replicate many traditional social experiences, especially for the lives of youth, novel antisocial behaviours that mimic face-to-face immoral actions such as: insulting, stealing, and harming others have been reformed into online behaviours such as: trolling, pirating, and malicious hacking (Livingstone, & Brake, 2010). Although the presence of antisocial behaviours within face-to-face settings is not considered abnormal in regards to psychological development, the appropriate punishment of such antisocial behaviours is crucial to the development of the moral self during early adolescence and further influences the subsequent use of behaviour throughout the lifespan (Damon, & Killen, 1982; Hardy, Bean & Olsen, 2015; Hertz, & Krettenauer, 2015). What is interesting to note, is that these immoral online behaviours are not completely novel themselves, but rather it is the context in which they are employed that is a novel. This is further compounded by the presence of various online contextual factors such as: anonymity, asynchronicity, and emotional apathy, which greatly differ in comparison to face-to-face

contexts (Buote, Wood, & Pratt, 2009; Gross, 2004; Ruions, & Bak, 2015; Annisette, & Lafreniere, 2017). This culmination of factors (i.e., online immoral behaviours and online contextual differences) may subsequently motivate individuals to engage in more immoral behaviour while online regardless of their moral disposition and use of antisocial behaviour within face-to-face interactions. However, despite the concerns highlighted above and paired with mounting evidence that online interactions do in fact differ from face-to-face interactions, it remains unclear whether online contexts themselves elicit more immoral behaviour or whether individuals deliberately use online platforms to engage in behaviours that would elicit more retribution within face-to-face scenarios. Thus, the main objective of this study is to clarify whether the perceived high prevalence of immoral interactions within various online settings is validated through a comparison of face-to-face and online immoral behaviours. In addition, the present study assessed whether influential moral constructs such as moral identity and moral disengagement significantly differ across these contexts as well as across adolescent and young adulthood.

Regarding the assessment of moral behaviour and moral ideals throughout earlier developmental periods, moral identity has most recently gained substantial empirical attention (Hertz, & Krettenauer, 2015). Moral identity is concerned with the importance of, and the adherence to, moral ideals, which ultimately predict moral and immoral behaviour (Walker, 2004; Hertz, & Krettenauer, 2015). This personality trait develops the most during early adolescent periods and further solidifies during young adulthood periods (Damon, 1984; Hardy, & Carlo, 2011). In terms of antisocial behaviours, it has been established that appropriate punishment of an antisocial behaviour is crucial to moral identity development during these periods, as is the appropriate reinforcement of prosocial behaviour (Krettenauer, Colasante,

Buchmann, & Malti, 2013; Krettenauer, & Johnson, 2011). However, investigations into the relationship between online moral identity and online moral behaviour have only recently begun to emerge. To date, online moral identity research within younger developing populations has been largely restricted to literature that specifically addresses cyber-bullying behaviour (Wang, Yang, Yang, Wang, & Lei, 2015). While cyber-bullying does encompass some aspects of online antisocial behaviour (i.e., trolling), there is an empirical need to address more general online antisocial behaviours that are not exclusively related to cyber-bullying. Pirating for instance is concerned with the illegal downloading of commercial media such as movies, television shows, and video games and differs from cyber-bullying abuse. Pirating is a form of theft yet this immoral behaviour is highly prevalent amongst many online users (Diamant-Cohen, & Golan, 2017).

This gap within online moral identity research is consistent within research assessing other moral constructs that, unlike moral identity, have been shown to positively predict antisocial behaviours such as stealing and harming others (Bandura, 2016). Notably, the use of moral disengagement within online interactions is also well documented within cyber-bullying literature (Wang, Lei, Liu, & Hui, 2016), however like moral identity, there remains a need to expand the assessment of moral disengagement use within a variety of daily online behaviour that is not encapsulated in cyber-bullying behaviours alone. Thus, a study of this nature would reflect a broader array of antisocial behaviours that are committed by online users (i.e., pirating, trolling, hacking, etc.), while subsequently forming a basis for research that addresses online contextual differences in morally relevant constructs during earlier psychological development. From this, the current investigation aims to clarify whether online engagement, especially during younger developmental periods, does in fact warrant concern by assessing whether moral ideals

(i.e., moral identity) are less important in online contexts when compared to traditional face-to-face interactions amongst family members and friends, where moral cohesion has been reported as consistently high (Krettenauer, & Victor, 2017). Further, as a possible explanation for lower moral identity coherence within online contexts, the use of moral disengagement mechanisms will be compared between online contexts and face-to-face contexts. This is motivated by research showing moral disengagement to be positively predict cyber-bullying behaviours (Wang, Yang, Yang, Wang, & Lei, 2015), while also being shown to mediate the relationship between moral identity and face-to-face antisocial behaviours (Detert, Trevino, & Sweitzer, 2008; Chowdhury, & Fernando, 2013). Not only will moral disengagement be used as an independent variable, but it will also be considered as a possible mediating variable between moral identity and antisocial behaviours within an online context. Last, as moral development and ICT usage are the most pronounced during early adolescence and onto young adulthood periods (Krettenauer, Colasante, Buchmann, & Malti, 2013; Qorus Consulting Group Inc., 2012), the last aim of this study is to assess whether online contextual differences in moral identity and moral disengagement change across age from adolescence to young adulthood.

### **Information and Communication Technologies**

Information and Communication Technologies (ICT) such as computers, tablets, and smartphones have become ubiquitous tools for social communication for early adolescent and young adulthood periods: with 97% of individuals aged 14-24 reporting to use a social media platform (such as Facebook, Instagram, Twitter, etc.) in conjunction with their ICT device (Qorus Consulting Group Inc., 2012). However, it must be noted that the popularity of ICT usage extends beyond platforms such as: Reddit, Instagram, and Facebook, as is apparent with the emerging field of amateur and professional video gaming termed eSports (Macey, & Hamari,

2018). ICT devices and internet connections are increasingly available to younger populations due to their portability and affordability. With recent technological advances in wireless internet and data connections, it is possible for North American youth to be constantly engaged online without a wired connection. This ubiquitous presence of ICT usage has dramatically altered social communication for youth, as within the 21st century adolescents and young adults report to interact as often or even more often with their family, friends, and strangers via their ICT device when compared to traditional face-to-face forms of communication (Fioravanti, Dettor, Casale, 2012).

In light of this popularity and this preference for ICT devices, stark contextual differences have been highlighted in comparison to face-to-face interactions (Ruions, & Bak, 2015; Annisette, & Lafreniere, 2017). A vast majority of online encounters through ICT differ in regards to inter-personal communication via three factors that are likely to also influence the usage of immoral online behaviour. These factors are: asynchrony, anonymity, and emotional apathy. Asynchrony refers to the asynchronous nature of ICT interactions in relation to face-to-face interactions: where face-to-face interactions involve an immediate response to a received message (i.e., spoken conversation), ICT interactions may be exceedingly delayed from the departure of the initial message to the actual response from the recipient (Buote, Wood, & Pratt, 2009). Not only does an asynchronous communication allow a victimizer to temporally detach themselves from an antisocial online behaviour (i.e., spam messaging, trolling, pirating, etc.), but it may also emotionally blunt the retaliatory response that is received from the victim (Bryant, Sanders-Jackson, & Smallwood, 2006). Even in limited cases where negative reactions from other ICT users may be as immediate as within in-person interactions (i.e., video messaging,

instant-messaging, Twitch streaming), any form of physical retaliatory harm is either delayed, is entirely absent, or is impossible due to geographical restraints.

ICT interactions are also highly anonymous in comparison to face-to-face interactions: especially so within online platforms such as Reddit, Twitter, and within multiplayer video-games that use anonymous avatars. Not only are some ICT functions truly anonymous (i.e., pirating, hacking, & spamming), but a vast majority of non-anonymous platforms allow users to alter their appearance or omit facts related to their personality (i.e., Instagram, Facebook, Snapchat, etc.). In terms of antisocial behaviours that are harshly reprimanded within face-to-face encounters such as: lying, stealing, and harming others, the anonymity factor that is inherent within many ICT settings may reduce the emotional and the behavioural reactions from other online users (Fioravanti, Dettore, & Casale, 2012). Thus, an anonymous online identity is likely to influence immoral online behaviour, as an immoral action within an online context is expected to be less attached to ones' moral identity. The last online factor of importance in this current study is concerned with the fact that individuals communicating via ICT devices may experience a lowered emotional perception of their respondents' reaction. This may be due to either a delayed negative response from a respondent (asynchrony) and/or this may be based on both the user's and the recipient's increased anonymity while engaging online. A lowered perception of a victim's harm might be more evident in online contexts than within inter-personal interactions (Ruions, & Bak, 2015), which could further catalyze the use of moral disengagement mechanisms while subsequently lowering the activation of moral identity via feelings of shame and/or guilt (Stets & Carter, 2012). Thus, it seems that online interactions may introduce a bevy of social and behavioural factors that differ in regards to face-to-face contexts and that are

expected to hinder moral identity coherence while further enabling the use of moral disengagement mechanisms.

From this, it is apparent that the prevailing use of ICT devices for adolescents to young adulthood, as well as the contextual differences present in ICT domains, validates the contextual comparison of online interactions in relation to face-to-face contexts during these developmental periods. These online contextual differences are of crucial importance in regards to the use of ICT devices amongst adolescent and young adults, as online interactions seem to have the capacity to mimic traditional pro-social interactions (i.e., tolerance, cooperation, courteousness, etc.) and anti-social encounters (i.e., theft, harassment, deception, etc.), which are vital to the development of moral constructs (Krettenauer, & Casey, 2015). However, it is important to note that online interactions not only replicate traditional forms of face-to-face interactions (Chung, 2013) but they also introduce unique and complex contextual factors that are likely to influence moral identity cohesion and the use of moral disengagement mechanisms (Annisette, & Ruions, & Bak, 2015; Lafreniere, 2017). Thus, the approach of this investigation hinges upon the expected differences between online and face-to-face contexts, in regards to the prevalence of antisocial behaviours and the activation of morally influential variables such as moral identity and moral disengagement.

### **Moral Identity**

Moral identity, arguably, has taken the forefront in moral developmental research: with its development beginning during adolescence and continuing throughout the lifespan (Hertz & Krettenauer, 2015). Defined as “the degree to which being a moral person is important to an individual’s identity” (Hardy & Carlo, 2011): moral identity markedly develops during early adolescence and further solidifies during young adulthood (Krettenauer & Casey, 2015). Viewed

as a personality construct, moral identity bridges the gap between an individuals' moral judgments (i.e., right versus wrong) and an individuals' moral behaviour (i.e., prosocial vs. antisocial actions). Thus, moral identity has been argued and situated as the chief motivator for actual moral and immoral behaviour (Walker, 2004). This has been validated by a recent meta-analysis that showed moral identity to positively predict prosocial behavior while negatively predicting antisocial behaviours across the lifespan as well as across different inter-personal contexts such as those found within family, friend, school, and work situations (Hertz, & Krettenauer, 2015). However, before further addressing these contextual and developmental outcomes, it is vital to understand the prevailing empirical theories surrounding moral identity research as each hold unique relevance in regards to possible trajectories of moral identity activation within online settings and across earlier developmental periods.

In terms of an empirical approach to moral identity research currently, there are two prevalent theories: a trait-based approach and a socio-cognitive perspective (Hardy, & Carlo, 2011). The trait-based approach argues that moral identity is an agentic and stable trait that connects ones unique moral ideals to their actual moral behaviour (Blasi, 1984). Through this view, moral identity is a constant and stable predictor of ones' engagement in prosocial acts and refrainment from antisocial behavior, as it reflects an adequate and important part of ones' identity much like other personality traits (Aquino, & Reed, 2002). Here, moral identity is viewed as central to the self as it reflects a commitment to moral standards that have either been adopted through a family belief system or that have been implemented through exposure to societal norms. These moral beliefs not only reside within the self, but further moral attitudes and behaviour ultimately reflect ones' moral agentic role and their subsequent construction of their moral beliefs. In terms of an online context, in considerations of a trait-based perspective,



individuals whom engage online would not be influenced by contextual or situational factors such as anonymity, asynchronicity, and emotional apathy. Those that do show low moral identity activation while online, merely reflect an individual difference that are often reflected within other personality constructs as well (Blasi, 1984). This assimilation of societal moral ideals into ones' identity is also apparent in a socio-cognitive approach, however unlike a trait-based theory, a socio-cognitive model allows for situational alterations in moral identity activation despite the overall trajectory of moral development (Hardy, & Carlo, 2011).

As with the trait-based model, the socio-cognitive approach also emphasizes that moral identity is an agentic construct that predicts moral and immoral behaviour, yet here moral identity is treated more as a cognitive-affective mechanism that interacts with a bevy of environmental and contextual factors (Monin, & Jordan, 2009). Cognitively, an individual's moral identity relies on a series of moral schemas that develop throughout the lifespan due to the integration of societal norms and family beliefs (Damon, 1984). In terms of an affective perspective, moral identity in a socio-cognitive perspective is also influenced by social ramifications in response to immoral behaviour, which arise from feeling of shame and guilt (Stets & Carter, 2012). Thus, moral identity activation under this model is contingent on the activation of schemas within certain situations that are influenced by the perceived amount of guilt and or shame one may endure if they act immorally, which is ultimately based on the punishment of past antisocial behaviours (Aquino, Freeman, Reed, Lim, & Felts, 2009, Hardy & Carlo, 2011). Situational factors that may alter moral identity activation include societal contexts such as those within family, friends, school, and work settings. These may also include alterations in perceived anonymity, asynchronicity, and emotional apathy which are found in ICT settings. Thus, unlike a trait-based approach, a socio-cognitive approach allows for the

plausibility that individuals may continue to exhibit less antisocial behaviour in certain contexts, while subsequently acting immoral due to a lack of moral identity schema activation within other contexts. Although these theories hold different perspectives in regards to the stability of moral identity across various contexts throughout moral development, they both hold direct theoretical relevance to this study as moral identity activation across younger development periods has not specifically been assessed in an online setting. Thus, it is important to consider a trait-based perspective as a possible explanation to null contextual results within this study when comparing differences in moral identity activation within contexts and between age periods.

Although the contextual influence of online interactions seems likely to influence moral identity activation, moral identity research that has been conducted under the provision of online interactions has just begun to emerge within recent years. The recent focus on moral identity within these online investigations is largely due to the theoretical literature supporting moral identity as a significant contextual predictor of moral and immoral behaviour (Krettenauer & Victor, 2017; Wang, Yang, Yang, Wang, 2015). Those few studies that have assessed online moral identity thus far tend to report consistent negative associations between moral identity and cyber-bullying behaviours (Wang, Yang, Yang, Wang, & Lei, 2015), as well as lower reports of moral identity coherence within online contexts overall (Annisette, & Lafreniere, 2017).

Although these results seem promising in the respect that increases in moral identity activation are related to decreases in cyber-bullying behaviour, reports of lower online moral identity cohesion overall suggests that moral identity coherence is less important for users while online.

External motivations to behave morally through differing reactions to prosocial and antisocial behaviour, may become less salient while online. An asynchronous punishment in reaction to antisocial behaviour: such as trolling, may be less effective if the time between the

antisocial behaviour and the retaliation is extended. Further, emotional and geographical distance inherent in online interactions may further reduce the negative emotional response related to the retribution of an immoral action, which could hinder the deterrence of future immoral behaviours and external motivations while online. While these factors may be most pronounced in external forms of moral motivation, the most important contextual difference in regards to online interactions in relation to moral identity cohesion is the heightened sense of personal anonymity. For regardless if one's external motivations are equally reprimanded online in comparison to in-person, while online, the sense of anonymity allows a majority of users to disassociate their actions from their internal moral disposition (Bandura et al. 1996; Ruions, & Bak, 2015). Thus online interactions have the capability to influence the three empirical pillars associated to moral identity and moral identity development, especially when anonymity, asynchronicity, and emotional apathy are considered as important ICT factors. From the above mentioned theoretical and contextual research, it has become clear that moral identity is contingent on three prevailing factors: internal factors (i.e., family values, societal beliefs, etc.), external factors (i.e., reinforcement, affective responses, punishment etc.), and situational factors (i.e., family, friends, and now online contexts) (Krettenauer, & Johnston, 2011; Krettenauer, & Victor, 2017; Monin, & Jordan, 2009). In terms of internal moral factors, individuals not only align their moral identity and moral behaviour to reflect their inherent beliefs in right versus wrong, but they also use their internal moral disposition as a source of motivation for future moral behaviour or immoral behaviour. External moral factors stem from the experiences with prosocial behaviour and antisocial behaviour throughout moral identity development, and thus are used as external motivation when considering whether to commit a moral or an immoral action (Krettenauer, Colasante, Buchmann, & Malti, 2013; Tasimi, & Young, 2016; Krettenauer & Casey, 2015).

Thus external motivation differs in regards to internal motivation as external motivations are related to the impression of others and are not related to an individuals' moral disposition. These moral motivations are not exclusively dichotomous in the respect that an individual may be influenced by a gradient of internal and external factors in relation to the presence of moral and immoral behaviour.

In terms of the primary research goal for this current study, considering current socio-cognitive moral identity research while also considering current global and political discussions surrounding online immorality: this study aims to assess whether moral identity activation is significantly lower in online contexts compared to face-to-face contexts that are encapsulated within family and friend situations. A chief theoretical pillar for this current study is the fact that the trait-based and the socio-cognitive approach hold two distinct notions in terms of the influence of contextual factors in relation to moral identity coherence. As this investigation aims to assess context differences in moral identity in regards to online and face-to-face relationships (i.e., family and friends), it is inherent that a socio-cognitive approach is emphasized. However, as the development of moral identity activation across adolescence into young adulthood has yet to be investigated in an online context, a trait-based hypothesis is a valid alternative hypothesis to explain potential null differences in terms of moral identity activation within online contexts and across age. This is in line with previous studies that have reported contextual differences in moral identity (Aquino, Freeman, Reed, Lim, & Felps, 2009; Krettenauer, & Johnson, 2011; Krettenauer, & Victor, 2017; Monin, & Jordan, 2009) and negative associations between moral identity and immoral online behaviours (Annisette, & Lafreniere, 2017; Wang, Yang, Yang, Wang, & Lei, 2015). Further, considering that the three contextual factors within online interactions are a potential hindrance to internal and external moral motivations, this current

study holds the primary prediction that moral identity will be significantly lower in online contexts compared to face-to-face contexts involving family members and friends. With this primary hypothesis established, it is important to highlight that moral identity development coincides with increased ICT usage during adolescence and onwards, thus it is important to establish whether these expected differences in moral identity activation are moderated by age. The importance of this research question becomes imperative while assessing inter-personal moral identity developmental research, in which social interactions, and the subsequent appraisal of prosocial behaviour and the punishment of antisocial behaviour is deemed crucial to moral identity development and subsequent behaviour throughout the lifespan (Damon & Killen, 1982; Blasi, 1984; Hardy, Bean, & Olsen, 2015).

### **Moral Identity Development.**

The inception of the moral personality begins near the age of two through the formation of the moral self, which subsequently develops into moral identity during adolescence and remains as such until death (Emde, Biringen, Clyman, & Oppenheim 1991). Even during infancy, research has attributed moral development to the continual exposure to social environments as well as to the reinforcement and the punishment of prosocial and antisocial behaviours within various situations (Damon, & Killen, 1982; Turiel, 2008). The role of sociability in moral development is prominent during the transition from adolescence into young adulthood, as these age groups begin to emphasize peer relationships over family relationships (Buote, Wood, & Pratt, 2009). Further, these age groups also experience different social situations during the transition from academic environments during adolescence to workplace situations during young adulthood. Already, ICT is becoming imbedded within earlier developmental periods as individuals are often first introduced to social media platforms during

early adolescence (Chung, 2013; Quorus Consulting Group, 2012). Thus it seems that moral identity development and ICT usage first intersect during early adolescence and become further established during later young adulthood periods. The notion that moral identity development and ICT usage seem to intersect during earlier development is instrumental to the predicted differences in moral identity activation within this context because previous developmental socio-cognitive research has concluded that significant differences in moral identity motivation exist between family, friend, and school contexts during adolescence, which tend to remain consistent during young adult periods within work contexts as well (Krettenauer & Victor, 2017). Thus, it is possible that online contexts will also introduce differences in social contexts that are witnessed already between family, friend, and school/work contexts and that tend to remain throughout older developmental periods.

Throughout moral development intimate bonds and social experiences within family and friend contexts aid in the constructions of ones' internal moral disposition as well as influencing their moral behaviour through external means of reinforcement and punishment. However there are significant differences in the influence that each respective form of motivation holds across these developmental periods. In early and late adolescent populations, external factors: specifically those related to the possibility of retribution are the most pronounced form of moral motivation. This is significantly different from later developmental periods: found during young adulthood, as here older individuals tend to act morally based on their core-beliefs rather than based on the impression of others (Krettenauer, & Casey, 2015). This increase on the reliance of internal moral motivations seems to be in line with reports showing overall moral identity (i.e., non-contextually specific), to increase with age (Hertz & Krettenauer, 2015). This is also in line with the maturity principle in which the ability to respond to the environment in an appropriate

manner is reflected in ones' adherence to their core-beliefs, rather than the differing opinion of others across alternating situations (Wechsler, 1950; Caspi, Roberts, & Shiner, 2005). Morally developing individuals are introduced to novel social contexts quite early in development, with the introduction of friend and school contexts during childhood and adolescence, which are later followed with post-secondary education and workplace situations in young adulthood. Although moral motivations and moral identity activation within friend contexts tend to mimic those of family contexts, school contexts specifically prioritize high grade attainment and exceptional university grade point averages over the formation of cooperative and cohesive social bonds. Thus, it is unsurprising that morally developing youth within school contexts report significantly higher external moral motivations and significantly lower internal moral motivations when compared to family and friend environments (Krettenauer & Johnson, 2011; Krettenauer & Victor, 2017). This contextual difference remains consistent within work contexts as those in later development leave their educational endeavours to pursue a career, which promote the attainment of higher salaries and monetary promotions. These results suggest that individuals rely more on their internal moral compass when interacting within intimate relationships, yet rely more on external forms of moral motivation within less intimate relationships that are found within school and workplace settings. Thus, from an early age and into early adulthood, morally developing individuals experience contrasting social contexts that tend to exhibit different levels of internal and external forms of moral identity motivation based on social and contextual factors. These stark contextual contrasts within these mentioned situations are now more apparent in online contexts which are more immersive and novel in comparison to school and work environments. ICT devices are prominent within school and work contexts through the use of smart-boards, electronic booklets, and workplace social media sites such as LinkedIn. Further,

their ubiquitous nature also supersedes the structured and segmented time intervals spent within school and work settings, as individuals often carry their ICT devices to and from these settings. Differences in moral identity activation are thus likely to exist within online settings when compared to family and friend scenarios, which is consistent with similar age groups that attend school and university, while later entering the workplace.

Concerning online moral identity development across early adolescence and into young adulthood, contextual differences due to online engagement have not yet been empirically assessed. However, there remains a large amount of literature concerning psychological differences between traditional inter-personal contexts and online contexts. This has been documented within online studies that have included adolescent, emerging adult, and young adult samples to assess cyber-bullying and prevalence rates of psychopathology amongst online users (Shakya & Christankis, 2017; Wang, Yang, Yang, Wang, & Lei, 2015), with both forms of prevalence rates remaining highly consistent across these particular age categories in comparison to face-to-face interactions. Thus it seems differences in moral coherence may be represented across early adolescent, middle to late adolescent, and young adult age groups within online contexts, with possible downward or upward trends in moral identity activation, as is possible within a socio-cognitive theoretical framework (Hardy & Carlo, 2014), or stable trends as argued by Blasi (1984). These cross-contextual differences exhibited in moral identity development are clarified through the realization that moral development is contingent on the interplay of internal and external moral motivations that tend to consistently differ between family and friend contexts when compared to school and work contexts (Krettenauer & Victor, 2017). Social interactions within online contexts not only allow for emotionally and temporally muted responses in relation to immoral behaviour, but they also externally motivate many users to



achieve online popularity through the tracking of “likes” or comments on social media platforms (Leung, 2013). Similar to athletic sporting events, online gamers are also externally motivated to win matches, which ultimately showcases the range of external motivations through ICT usage. Much like with school and work contexts, these contexts may show lower internal motivation and higher external motivation. Moreover, these before mentioned results support the notion that moral identity development can differ between different contextual situations and that these differences remain significant throughout moral identity development.

As no developmental analyses have been completed in regards to moral identity in an online context, it is difficult to hypothesize an appropriate developmental trajectory for this present study. It seems equally plausible that with less social retribution within online contexts, pre-adult participants may resort to internal modes of moral motivation to guide their moral or immoral behaviour. This result would support a trait based approach towards moral development and would be in line with increases in overall moral identity and moral internalization across age (Blasi, 1984; Krettenauer, & Casey, 2015). However, as moral identity is negatively related to immoral behaviour, and has been reported as externally motivated in less socially cohesive work and school contexts (Hertz, & Krettenauer, 2015; Krettenauer, & Victor, 2017), it is more probable that with perceived rises of novel immoral online behaviour (Streitfeld, 2017), moral identity development in an online context will be consistently lower in comparison to face-to-face contexts. This possibility is established with the consideration of heightened asynchronicity, anonymity, and emotional apathy in online contexts as well as with research exhibiting contextual differences in moral identity motivation throughout moral development. Thus, the sole research question within this study is in line with the first hypothesis which moral identity is predicted to be lower in online contexts across age, yet the research question aims to specifically

clarify whether this effect will be stronger, weaker or stable over the developmental trajectory across age periods that are within early adolescence to young adulthood periods. With these contextual and developmental considerations in mind, it is important to highlight that moral identity is not the sole moral construct capable of predicting moral and immoral behaviour, especially within differing situational contexts. Similar to previous studies that assessed the influence of anonymity as well as decreased emotional proximity and increased physical proximity on the prevalence of immoral behaviour (Annisette, & Lafreniere, 2017; Bandura et al., 1996; Ruions, & Bak, 2015; Wang, Lei, Liu, & Hui, 2016), the use of moral disengagement within online contexts seems pertinent to assess within this current developmental investigation.

### **Moral Disengagement**

Conceptualized by Bandura et al. (1996), moral disengagement is the psychological process where individuals distance their moral ideals from an immoral act in an attempt to reduce their personal blame. Moral disengagement literature has been used to explain the use and the attempted justification of grossly immoral acts throughout the historical record (e.g., The Holocaust, The Rwandan genocide, and Canadian Residential Schools) and ultimately this construct encapsulates acts where persons aim to distort reality in an attempt to justify the misalignment of their moral beliefs in relation to the perpetration of theirs or of another's immoral behaviour (Albert Bandura, 2016). Not only does moral disengagement help to explain the use of antisocial behaviour, but its influence may also provide insight into the perceived prevalence of immoral behaviours within online and ICT contexts. Even though the use of moral disengagement mechanisms within online contexts is not likely to result in the severe physical harm of ethnic groups, recent events throughout North America have shown young individuals urge their romantic partners into committing suicide through the use of instant messaging

systems (Bidgood, 2017), children murder their classmates due to perceived directives from an internet meme (Moreno, 2018), and various other cases of internet suicide and/or homicide resulting from nefarious online behaviours (Bauman, Toomey, & Walker, 2013; King, Walpole, & Lamon, 2007). Thus, the use of moral disengagement mechanisms is directly related to the use of immoral behaviour in face-to-face contexts and its applicability in online contexts is also relevant and alarming. As a result, it is not only empirically imperative to assess whether moral disengagement is related to immoral online behaviours such as: trolling, cyber-hacking, and pirating, but also it is important to assess whether this construct accounts for the relationship between immoral online behaviour and weakened online moral identity. Thus this current study aims to assess the use of all eight moral disengagement mechanisms within this developmental sample to provide a more robust analysis of this construct's influence on antisocial online behaviours that are beyond the scope of aggressive cyber-bullying behaviours.

Albert Bandura's original research into moral disengagement highlighted eight cognitive distortions employed throughout moral disengagement use, which are based on three distinctive loci: behavioural output, agentic role, and victim harm. By use of these eight mechanisms, an individual may place the onus of their immoral behaviour on the victim themselves (attribution of blame), on the beliefs of an authoritative body (displacement of responsibility), in comparison to worse immoral acts (advantageous comparison), by use of harmless language (euphemistic labeling), by devaluing the victim as nonhuman (dehumanization), by placing responsibility on a group mentality (diffusion of responsibility), by minimizing the harm done to the victim (minimization), or by thinking that the immoral behaviour ultimately helps the victim in some way (moral justification). These eight mechanisms of moral disengagement are further categorized into three loci: behavioural (moral justification, euphemistic labeling, and

advantageous comparison), agentic (diffusion of responsibility and displacement of responsibility) and apparent harm to the victim (dehumanization, attribution of blame, and minimization) (Bandura, 2016). The behavioural locus is concerned with moral disengagement mechanisms that are deployed to salvage the moral response to an anti-social behaviour. For example, one may plagiarize an essay by using Spark notes and justify this behaviour by stating that they are merely “borrowing” another's idea (euphemistic labeling). For the agentic locus, moral disengagement is utilized when the role of the perpetrator as an agentic figure of control is questioned or reprimanded. For example, an individual may pirate a movie online for free and state to himself or herself that "everybody does this; I'm not the only one" (diffusion of responsibility).

Last, for the locus concerned with victim harm, moral disengagement mechanisms of this type either refute or minimize the damage or harm done to the victim of an immoral or anti-social act. For example, an individual may share an embarrassing or intimate photo of another individual online and state to themselves and others that "it is this person's fault for having originally taken that photo" (attribution of blame). Even though these mechanisms have traditionally been investigated within face-to-face contexts, it is important to note that moral disengagement use has more recently been investigated under an online pretense as well and has also been lightly investigated in relation to other moral constructs such as online moral identity (Wang, Yang, Yang, Wang, & Lei, 2015). Notably, the utilization of moral disengagement in online contexts is the most prevalent within cyber-bullying research, as here moral disengagement usage has been reported as positively related to cyber-bullying behaviours, especially amongst adolescent males (Wang, Lei, Liu, & Hui, 2016). However, as with traditional moral disengagement investigations, studies assessing ICT and online moral

disengagement usage have largely relied on aggressive behaviours only (i.e., cyber bullying and online harassment). The applicability of moral disengagement usage within online domains not only extends to the novel immoral behaviours inherent in online contexts (i.e., pirating, trolling, hacking, etc.), but its use may also be influenced by the presence of anonymity, asynchrony, and emotional apathy within these settings. Thus, it seems pertinent to assess both moral disengagement and moral identity within a multitude of social online scenarios, which are not completely encapsulated in aggressive behaviours alone.

Increased asynchrony while online: paired with an increase in emotional and geographical distance in relation to a victim's harm response, seems especially influential towards the use of moral disengagement. Harm towards a victim through online platforms may be less visible to the perpetrator and thus may minimize their agentic role. This is an important and original insight by Bandura, who himself highlighted that distance and time between an immoral act and the consequence of that act is an important motivator for individuals to morally disengage (Bandura, 2002). Much like their influence on moral identity activation: anonymity, asynchrony, and emotional apathy are likely to influence the behavioural, agentic, and victim harm loci that are inherent to moral disengagement mechanisms. Thus it seem plausible that the use of moral disengagement mechanisms may explain the relationship between online moral identity and online antisocial behaviours, especially when moral identity coherence is predicted to be lower within these online contexts.

As the use of moral disengagement seems especially applicable within online situations and paired with the acknowledgement that no current studies have assessed online moral disengagement outside the confines of aggressive online behaviour, a new scale for online moral disengagement must be created. Thus, for the purpose of this study, the eight types of moral

disengagement mechanisms that have been listed above and that have been empirically assessed within face-to-face contexts have been revised to apply to online scenarios (see Appendix). This revised scale will present online vignettes related to immoral online behaviours (i.e., pirating, trolling, etc.) followed by moral disengagement mechanisms related to this behaviour (i.e., minimization, euphemistic labeling, etc.). These online vignettes will be presented in conjunction with inter-personal moral transgressions that match the online scenarios in terms of their immoral gravity (i.e., pirating = stealing, trolling = harassment, etc.). This newly developed scale will be assessed in terms of validity and reliability for future use as an online moral disengagement measure.

Although these mechanisms have traditionally been investigated within face-to-face contexts, it is important to note that moral disengagement use has more recently been investigated in an online context as well and has also been briefly investigated in relation to other moral constructs such as online moral identity (Wang, Yang, Yang, Wang, & Lei, 2015). Notably, the utilization of moral disengagement in online contexts is the most prevalent within cyber-bullying research, as here moral disengagement usage has been reported as positively related to cyber-bullying behaviours, especially amongst adolescent males (Wang, Lei, Liu, & Hui, 2016). However, as with traditional moral disengagement investigations, studies assessing ICT and online moral disengagement usage have largely relied on aggressive behaviours only (i.e., cyber bullying and online harassment). The applicability of moral disengagement usage within online domains not only extends to the novel immoral behaviours inherent in online contexts (i.e., pirating, trolling, hacking, etc.), but its use may also be influenced by the presence of anonymity, asynchrony, and emotional apathy within these settings. From this, it seems pertinent to assess moral disengagement within a multitude of social online scenarios, which are

not completely encapsulated in aggressive behaviours alone. From this, the current developmental investigation aims to assess the use of moral disengagement in a multitude of online situations where moral standards are at stake, as this more adequately represents how online interactions mimic traditional inter-personal interactions. With the addition of non-aggressive online variables (i.e., trolling, pirating, and hacking) the expectation is to establish a more robust explanation for the relationship between moral identity, moral disengagement, and the prevalence of immoral online behaviours. As this investigation aims to assess moral identity development within family, friend, and online contexts, it is important to also assess moral disengagement within immoral face-to-face interactions throughout developmental stages. This inclusion of face-to-face behaviours allows for a comparison of online moral disengagement compared to face-to-face moral disengagement within adolescent and young adult populations. Based on the findings mentioned throughout this study, it seems pertinent to assess both moral disengagement and moral identity in conjunction with novel interactions that take place exclusively within online and ICT contexts and across age. Not only would the heightened use of moral disengagement mechanisms online in comparison to inter-personal relationships explain lowered coherence to moral identity while online, the moral disengagement may mediate the relationship between moral identity and immoral online behaviours.

### **Online Moral Identity and Moral Disengagement**

Moral identity and moral disengagement are both important predictors of an individual's enactment of immoral behaviours within face-to-face interactions (Bandura et al, 1996; Hertz, & Krettenauer, 2015). However, these constructs hold inverse relationships in regards to immoral behaviour, where reports have shown that moral identity coherence is negatively related to immoral behaviours (Hertz, & Krettenauer, 2015), while the use of moral disengagement

mechanisms is positively related to these same behaviours (Bandura et al, 1996). Not only does this revelation hint towards the complex relationship between moral identity and moral disengagement in relation to antisocial behaviour, but it also suggests a possible mediation relationship between these constructs, where moral disengagement accounts for the relationship between moral identity and immoral behaviour, either face-to-face and/or while online. This mediation was originally stipulated by Bandura et al. (1996), where it was suggested that coherence to ones' moral ideals is at the mercy of moral disengagement use. This has been validated throughout investigative analyses that have assessed this mediation relationship within face-to-face interactions (Detert, Trevino, & Sweitzer, 2008; Chowdhury, & Fernando, 2013) and has also been made evident through notable cases in recent history such as the torture witnessed at Abu Ghraib and The Boston Globe's *Spotlight* article on pedophilic abuses within the Roman Catholic Church (Bandura, 2016).

Not only have moral exemplars been shown to commit egregious immoral acts, but their subsequent explanation of such behaviour often involves the distancing of ones' core moral values from ones' immoral behaviour. For instance, within U.S.A. soldier testimony of the Abu Ghraib incident, countless accused soldiers attempted to justify their actions by stating that they were following the orders of their commanders (Hersh, 2004), this attempted justification not only mimics testimony from Nazi death camp workers (Harrisville, 2016), but it further exemplifies the use of the diffusion of responsibility disengagement mechanism. However, in light of these accounts, further moral identity research has noted that those with higher than average ratings of moral identity activation tend to report low ratings of moral disengagement use (Aquino, Reed, Thau, & Freeman, 2007; Hardy, Bean, & Olsen, 2015). In light of these contrasting reports, within this current study; online contexts are predicted to hinder moral



identity activation while nurturing moral disengagement use, thus it seems more plausible that moral disengagement will be the mediating variable within this specific context. In terms of assessing this complex relationship online, one study of interest has assessed the relationship of both these moral variables within an online context.

Wang, Yang, Yang, and Wang (2015), assessed a moderated mediation model of moral disengagement and moral identity amongst Chinese young adults. Here, the focus was on cyber-bullying behaviours, with researchers reporting that moral disengagement partially mediated the relationship between trait anger and cyber bullying. Further, this investigation found moral identity to moderate the relationship between trait anger and cyber bullying where those with high moral identity did not exhibit a significant relationship between trait anger and cyber-bullying. This study exemplifies the complex relationship between moral identity and moral disengagement in relation to immoral online behaviours, however as with many online studies, the dependent variables of interests are exclusively related to cyber-bullying behaviours.

Although this study did not directly assess a mediation relationship with moral identity and moral disengagement within the same predictive model, this online investigation validates the assessment of both moral identity and moral disengagement within our developmental analysis as both have been shown to significantly influence online behaviours that are related to cyber-bullying, and thus possibly pirating, hacking, and other online antisocial behaviours.

Furthermore, it reignites the argument that additional studies such as this current investigation must be established to broaden the scope of assessment in regards to immoral online behaviours, especially in relation to influential moral constructs. The inclusion of moral disengagement as a mediation variable within the relationship between online moral identity and online immoral behaviour provides a more robust analysis of immoral behaviour perpetrated through ICT. As

moral coherence has been shown to be lower within online contexts (Annisette, & Lafreniere, 2017), it is more plausible that moral disengagement will be a more valid predictor of online immoral behaviour. Thus, the inclusion of non-violent and less extreme immoral behaviours that are highly prevalent within online activities such as pirating, trolling, and hacking may, through the use of moral disengagement, deactivate one's moral identity even within those with high moral identity coherence in traditional face-to-face contexts.

This complex relationship between moral identity and moral disengagement may be most exemplified within online contexts where a bevy of internal, external, and contextual factors meet at a capstone, as the factors inherent in online contexts seem to hinder moral identity activation while consequently catalyzing moral disengagement usage. This is supported by many of the original findings by Albert Bandura, where it is emphasized that increased distance from a victim will catalyze the use of disengagement mechanisms. Not only is this proximity factor exacerbated within online contexts, but asynchronous responses are delayed or ultimately are never attributed to ones' anonymous identity. It has been readily shown that there lacks a comprehensive investigation that assesses moral disengagement and its relationship in regards to moral identity and the presence of immoral behaviours within an online paradigm. To address this gap within the literature and to more accurately assess whether online interactions are in fact detrimental to harmonious face-to-face interactions, this investigation hypothesizes that the relationship between moral disengagement and immoral online behaviour will account for the predictable variance between moral identity and immoral online behaviour. If developmental populations exhibit this mediation relationship between moral identity, moral disengagement, and immoral online behaviour, this would not only validate the current concerns in regards to online morality, but it would also encourage the further exploration of moral values that restrict

prosocial behaviour such as moral licensing (Merrit, Effron, & Monin, 2010), and moral hypocrisy (Batson, Kobryniewicz, Dinnerstein, Kampf, & Wilson, 1997). Refer to Figure 3 for visual representation of this mediation model.

### **The Current Investigation**

The expansive use of online platforms in conjunction with information and communication technologies has far exceeded its initially intended role within workplace, government, and industrial settings (Leung, 2013; Macey, & Hamari, 2018; King, Walpole, & Lamon, 2007). Catalyzed by the emergence of personal computers (PCs), cellular phones, smart-phones, laptops, tablets, smart boards, and smart watches (watches with internet): online interactions have become an ubiquitous facet within the social lives of youth. This constant access to online materials has piqued the interest and the concern of developmental psychologists and policy makers alike, as online relationships now have the ability to usurp many face-to-face interactions that are fundamental to the development of a moral identity. However, despite a wealth of literature on face-to-face interactions concerning both moral identity development and moral disengagement usage there lacks a developmental investigation that addresses if and when online contextual differences arise and whether these differences remain stable or change across moral development in comparison to face-to-face interactions. Not only is the development of moral identity crucial to the appropriate regulation of antisocial behaviours throughout the lifespan, but its emergence during adolescence and its solidification during young adulthood tends to coincide with increased ICT usage. This is of particular concern as online interactions are hypothesized to weaken the activation of ones' moral identity throughout earlier development, while further catalyzing the use of moral disengagement mechanisms.

A wealth of cyber-bullying and online pathological research has begun to highlight that

online interactions do in fact differ from face-to-face interactions (Annisette, & Laffreniere, 2017), with subsequent studies addressing differences in social behaviour online overall (Gross, 2004; Leung, 2013). This not only points towards to the importance of future psychological studies to focus on similarities and differences in online behaviour, but further, as within other contexts, the importance and application of psychological constructs such as ones' moral ideals may be dynamic (Krettenauer, Murua & Jia, 2016). This may be due to the exacerbation of the effects of variables such as anonymity, asynchronicity, and emotional apathy within online contexts specifically and may be further catalyzed by the ubiquitous nature of ICT devices within all aspects of youth and adult lives (i.e., family, friends, school, & work). Not only is the assessment of online contexts novel within moral development research, but these contexts provide unique situational factors that may be negatively related to moral identity cohesion. Further, within these contexts the use of moral disengagement mechanisms may be more apparent due to similar reasons that influence lower moral identity (Bandura et al, 1996; Hardy, Bean, & Olsen, 2015). The study of these moral disengagement mechanisms is already prevalent within the bullying and cyber-bullying literature: as it readily explains alterations in ones' moral adherence in the face of an immoral act. Moral disengagement been shown to positively predict the presence of immoral behaviour, but it has subsequently been shown to mediate the relationship between moral identity and face-to-face immoral behaviours. Thus, moral disengagement usage within this current study is expected to be higher within online contexts when compared to face-to-face contexts, while subsequently explaining the relationship between moral identity and immoral online behaviours. With the inclusion of both moral identity and moral disengagement as independent variables in predicting the perpetration of online immoral behaviour, this current study aims to clarify some current concerns surrounding online behaviour

amongst developing populations.

In summary, this current investigation aims to assess whether there are significant differences in moral identity activation within three contexts (family, friends, and online) and between three age groups (early adolescence, late adolescence, and young adulthood). Further, differences in moral disengagement usage will be compared within two contexts (face-to-face & online) and across three age groups (early adolescence, late adolescence, and young adulthood). These contextual assessments are based on previous investigations that show moral identity and moral disengagement to differ across different socio-environmental contexts (Hardy & Carlo, 2011; Bandura, 2016). Aside from assessing significant contextual differences between these two constructs, it is further pertinent to assess the relationship of moral identity and moral disengagement in regards to immoral online behaviours within the same predictive model. Thus, the last aim of this current investigation is to address whether there is a more complex relationship between moral identity and moral disengagement within online contexts when related to predicting online antisocial behaviour within these ages. A need for this assessment is solidified by research showing moral identity to be lower in online contexts (Wang, Yang, Yang, Wang & Lei, 2015). Further, moral disengagement has also been shown to be significantly higher in online contexts (Wang, Lei, Liu, & Hui, 2016), and with subsequently negative correlations between moral disengagement and moral identity being reported (Hardy, Bean & Olsen, 2015), a mediation model is viable. Thus, this investigation holds three main hypotheses and one research question in regards to the development of moral identity and moral disengagement in relation to online antisocial behaviour during the periods starting in early adolescence and ending within young adulthood.

## Hypotheses

Three hypotheses will be tested within this current study. In addition, one exploratory research question will be examined. **H1.** Moral identity will be significantly lower in the online context when compared to the family context and to the friend context. **H2.** Moral disengagement in the online context will be significantly higher when compared to the family context and to the friend context. **H3.** Moral disengagement use will mediate the relationship between online moral identity and online immoral behaviour. **RQ:** Will online moral identity and moral disengagement be consistently higher, lower, or remain stable across early adolescence, late adolescence, and young adulthood age periods in the cross-sectional study?

## Method

### Sample

Early adolescent (12-15), middle to late adolescent (15.10-22), and young adult (22.10+) participants were recruited for this study. Early adolescent and middle adolescent participants were recruited through consenting secondary schools within the Waterloo Regional District School Board (WRDSB), where each participant received \$7 as compensation with the participating school also receiving an additional \$7 per adolescent participant. Late adolescent and young adult participants were recruited from the Wilfrid Laurier University (WLU) Psychology Research Experience Program (PREP) and received academic participation marks for their completion of the study. Further late adolescent and young adult participants were recruited via online advertisements posted to social media platforms and were entered into a prize lottery consisting of four cash prizes. Overall, the sample was comprised of 392 participants, of which 39.9% were male. Of the 98 early adolescent participants ( $M = 13.25$  years,  $SD = .54$ ), 33.0% were male. Of the 174 middle to late adolescence ( $M = 19.61$  years,  $SD$

= 1.14) 38.0% were male. Last, of the 113 young adult participants ( $M = 24.81$  years,  $SD = 1.97$ ) 49.0% were male. The majority of participants were born in Canada ( $n = 232$ ; 59.2%). Those born outside of Canada ( $n = 160$ ) had come from all variety of countries. Of these total participants, 68% reported that their father completed some college or university studies or higher (i.e., college diploma, undergraduate degree, graduate degree), with 73.7% of participants reporting that their mother had completed some college or university studies or higher (i.e., college diploma, undergraduate degree, graduate degree). Early adolescent participants were asked both of their parent's current occupations, rather than their educational status, as this information is more readily available to younger participants. Only exact age was significantly different between these three age groups based on their demographic information  $F(2, 381) = 1936.38, p < .001$ . Descriptive and significance values for demographic information in regards to age, gender, ethnicity, and parental education are presented in Table 1.

## Measures

**Information and Communication Technologies Usage.** Participant ICT usage was assessed using a shortened version of the Media and Technology Usage and Attitude Scale, conceptualized by Rosen, Whaling, Carrier, Cheever, and Rökkum (2013). For the purpose of this study, questions assessing ICT attitudes were removed, as the purpose of this scale for this investigation was to assess usage frequency. This scale measured participant ICT usage based on six sub-sets of items (general social media usage, internet searching, emailing, media sharing, text messaging, and video gaming) that were provided on a 10 point scale that assessed online usage frequency (1 = never, 2 = once a month, 3 = several times a month, 4 = once a week, 5 = several times a week, 6 = once a day, 7 = several times a day, 8 = once an hour, 9 = several times an hour, and 10 = all the time). To compare time spent in face-to-face interactions and online

interactions, additional items were used that assess the frequency of time spent with online and in-person friends on a 8-point scale (1= never, 2 = once a month, 3 = several times a month, 4 = once a week, 5 = several times a week, 6 = once a day, 7 = several times a day, and 8 = all the time), with another item assessing the number of friends a participant has online that they have never met in person on a 9 point scale (1 = 0, 2 = 1-50, 3 = 51-100, 4 = 101-175, 5 = 176-250, 6 = 251-375, 7 = 376-500, 8 = 501-750, and 9 = 751 or more).

The internal consistency for the Media and Technology Usage and Attitude Scale within the use of this study was high ( $\alpha = .78$ ). Participant ICT usage was consistent with previous reports within a Canadian demographic survey (Quorus Consulting Group Inc., 2012), as 98.7% of participants within this study reported the use of an ICT device for texting and/or instant message with 98.7% reporting to regularly access social media platforms on a daily basis. A majority of the participants, roughly 62% reported that they regularly play video-games and similar to previous studies these participants also engaged with friends and individuals online as much or more often when compared to face-to-face meetings (Chung, 2013), with 63.1% of participants engaging on a regular basis with others online. This preference towards online interaction was further validated within this sample, as 25.4% of participants reported that they interact with friends online once a day or more when compared to 27.3% reporting to interact with friends in a face-to-face context once a day or more. Additionally, 56.8% of participants reported to have engaged with users online that they've never met in a face-to-face setting, which would be the face-to-face equivalent to interacting with strangers. Descriptive statistics for all ICT scale items are presented in Table 2.

All 18 items from the Media and Technology Usage and Attitude Scale were entered into a factor analysis to investigate whether there are different factors for ICT usage. Five factors



presented Eigenvalues  $> 1$  that in total explained 63.92% of the item variance: F1 (4.64), F2 (2.48), F3 (2.09), F4 (1.22), F5 (1.08). A scree plot of the five Eigenvalues indicated that the fifth factor did not contribute significantly to this model, therefore a subsequent factor analysis with four factors was completed, followed by Varimax rotation. In their respective order based on their predictable variance, these four factors accounted for 57.95% of the total variance and are as follows: (1) communication/retrieving information from the internet, with 23.97% explained variance, (send and receive text and instant messages, check social media platforms, read social media postings, check for text and instant messages, search internet for media, and search internet for information), (2) gaming and watching videos, with 12.16% explained variance, (play video games by myself, play video games face-to-face, and watch TV shows and movies online), (3) posting in social media, with 9.39% explained variance, (post a social media update, post photos to social media, and comment on a social media post), and (4) online friendships, with 6.14% explained variance, (how often do you meet with friends online, and how often do you meet with people online whom you've never met in person). Either due to having factor loadings below .40 or having factor loadings within .20 of other factors, four ICT items were not represented in these four newly formed factors. These ICT items are: browse social media profiles, search the internet for images, search the internet for videos or photos, watch video clips online, and how often do you meet with friends in person outside of school. Based on this factor analysis, the items present within the four factors were subsequently averaged into four subscales that represented this total ICT model and these subscales were later used for correlational analyses. Refer to Table 3 for the rotated component matrix.

**Moral Identity.** Moral identity was assessed using the modified version of the Good-self Assessment Scale (Krettenauer, Murua & Jia, 2016), which was administered three times under

the pretense of family interactions, friend interactions, and online interactions. For middle to late adolescent and young adult participants, the modified Good Self-Assessment Scale first had participants freely list three to five traits that characterize a highly moral person. This initial assessment was unprompted and urged participants to report traits that spontaneously came to their mind. Following this, participants rated 80 moral traits that define a highly moral person on 1-5 Likert scale ranging from 1 = not at all describes, 2 = a little bit describes, 3 = somewhat describes, 4 = fairly well describes, and 5 = extremely well describes a highly moral person. After this rating process, participants were presented the same list of 80 moral attributes and were instructed to select 12 to 15 of these moral traits, but only those that define the core of a highly moral person in their personal point of view. Following this moral trait selection process participants were presented a concentric image representing their self with four circles and an exterior area representing: extremely important, very important, important, somewhat important, and unimportant areas where their chosen 12-15 moral traits may be hypothetically placed. Following the presentation of this imagine, participants were prompted to rate each moral trait on a 1-5 Likert scale ranging from 1 = unimportant to me, 2 = somewhat important to me, 3 = important to me, 4 = very important to me, and 5 = extremely important to me. Refer to the Good-self Assessment Scale within the Appendix for a full list of moral traits used within this modified scale.

Due to requests from the WRDSB, the moral Good-self Assessment Scale was modified further for early and middle adolescent participants to address issues with survey length and comprehension. Within this youngest sample, these adolescents were only shown the concentric imagine in conjunction with 15 moral traits on three separate pages and were not instructed to spontaneously report three to five highly moral traits, nor were they provided the full list of 80 moral traits. Within this sample, each context was presented with the concentric imagine as well

as the following moral traits: non-judgmental, trustworthy, fair, genuine, compassionate, forgiving, honest, accepting, selfless, responsible, caring, knows what is right and wrong, and respectful. As with the older participants, these adolescent participants rated these traits on a 1-5 Likert scale ranging from 1 = unimportant to me, 2 = somewhat important to me, 3 = important to me, 4 = very important to me, and 5 = extremely important to me. Contextual prompts for all participants age groups included: “How important are the qualities you chose to describe a highly moral person for you personally when you are online?”, “How important are the qualities you chose to describe a highly moral person for you personally when you are with your friends?”, “How important are the qualities you chose to describe a highly moral person for you personally when you are with your family?”. The internal consistency for the Good-self Assessment Scale within the use of this study was the following for each context: family ( $\alpha = .92$ ), friend ( $\alpha = .93$ ), and online ( $\alpha = .95$ ) contexts.

**Moral Disengagement.** Moral disengagement was assessed using the newly developed Online & Face-to-Face Moral Disengagement Scale (OFF-MDS), which was formulated based on the original Moral Disengagement Scale (Bandura et al., 1996). This new scale focuses on all eight mechanisms of moral disengagement outlined in Bandura's research: moral justification, euphemistic language, advantageous comparisons, displacement of responsibility, diffusion of responsibility, distorting consequences, attribution of blame, and dehumanization. However, what is new to this scale is the assessment of these eight mechanisms with vignettes that address online situations in conjunction to their identical face-to-face scenario. The OFF-MDS presents 15 online context vignettes and 15 face-to-face context vignettes that focus on an initial moral transgression that are equally represented online as well as within face-to-face scenarios such as stealing, lying, and identity theft. Each equivalent online and face-to-face vignette is

accompanied by two randomly ordered and identical moral disengagement mechanisms (i.e., minimization and moral justification) that aim to justify the moral transgression that has been presented in each context.

Participants are first prompted to use a 1-7 Likert scale ranging from 1 = extremely bad to 7 = extremely good to report their agreement with the initial moral transgression. Following this, participants are asked to rank their agreement with two moral disengagement mechanisms on a 1-5 Likert scale ranging from 1 = strongly disagree, 2 = somewhat disagree, 3 = neither disagree nor agree, 4 = somewhat agree, and 5 = strongly agree. These same moral disengagement mechanisms are presented in the matching online and face-to-face vignettes, and were randomly ordered throughout the 30 total vignettes. Moral transgression vignettes in the OFF-MDS include but are not limited to: “you comment on someone’s Facebook photo and say that they look ugly”, “you purposefully anger (troll) someone in an online forum”, and “you take some videos of your favourite movies from a video store without paying”. Examples for each type of moral disengagement mechanism that followed these moral transgression vignettes were as follows: “it is just a rumour, it’s nothing serious” (minimization), “it’s my friends fault they sent me an inappropriate photo” (attribution of blame), “ugly people should be told the truth” (dehumanization), “this is just ‘trolling’ nothing else” (euphemistic labeling), “everyone else cheats, why shouldn’t I?” (diffusion of responsibility), “I need to cheat to get a good grade” (displacement of responsibility), “others do things that are much worse” (advantageous comparison), and “it is okay to overcharge” (moral justification). The internal consistency for the Online Moral Disengagement Scale was  $\alpha = .94$ , with high consistency within the segmented online measures ( $\alpha = .87$ ) and face-to-face measures ( $\alpha = .89$ ). Further, the online moral

disengagement measure and the face-to-face moral disengagement measure were significantly related,  $r(383) = .91, p < 0.001$ . See Appendix for the newly formulated OFF-MDS.

**Antisocial Behaviour.** Past antisocial behaviour by self-report and willingness to engage in these behaviours in the future was assessed within an online as well as a face-to-face context for this study. These measures were formulated and followed the format of a previously used behavioural measures used within moral identity research (Johnson & Krettenauer, 2011). Within both online and face-to-face contexts, early and middle adolescent participants were asked 17 questions about their past antisocial behaviour and well as their willingness to engage in these same behaviours in the future. Late adolescent and young adult participants were asked 27 questions about their past antisocial behaviour and well as their willingness to engage in these same behaviours in the future. All items were presented on a 0-3 scale ranging from 0 = never, 1 = once or twice, 2 = a few times, and 3 = several times for past behaviours and on a 0-3 scale ranging from 0 = I would never do this, 1 = I possibly would do this, 2 = I likely would do this, and 3 = I surely would do this. This resulted in 4 scales: past online antisocial behaviours, past face-to-face antisocial behaviours, willingness to perform online antisocial behaviours, and willingness to perform face-to-face antisocial behaviours. Examples of immoral online behaviour presented in all four measures include but are not limited to: “have you ever downloaded commercial music or videos without paying?”, “I try to get access to an event (e.g., movie, concert) without paying”, and “I use an online source to plagiarize an assignment or an essay”. Due to time restrictions, the early and middle adolescent sample were only administered shortened online behavioural checklists and were not provided face-to-face versions of this scale. As a result, three online and three face-to-face items were restructured to use less abrasive terminology in regards to trolling, bullying, and harassing behaviours, and ten items were

removed completely. These altered items were used to compute scale averages but were not individually compared against young adult antisocial measures. See Table 4 for frequency statistics for online antisocial behaviours. The internal consistencies for each measure are as follows: performed online antisocial behaviours ( $\alpha = .94$ ), performed face-to-face antisocial behaviours ( $\alpha = .92$ ), intended online antisocial behaviours ( $\alpha = .92$ ), and intended face-to-face antisocial behaviours ( $\alpha = .94$ ). All behavioural measures were positively correlated: performed online and performed face-to-face,  $r(373) = .67, p < 0.001$ ; performed online and intended online,  $r(373) = .75, p < 0.001$ ; performed online and intended face-to-face,  $r(286) = .52, p < 0.001$ ; performed face-to-face and intended face-to-face,  $r(286) = .81, p < 0.001$ ; performed face-to-face and intended online,  $r(286) = .53, p < 0.001$ ; intended face-to-face and intended online,  $r(287) = .68, p < 0.001$ .

**Social Desirability.** Participants completed the Children's Social Desirability Short (CSD-S) scale (Miller et al., 2014), as a potential control measure for this investigation. This scale has 14 questions, where participants answer all 14 statements in succession with either the statement “Yes” or “No”. Items in this questionnaire include but are not limited to: “Have you ever felt like saying unkind things to a person?”, “Have you ever broken a rule?”, and “Do you sometimes get mad when people don't do what you want them to do?”. The internal reliability for the Children's Social Desirability Short was  $\alpha = .78$ , suggesting that the child version of this social desirability scale was appropriate for use with older samples.

## Results

A majority of the measured variables were significantly different as a function of participant gender and with consideration of a Bonferroni correction, the subsequent effects were considered significant if they produced a value below  $p = .005$ :  $F(1, 369) = 11.34, p = .001$ ; face-

to-face moral disengagement,  $F(1, 369) = 11.41, p = .001$ ; intended antisocial online behaviours,  $F(1, 369) = 18.17, p < .001$ ; performed antisocial online behaviours,  $F(1, 369) = 13.05, p = .001$ ; online moral identity  $F(1, 369) = 19.73, p < .001$ ; and friend moral identity,  $F(1, 369) = 14.61, p < .001$ . Male participant values were significantly higher for: intended online antisocial behaviour, performed online antisocial behaviour, and face-to-face moral disengagement.

Subsequently, female participant values were significantly higher for: online moral identity and friend moral identity. As the above variables are represented within the current study hypotheses, when appropriate, analyses were conducted with gender as a covariate. Participants age classification into early adolescent, early to late adolescent, and young adult categories was significantly related to gender,  $\chi^2(2, N = 383) = 6.09, p = .047$ . Participant's exact age was positively related to ICT usage,  $r(381) = .12, p = 0.018$ , intended online antisocial behaviours,  $r(377) = .19, p < 0.000$ ; performed online antisocial behaviours,  $r(377) = .27, p < 0.001$ ; family moral identity,  $r(379) = .11, p = 0.034$ ; and social desirability,  $r(378) = .32, p < 0.001$ .

Analyses using the full participant sample indicated that social desirability was significantly related to a majority of the variables that were of interest to the study hypotheses and was also included as a covariate during subsequently appropriate analyses. However, these correlations were consistently low: ICT usage,  $r(384) = .22, p < 0.001$ ; online moral identity,  $r(383) = -.13, p = 0.014$ ; online moral disengagement,  $r(383) = .17, p = 0.001$ ; face-to-face moral disengagement,  $r(383) = .11, p = 0.034$ ; intended online antisocial behaviours,  $r(383) = .27, p = 0.012$ ; intended face-to-face antisocial behaviours,  $r(285) = .17, p = 0.003$ ; performed online antisocial behaviours,  $r(383) = .27, p < 0.001$ ; performed face-to-face antisocial behaviours,  $r(284) = .16, p = 0.009$ ; and participants' exact age,  $r(378) = .32, p < 0.001$ . See Table 5 for a full list of bivariate correlations for all variables included within this study.

**Information and Communication Technologies**

To better determine whether differential use of ICT devices influenced moral behaviours and moral ideals differently, analyses with all 392 participants were conducted on the shortened Media and Technology Usage and Attitude Scale. This was motivated by the fact that participant ICT usage was positively correlated with intended online antisocial behaviours,  $r(386) = .19, p < 0.001$ ; performed online antisocial behaviours,  $r(385) = .24, p < 0.001$ , online moral disengagement,  $r(383) = .22, p < 0.001$ ; face-to-face moral disengagement,  $r(383) = .17, p = 0.001$ ; family moral identity,  $r(385) = .14, p = 0.006$ ; and social desirability,  $r(384) = .22, p = 0.025$ . The four factors that were reduced from the full list of provided ICT measures (communication/retrieving information from the internet, gaming and watching videos, posting in social media, and online friendships) were entered into a bivariate analyses with all study variables: moral identity, moral disengagement, performed and intended immoral behaviours both online and in person, social desirability, ICT usage, and age. By use of a Bonferroni correction, the subsequent correlations were considered significant if they produced a value below  $p = .005$ . The first factor of communication and retrieving information from the internet was positively correlated with social desirability,  $r(384) = .26, p < 0.001$ , family moral identity,  $r(385) = .20, p < 0.001$ , online moral disengagement,  $r(383) = .17, p = 0.001$ , past online antisocial behaviours,  $r(385) = .17, p = 0.001$ , and participants exact age,  $r(381) = .40, p < 0.001$ . The second factor of gaming and watching videos was positively correlated with online moral disengagement,  $r(383) = .15, p = 0.003$ , face-to-face moral disengagement,  $r(383) = .15, p = 0.003$ , willingness to engage in future online antisocial behaviours,  $r(384) = .16, p = 0.002$ , past online antisocial behaviour,  $r(385) = .12, p = 0.015, p < 0.001$ , and participant's exact age,  $r(381) = -.17, p < 0.001$ . The third factor of posting in social media was only positively



correlated with past online antisocial behaviour,  $r(385) = .16, p = 0.001$ . Number of online friendships was positively related to willingness to engage in future antisocial online behaviour,  $r(384) = .19, p < 0.001$ , and past antisocial behaviour,  $r(383) = .20, p < 0.001$  and was negatively correlated with family moral identity,  $r(383) = -.15, p = 0.002$ , and friend moral identity,  $r(382) = -.19, p < 0.001$ .

Last, these four ICT factors were also tested based on possible gender differences, as this was a significant covariate within this current study. Mean comparisons of each factor indicated that for the social media factor, female participants ( $M = 3.90, SD = 1.77$ ) scored significantly higher than male participants ( $M = 3.42, SD = 1.65$ ),  $F(1, 379) = 6.80, p = .009$ . For the video-gaming factor, male participants ( $M = 4.81, SD = 1.73$ ) engaged more than female participants ( $M = 3.54, SD = 1.53$ ),  $F(1, 379) = 55.69, p < .001$ . The online friends factor also displayed significant differences between female ( $M = 2.56, SD = 1.70$ ) and male participants ( $M = 3.25, SD = 2.12$ ), while the use of internet for information searching did not yield any significant results based on gender.

### **Effect of Moral Identity Within Contexts**

A repeated measures ANOVA using the full study sample, with social desirability as a covariate, indicated a significant effect for moral identity contexts,  $F(2, 380) = 11.40, p = .001, \eta_p^2 = .029$ . Bonferroni post hoc analyses confirmed that moral identity was significantly different between online ( $M = 3.71, SD = .96$ ) and family ( $M = 4.25, SD = .68$ ) contexts,  $p < .001$ , as well as between online and friend ( $M = 4.15, SD = .74$ ) contexts  $p < .001$ . Family and friend contexts did also significantly differ from each other,  $p < .001$ , however the mean difference between these two contexts ( $MD = .104, CI [.042, .166]$ ) was much lower in comparison to online and family contexts ( $MD = .537, CI [.435, .640]$ ) and online and friend contexts ( $MD = .434, CI$

[.337,.530]. Further, these contextually differentiated moral identity outcomes were all positively correlated; family moral identity and friend moral identity,  $r(384) = .75, p < 0.001$ ; family moral identity and online moral identity,  $r(384) = .51, p < 0.001$ ; friend moral identity and online moral identity,  $r(383) = .60, p < 0.001$ . See Figure 1 for mean comparisons of moral identity within context.

### **Effect of Moral Disengagement Within Contexts**

A repeated measures ANOVA using the full study sample, with social desirability as a covariate, indicated that there was a no significant effect for context on moral disengagement use for online ( $M = 2.50, SD = .61$ ) and face-to-face ( $M = 2.23, SD = .60$ ) interactions. However, there was a significant linear interaction between moral disengagement context and social desirability,  $F(1, 381) = 9.86, p = .001, \eta_p^2 = .025$ . Last, these contextually differentiated moral disengagement outcomes were positively correlated when controlling for social desirability,  $r(380) = .91, p < 0.001$ . See Figure 2 for mean comparisons of moral disengagement based on context.

### **Mediation of Online Moral Identity, Online Moral Disengagement, and Online Antisocial Behaviour**

As outlined by Preacher and Hayes (2013), this mediation analysis using the full study sample was completed under model 4, with 5000 bootstrap samples and with 95% confidence intervals. Online moral identity was treated as an independent variable, online moral disengagement as a mediator variable, performed online immoral behaviour as the dependent variable, and gender as well as social desirability as covariates. Subsequently, online moral disengagement was found to be a significant mediator between online moral identity and performed online antisocial behaviours. Online moral identity significantly predicted online

moral disengagement,  $b = -.187, p < .001$   $CI [-.249, -.124]$ , and online moral disengagement was a significant predictor of performed immoral online behaviour,  $b = .205, p < .001$   $CI [.143, .266]$ . This model accounted for approximately 21.9% of the variance of performed immoral online behaviours ( $R^2 = .219$ ). The relationship between online moral identity and online immoral behaviours was significantly diminished through the indirect effect of online moral disengagement,  $b = -.038$  95%  $CI [-.059, -.021]$ , which differed from the total effect of online moral identity,  $b = -.079, p = .001$  95%  $CI [-.119, -.021]$ . This mediation effect remained consistent when performed online immoral behaviour was replaced with intended online immoral behaviour, as both online moral disengagement,  $b = .280, p < .001$  95%  $CI [.217, .343]$ , and online moral identity,  $b = -.097, p < .001$  95%  $CI [-.140, -.054]$ , predicted intended online immoral behaviour. Subsequently the relationship between online moral identity and intended online immoral behaviours was significantly diminished,  $b = -.045$  95%  $CI [-.085, -.004]$  through the indirect effect of online moral disengagement,  $b = -.052$  95%  $CI [-.078, -.030]$ . This model accounted for approximately 14.6% of the variance of intended online antisocial behaviours ( $R^2 = .146$ ). See Figure 3 for an illustration of these mediation models.

### **Effect of Age on Moral Identity and Moral Disengagement**

In terms of the sole research question, the categorical age of these participants was treated as an independent variable using the full study sample to assess whether the online moral identity activation and online moral disengagement usage were effected by age. First, a mixed method multivariate ANCOVA confirmed that there was no effect of age group when assessing differences in contextual moral identity when gender and social desirability were treated as control variables. However, a significant age and moral identity context interaction effect did emerge within this analysis,  $F(2, 373) = 8.89, p = .003, \eta_p^2 = .023$ , in where contextual

differences in moral identity were dependent on age group categorization. This interaction effect arose, as only family moral identity contexts significantly differed by early adolescent ( $M = 4.08$ ,  $SD = .71$ ), late adolescent ( $M = 4.35$ ,  $SD = .68$ ), and young adult ( $M = 4.23$ ,  $SD = .61$ ) categories. A subsequent multivariate ANCOVA confirmed that there was no significant age effect when assessing differences in contextual moral disengagement use when gender and social desirability were treated as control variables. These non-significant results continued when age was tested as a predictor to differences between intended online immoral behaviours and performed online immoral behaviours, intended face-to-face immoral behaviours and performed face-to-face immoral behaviours.

Last, mean difference comparisons for each study variable were tested over the three age categories, with significant differences emerging for intended online antisocial behaviour,  $F(2, 383) = 7.57$ ,  $p = .001$ , between young adolescents ( $M = 1.33$ ,  $SD = .46$ ) and late adolescents ( $M = 1.49$ ,  $SD = .39$ ),  $p = .001$ , and between young adolescents and young adults ( $M = 1.55$ ,  $SD = .41$ ),  $p = .004$ ; performed online antisocial behaviour  $F(1, 382) = 15.95$ ,  $p < .001$ , between early adolescents ( $M = 1.31$ ,  $SD = .38$ ) and middle to late adolescents ( $M = 1.53$ ,  $SD = .38$ ),  $p = .001$ , and between early adolescents and young adults ( $M = 1.58$ ,  $SD = .36$ ),  $p = .004$ ; family moral identity,  $F(2, 381) = 5.53$ ,  $p = .004$ , between early adolescents ( $M = 4.07$ ,  $SD = .71$ ) and middle to late adolescents ( $M = 4.36$ ,  $SD = .68$ ),  $p = .001$ , and social desirability,  $F = 25.84$ ,  $df = 2$ ,  $p < .001$ , between early adolescents ( $M = 1.67$ ,  $SD = .23$ ) and middle to late adolescents ( $M = 1.82$ ,  $SD = .18$ ),  $p < .001$ , and between adolescents and young adults ( $M = 1.85$ ,  $SD = .16$ ),  $p < .001$ , as well as between middle to late adolescents and young adults,  $p = .035$ . It must be noted that due to restrictive school board requirements, the survey for adolescent participants did not include questions that assessed intended and performed face-to-face interactions, thus non-

significant results for these constructs do not represent possible younger age effects.

### **Face-to-face and Online Survey Analyses**

As the majority of these participants completed the study survey through use of an electronic device and as the aim of this study is to assess moral ideals and immoral behaviour within an online setting, it is possible that participants may respond differently when completing this survey in the presence of a research associate when compared to their anonymous completion of this study via an ICT device. Thus, to address this possible confound, a total of fifty additional participants were recruited through the Wilfrid Laurier University Psychology Research Experience Program and completed the same online survey by use of laptop or smartphone but while in the presence of a research associate within a laboratory setting located on Wilfrid Laurier University campus. To assess possible online effects in relation to the collection of participant data, these fifty laboratory participants ( $M_{age} = 19.68$ ,  $SD = 1.42$ ) were compared to fifty participants that completed the survey online but outside of a laboratory setting ( $M_{age} = 19.76$ ,  $SD = .94$ ). The non-laboratory comparison group was selected from the total sample for this study ( $n = 392$ ) and matched the laboratory sample based on age distributions. This analysis revealed that, ICT usage alone differed between these two groups,  $F(1, 99) = 76.28$ ,  $p < .001$ ,  $\eta_p^2 = .437$ . With laboratory participants reporting lower ICT usage when compared to non-laboratory participants. Further, non-significant effects were observed between all other study variables within this comparison. See Table 1 for descriptive and significance values for these analyses.

### **Discussion**

The overarching aim of this study was to empirically address current and global concerns surrounding the perceived prevalence of immoral behaviour within online platforms and to directly assess whether online interactions hold direct influence on psychological development, specifically in relation to morally relevant constructs. Online interactions have garnered recent substantial interests within certain areas of developmental research, such as those that have assessed cyberbullying and online mental health outcomes (Shakya & Christankis, 2017; Wang, Yang, Yang, Wang, & Lei, 2015), however there lacked a comprehensive study that assessed online domains as an environmental factor. Online interactions are not only increasingly anonymous, but they further catalyze asynchronous and emotionally apathetic reactions between online users (Buote, Wood, & Pratt, 2009; Ruions, & Bak, 2015; Annisette, & Lafreniere, 2017). This has been highlighted within cyberbullying research, where this online distance has contributed to heightened moral disengagement usage within aggressive online scenarios (Ruions, & Bak, 2015), but outside of these forms of aggressive online behaviours, there remain questions surrounding more common online behaviours that are antisocial in nature such as trolling and pirating. Online interactions through the use of ICT devices are not only ubiquitous forms of social communication for North Americans and citizens of developed countries, but further, their usage is most prevalent within developing adolescent and young adult populations (Leung, 2013). Thus, not only is it imperative to assess these novel online contexts within the populations where their use is most prevalent, but further these age groups are of theoretical importance: as this time period is when the moral identity first emerges and later solidifies. This current study sampled early adolescent, middle to late adolescent, and young adult participants, which are the age groups that consistently report high amounts of time spent on ICT

devices (Leung, 2013; Quorus Consulting Group Inc., 2012; Rosen, Whaling, Carrier, Cheever, & Rokkum, 2013). This is important to highlight, as this matching of demographic information partially explains why the ICT prevalence rates within this study matched previous North American samples as they were also consistently high. Not only did this sample readily engage in all activities provided within the shortened Media and Technology Usage and Attitude Scale, but further each age group within this study reported to check social media, text or instant-message, or browse the internet for content on a regular and daily basis. Thus, although the below results are demographically consistent, their implications remain within predominately dominant Caucasian and North American populations. Despite this possible lack of generalizability, these results further highlight that ICT usage has become a prevalent medium for social interaction that deserves further empirical exploration.

The influence of these pervasive online interactions is represented in the results that moral identity was significantly the lowest in the online context when compared to the family and the friend context. Online contexts heightened anonymity, asynchronicity, and emotional apathy (Buote, Wood, & Pratt, 2009; Gross, 2004; Ruions, & Bak, 2015; Annisette, & Lafreniere, 2017), which are expected to deactivate moral identity in comparison to face-to-face contexts. In line with the primary research hypothesis, this study found significant contextual differences in moral identity activation across these three contexts: as when moral identity was compared cross-contextually between family, friend, and online interactions, moral identity within the online context was significantly the lowest. Similar to previous reports, moral identity development within family and friend contexts remained high (Krettenauer & Victor, 2017) and this contextual main effect remained significant within all age groups. However, in relation to the research question within this study, no differences in online moral identity were reported

between the three age categories. Considering the contextual effect alone, it appears that moral identity is activated to a lesser degree within online contexts, which implies that this context holds less moral relevance for participants in relation to their face-to-face environments. The fact that the importance of moral values to oneself (i.e., moral identity) is less pronounced in online contexts validates the concern from internet entrepreneurs, policy makers, and developmental psychologists alike, as online interactions have the ability to mimic and replace antisocial behaviours that are crucial to the development of moral identity (Blasi, 1984; Aquino, & Reed, 2002). Although face-to-face moral identity remained high throughout this sample, which indicates that online moral identity did not hinder face-to-face moral identity, all three moral identity contexts were moderately and positively correlated, thus suggesting that face-to-face moral ideals have the ability to influence online ideals and vice-versa. However, it must be noted that family and friend contexts showed much stronger correlations together and much lower mean differences in comparison to each of these face-to-face groups' comparisons to the online context. Thus, although online moral identity and face-to-face moral identity contexts share predictable variance, these results indicate that future studies should consider online moral identity as an independent social construct in relation to moral identity within face-to-face environments. This conclusion is in line with current psychological studies that have found consistent differences between online and face-to-face contexts in relation to sociability, bullying behaviours, and mental health determinants (Buote, Wood, & Pratt, 2009; Leung, 2013; Wang, Yang, Yang, Wang, & Lei, 2015; Shakya & Christankis, 2017; Lobel, Engels, Stone, Burk, & Granic, 2017). This is important to note, as aside from moral disengagement, this study did not assess any variables that would directly explain lowered moral identity in this context (i.e., internal and external moral motivations, moral licensing, etc.). As the above result are



preliminary for the assessment of online behaviour by use of moral constructs, future studies should still aim to assess the relationship between various moral contexts, regardless if they are found to be contextually distinct. This would validate the findings of this study, while also confirming or denying if online interactions have the ability to influence face-to-face interactions in a negative manner.

These contextual assessments are in line with previous socio-cognitive literature that showed younger developmental periods to exhibit context differentiation between family, friend, school, and work across adolescent and young adult age groups (Krettenauer & Victor, 2017). As school and work contexts are externally motivated, they tend to show lower levels of moral identity activation in relation to intimate relationships found within family and friend contexts across age. From this, it becomes imperative to consider moral identity within less cohesive contexts (i.e., school, work, and now online) as this context differentiation across moral development needs to become more readily established within online environments. Echoed within these contextual investigations is the notion that moral values may fluctuate depending on differences in contextual factors within influential social interactions. Not only must internal and external moral motivations be assessed within future online investigations to assess whether online motivations mimic school and work motivations, but the importance of online interactions within the social lives of youth must be considered within equal weight when compared to family, friend, school, and work contexts in future developmental investigations. This is not only validated by the significant contextual differences that were outlined within this study, but it is also validated by that fact that this sample, as well as most North American youth, readily engage with ICT on a daily basis. As with previous studies, prevalence rates for daily ICT usage were consistently high with reports near 90 percent (Quorus Consulting Group Inc. (2012).

Further, within this current study alone, 75 percent of the above participants reported to engage in pirating behaviours, 33% of participants reported to engage in hacking behaviour, and roughly 44% report to engage in trolling behaviours. Thus, undoubtedly, ICT usage is pervasive, as is the prevalence of online antisocial behaviours.

Confirmation that moral identity is in fact lower within online contexts is informative; however it does not fully indicate whether online users engage in more antisocial behaviours due to its lowered activation. This is represented in the fact that significantly lower moral identity activation has been previously reported within similar age periods but rather within school and work contexts as when compared to family and friend contexts (Krettenauer & Victor, 2017). For this reason, moral disengagement was also assessed within this study to further clarify the relationship between online contexts, lowered moral identity activation, and the prevalence of online antisocial behaviours. In line with the second research hypothesis, moral disengagement was significantly higher within online interactions when compared to face-to-face situations. Such findings provide evidence for understanding the high prevalence rates of pirating and other antisocial behaviours within this sample. Not only is moral disengagement an influential construct within face-to-face scenarios but its applicability seems equally strong within online contexts as well. This was represented in the results indicating that online moral disengagement and face-to-face moral disengagement had a strong and positive correlation. This differed from the moral identity results, where the contextual correlations were considerably weaker. Further, not only is moral disengagement as influential within an online setting as within a face-to-face environment, but also this construct appears to be hindering online moral identity while positively predicting online immoral behaviours. The possibility of cross-contextual susceptibility seems most likely within participant moral disengagement usage, as these mean

differences were smaller in comparison to moral identity mean differences, and as well the correlations between contextual moral disengagement were larger than those between contextual moral identity. Perhaps this suggests that online immoral behaviours have the ability to influence face-to-face immoral behaviours, while online moral ideals do not have the same influence on face-to-face moral ideals and vice-versa. This extrapolation must be confirmed with subsequent online moral investigations, as the cross-contextual susceptibility of certain moral constructs in relation to other moral constructs is of theoretical importance. Thus from this, future investigations into online moral disengagement should consider that its applicability extends beyond abusive behaviours that are found within cyber-bullying phenomenon and as with face-to-face settings, moral disengagement appears to influence online users in the same way. This is important to note, as within online contexts, online users may be inhibited from acting prosocially due to the added constraints of online anonymity, asynchronicity, and emotional apathy.

These above conclusions are further supported by confirmation of the third research hypothesis, as moral disengagement was found to mediate the relationship between moral identity and immoral online behaviour. Thus not only is moral disengagement influential in online contexts, it is the only significant predictor of antisocial online behaviours within a predictive model that includes online moral identity. Further, this supports current research into cyber-bullying and other online behaviours that has included both moral identity and moral disengagement as independent variables (Wang, Yang, Yang, Wang, & Lei, 2015 & Wang, Lei, Liu, & Hui, 2016). However, this is in stark contrast to research conducted by Aquino, Reed, Thau, and Freeman (2007), which has noted that individuals with high moral identity activation are unpersuaded to indulge in moral disengagement use. Considering this fact, it is important to

note that within this current study and within previous online studies moral identity activation was reported to be substantially low, thus reducing the possibility of this moral exemplar effect within an online context. This theoretical difference in moral identity activation and moral disengagement use highlights the influence of ICT usage on previously established psychological principles. Thus, developmental psychologists must continue to expand current psychological literature into online and ICT domains, as these domains have the ability to challenge current conceptions of appropriate social behaviour. This argument is particularly pertinent to online environments as online activities are continually evolving to more accurately represent face-to-face behaviours. Not only are youth engaging online more so than in comparison to traditional face-to-face social activities (Leung, 2013; Livingstone, & Blake, 2010), but new advancements into 3D and virtual realities seem likely to further convolute perceptual differences between online interactions and face-to-face interactions.

In addition to the confirmation of these research hypotheses, further valuable insights were provided from the above results that aid in the future empirical study of moral behaviour in an online domain. It is important to note that although gender was used as a control variable for a majority of the above analysis, interesting trends in relation to online behaviour did emerge due to gender alone. It appears that male participants tended to engage more in negative online behaviours such as intending to and actually performing antisocial online behaviours, while also showing higher amounts of moral disengagement use. This is interesting to note, as female participants were consistently lower within these comparisons and further showed higher amounts of moral identity within all three contexts (online, family, and friends). In addition to this gender comparison, additional factor analysis of the included ICT measures clarified whether contextual results were due to differences in online engagement styles. For example, is it

possible that those who engage with ICT mostly for video-gaming purposes differ from those whom use ICT for social media solely? For this reason, comparisons such as this were also conducted. It appeared that all four factors (communication/retrieving information from the internet, gaming and watching videos, posting in social media, and online friendships) were positively correlated with moral disengagement and some form of antisocial online behaviour. The social media posting factor was the sole factor to show a relationship with a positive moral variable. Here, the unique correlation between social media posting and family moral identity was positive in nature. However all ICT factor correlations were consistently low, thus only partially validating the notion that differences in online usage influence online moral variables.

Apart from this current investigation, there remains no empirical assessment into the influence of ICT usage and morally relevant variables within a developmental analysis. Although all predictions within this study were supported, there remains a need for further exploration into ICT usage in conjunction to moral development and other psychological constructs that are beyond the scope of this current study. The sole research question within this current study was conceived from a current lack of developmentally focused studies and further work is needed to fill this developmental gap within the literature. Currently, it stands that online moral identity is lower within online interactions within early adolescent, middle to late adolescent, and young adult periods. Although the support of the moral disengagement hypotheses within this study aids in showing the marked difference between online and face-to-face environments within these age samples, further longitudinal research is need to better describe the trajectory of moral identity development and moral disengagement use within an online context. Further research should not only aim to validate the above findings, but further this exploration should expand into younger and older developmental age periods. Undoubtedly, ICT usage will continue to be a

ubiquitous form of social communication for various generations. It is possible that its pervasive use within other age groups will mimic the results above. However in consideration of the little developmental evidence within this field of study, it is imperative to establish the relationship between online engagement and online moral identity development as well as online moral disengagement usage throughout all relevant stages of the human lifespan.

**Limitations.** This study aimed to expand the current developmental literature into ICT domains, however further research must validate findings within these reported age frames, while also expanding into younger and older developmental periods. Current moral identity developmental literature posits that moral identity development emerges during young adolescent and solidifies during young adulthood (Krettenauer, & Casey, 2015). Although these age groups were measured in this current study, even dispersion of age groups into adolescent, emerging adult, and young adult categories more appropriately matches previous socio-cognitive investigations into moral identity development (Krettenauer, & Victor, 2017).

In terms of the statistical limitations within this current study, the age groups of main interest here contain populations that tend to report the highest amount of engagement with information and communication technologies. This fact may exacerbate the above reported effects, as the influence of ICT domains on psychological behaviour is assumed to be highest here. As such, these results may not remain within other developmental periods and may be the most pronounced within younger developmental periods. Although covariate analyses were performed, it is important for future research efforts to adequately control for gender and social desirability, as well as exploring other confounding effects (i.e., onset age of ICT usage, peer and family usage of ICT, regional affordability of ICT and/or data/Wi-Fi packages, governmental persecution of online antisocial behaviours, etc.) through sampling and statistical control

methods. Further, this study was cross-sectional in nature, thus the above effects are not longitudinally in nature, which is the golden standard within developmental psychology research.

Even though this study attempted to test participants from groups with less variability in their age, due to greater age differences in undergraduate and post-graduate samples, the resulting three age groups represented two adolescent categories and one young adult category. Further studies should aim to survey participants from more equally distributed age categories (i.e. adolescent, emerging adult, and young adult), as it is possible that the null age effects within this study were influenced by the age category criteria. Another implication in regards to the age categories in this study is related to a lack of item consistency across each age group. Notably the younger participants within this study received fewer intended antisocial behaviour items and fewer performed antisocial behaviour items due to school board ethics restrictions. This may have misrepresented the null effects between the three age categories in relation to the provided performed and intended behaviour measures.

**Conclusion.** Daily engagement in online social activities is not only highly prevalent amongst youth, but it is also detrimental towards social behaviour as well as individual moral ideals. The above results indicate that engagement within online contexts is related to lower moral identity, heightened moral disengagement, as well as higher prevalence rates of intended and performed online antisocial behaviour. Consistent across the early adolescent, middle to late adolescent, and young adolescent periods, these results initially support the concerns surrounding online behaviour within various empirical, educational, and geo-political discussions. The primary conclusion from this current investigation supports the notion that online interactions are in fact different in comparison to face-to-face interactions. Interestingly, moral identity exhibited larger contextual differentiation in comparison to moral disengagement; with these effects

remaining stable across adolescent and young adulthood, Further research must approach this topic with the assumption, rather than the suspicion, that online interactions are important within daily social lives of users and are likely to alter previous established psychological theories and results. Not only were prevalence rates of ICT engagement consistently high across all ages, but further a majority of participants reported to have engaged in an antisocial online activity such as pirating or trolling. As with the introduction of a contextual assessment, further research must identify which online factors are the most deleterious in relation to moral ideals and moral behaviour and to further validate the above findings within this current study.

This thorough assessment of online behaviour was suggested throughout the theoretical review of asynchronicity, anonymity, and emotional apathy; however this current study lacked the empirical means to directly assess the online factors that are likely to contribute to more antisocial behaviours and less cohesion to positive moral variables. Thus, not only is there much research to be conducted on online behaviour and on online ideals, but further, this novel context must be empirically explored to the same degree as has been witnessed with family, friend, school, and work contexts in moral development literature. Last, and in consideration of the above statements, future investigations must be open to the possibility that not all form of psychological phenomenon are completely altered by online engagement and ICT usage as this is a burgeoning field of enquiry. Thus, there remains the possibility that some personality characteristics may remain cross-contextually stable throughout development. To address these questions, future studies should address the current lack of empirical investigations that treat online contexts as an environmental factor that may alter previously established psychological constructs. Further, assessment within countries and continents that use ICT differently or whom impose strict penalties for reported online antisocial behaviours must be included to decrease the



possible limitations of a study that is focused on online behaviour and online ideals. As this study aimed to clarify online contextual effects in terms of morally relevant variables, it is important to highlight that this current study only offers a starting point for further investigations that aim to assess online behaviour within a socio-cognitive lens.

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Table 1

*Demographic Characteristics of Sample across Age Groups*

	Early Adolescent (12-15.10)	Late Adolescent (15.10-22)	Young Adult (22.10+)	Total
N	98	174	113	392
Male (%) <sup>a</sup>	33.0%	38.0%	48.2%	39.6%
Age in years M (SD)	13.25 (.54) <sup>***</sup>	19.61 (1.14) <sup>***</sup>	24.81 (1.97) <sup>***</sup>	21.29 (2.91)
European-Canadian <sup>a</sup>	91.90%	78.00%	91.80%	69.95%
Paternal Education <sup>b</sup>	N/A	79.90%	64.6%	72.00%
Maternal Education <sup>b</sup>	N/A	80.20%	75.50%	77.30%

*Note.* <sup>a</sup> column % , <sup>b</sup> % of participants parental figure with some college or university studies (question not asked in the adolescent sample). \*\*\* =  $p < .001$ . Seven participants did not report their exact age but were included in comparisons aside from age in years.

Table 2

*Means and Standard Deviations for all Questions Presented within the Media and Technology Usage and Attitude Scale, Categorized by Age Group.*

Item	Early Adolescent M (SD) <i>n</i>	Late Adolescent M (SD) <i>n</i>	Young Adult M (SD) <i>n</i>	Total M (SD) <i>n</i>
Look at social media postings	6.21 (2.85) 97	8.00 (1.94) 173	7.27 (1.71) 113	7.33 (4.48) 386
Comment on social media postings	4.57 (2.77) 98	4.86 (2.50) 172	4.50 (2.16) 113	4.70 (2.49) 386
Check social media platforms	6.59 (2.80) 98	7.51 (2.15) 172	7.27 (1.76) 113	7.21 (2.26) 386
Browse Social media profiles and photos	4.36 (2.92) 99	6.89 (2.26) 173	6.21 (2.31) 113	6.04 (2.67) 387
Post a social media status update.	2.33 (2.10) 98	3.21 (2.05) 173	2.35 (1.43) 113	2.75 (1.98) 387
Post photos to social media	2.84 (2.09) 98	4.15 (2.48) 173	3.59 (1.90) 113	3.67 (2.30) 387
Search the Internet for information	5.21 (2.53) 98	6.22 (2.12) 170	6.91 (1.73) 113	6.17 (2.23) 384
Search the Internet for media content	6.13 (2.53) 98	6.33 (2.23) 172	6.13 (1.86) 113	6.24 (2.22) 386
Check personal e-mails	3.32 (2.23) 97	6.65 (1.75) 173	7.19 (1.678) 113	5.98 (2.42) 386
Watch video clips online	6.26 (2.75) 98	6.68 (2.01) 172	6.42 (1.43) 113	6.51 (2.09) 386
Watch TV shows and movies online	5.68 (2.45) 97	6.13 (2.15) 171	5.66 (1.87) 112	5.88 (2.20) 383
Send and receive text messages or instant messages	6.85 (2.40) 98	8.25 (1.90) 172	7.92 (1.93) 112	7.78 (2.15) 385
Check text messages or instant messages	6.84 (2.23) 98	8.35 (1.72) 170	7.93 (1.46) 111	7.84 (1.89) 382

Item	Early Adolescent M ( <i>SD</i> ) <i>n</i>	Late Adolescent M ( <i>SD</i> ) <i>n</i>	Young Adult M ( <i>SD</i> ) <i>n</i>	Total M ( <i>SD</i> ) <i>n</i>
Play video games with other people in the same room	3.57 (2.60) 98	2.59 (2.09) 172	2.27 (1.74) 112	2.76 (2.19) 385
Play video games by myself	4.43 (2.94) 98	3.29 (2.65) 171	3.04 (2.40) 113	3.52 (2.72) 385
How often do you meet with friends online	3.01 (2.81) 96	3.81 (2.48) 170	3.56 (2.52) 113	3.54 (2.60) 382
How often do you meet with friends in person outside of school?	5.30 (2.71) 98	5.05 (1.89) 172	4.52 (1.51) 113	4.96 (2.05) 386
Number of people you interact with online that you have never met in person?	N/A 0	1.87 (1.22) 173	1.65 (0.86) 112	1.78 (1.09) 287

*Note.* The range of items was 1-9, with 1-8 for the last item. The seven participants who did not provide their age were included in subsequent total analysis.

Table 3

*Media and Technology Usage and Attitude Scale Factor Analysis Commonalities and Factor Loadings (>.30).*

ICT Question	Communalities	Factor Loadings			
	Extraction	F1	F2	F3	F4
Comment on social media posts	.59			0.72	
Check social media platforms	.60	0.62		0.43	
Browse Social media profiles and photos	.60	0.60		0.42	
Post a social media status update.	2.75			0.75	
Post photos to social media	3.67			0.70	
Search the Internet for information	6.17	0.60		0.43	
Search the Internet for media content	6.24	0.54	0.50		
Check personal e-mails	5.98	0.52			
Watch video clips online	6.51	0.47	0.48		
Watch TV shows and movies online	5.88		0.50		
Send and receive text or instant messages	7.78	0.74			
Check text messages or instant messages	7.84	0.66			
Play video games with other people in the same room	2.76		0.72		
Play video games by myself	3.52		0.81		
How often do you meet with friend online	3.54				0.74
How often do you meet with friends in person outside of school	4.96		0.44		
Number of people you interact with online that you have never met in person	1.78				.57

Table 4

*Cumulative Percent Frequencies for answers above “Never” for all Questions Presented within Performed and Intended Online Immoral Behaviours Scales. Performed and Intended Online Measures Include Full Sample.*

	Performed	Intended
<i>Have you ever downloaded commercial music or videos from an online source without paying?</i>	74.8%	74.3%
<i>Have you ever sent someone a threatening message online?</i>	23.4%	15.8%
<i>Have you ever kicked somebody out of an online game or group conversation for no reason?</i>	28.1%	33.2%
<i>Have you ever posted an inappropriate picture of someone else?</i>	8.3%	7.3%
<i>Have you ever spread a rumor about someone online?</i>	19.2%	12.5%
<i>Have you ever accessed someone’s online account without permission?</i>	36.6%	28.4%
<i>Have you ever used the Internet to plagiarize?</i>	30.2%	25.1%
<i>Have you ever stolen someone’s personal information online</i>	4.4%	6.0%
<i>Have you ever posted a negative comment about someone’s picture?</i>	24.2%	20.2%
<i>Have you ever created a fake identity online to fool someone else?</i>	31.9%	32.1%
<i>Have you ever insulted somebody online for fun? (e.g., trolling)</i>	44.9%	34.5%
<i>Have you ever altered a photo of yourself before posting it online?</i>	49.6%	51.8%
<i>Have you ever purchased an item online that was a “knockoff” but told your peers it was real?</i>	19.0%	56.2%
<i>Have you ever stated that an item was newer than it actually is online?</i>	17.9%	43.9%

Note.  $n = 385$ .

**Table 5**  
*Bivariate correlations for: Exact Age, Gender, ICT Usage, Moral Identity, Moral Disengagement, Performed Immoral Online Behaviour, Intended Immoral Online Behaviour, and Social Desirability.*

Item	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Exact Age									
(2) ICT	.12*								
(3) Online Moral Identity	-.06	.02							
(4) Family Moral Identity	.11*	.14**	.51***						
(5) Friend Moral Identity	-.07	-.01	.60***	.75***					
(6) Online Moral Disengagement	.06	.22***	-.33***	-.26***	-.33***				
(7) Face-to-face Moral Disengagement	.03	.17**	-.32***	-.29***	-.35***	.91***			
(8) Performed Online Behaviour	.27***	.24***	-.23***	-.20***	-.32***	.41***	.39***		
(9) Intended Online Behaviour	.19***	.19***	-.26***	-.24***	-.31***	.49***	.46***	.75***	
(10) Social Desirability	.33	.22**	-.13*	.09	-.04	.17**	.11*	.27***	.27***

*Note, \* = p < .05, \*\* = p < .01, \*\*\* = p < .001*

*Table 6*

*Mean (and standard deviation) for: Exact age, gender, ICT usage, Moral identity, Moral Disengagement, Performed Immoral Online Behaviour, Intended Immoral Online Behaviour, and Social Desirability for Supplemental Laboratory Comparisons.*

	Laboratory	Regular Sample
Exact Age	19.68 (1.42)	19.76 (.94)
Male (%) <sup>a</sup>	10%	10%
ICT	4.15 (.64)***	5.73 (1.10)***
Family Moral Identity	4.34 (.54)	4.33 (.72)
Friend Moral Identity	4.12 (.59)	4.18 (.82)
Online Moral Identity	3.72 (.81)	3.79 (1.08)
Online Moral Disengagement	2.50 (.51)	2.44 (.57)
Face-to-face Moral Disengagement	2.25 (.47)	2.16 (.62)
Performed Immoral Online Behaviour	1.47 (.29)	1.61 (.47)
Intended Immoral Online Behaviour	1.47 (.31)	1.47 (.35)

*Note.* <sup>a</sup> column %, lab  $n = 50$ , regular sample  $n = 50$ , \*\*\*  $p < .001$ .



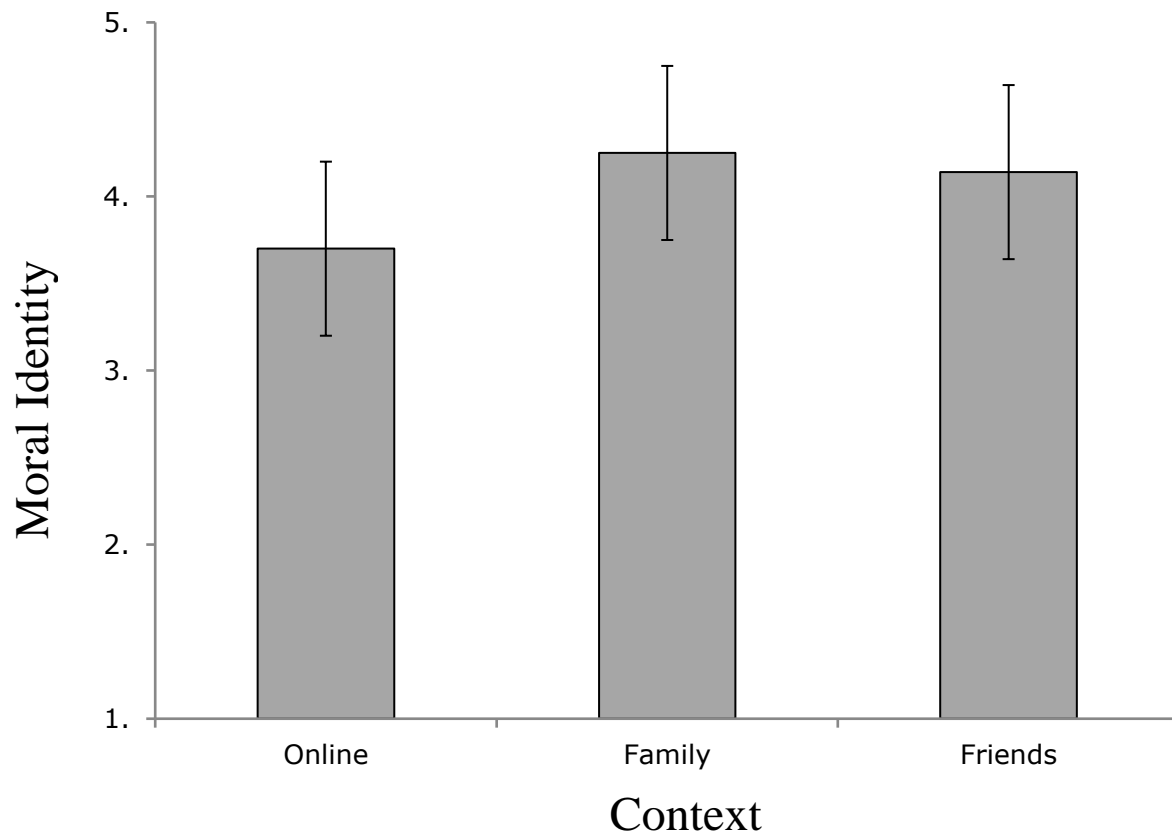


Figure 1. Moral identity values, M (SD), per online: 3.71 (.96), family: 4.25 (.68), and friend: 4.15 (.74) contexts.

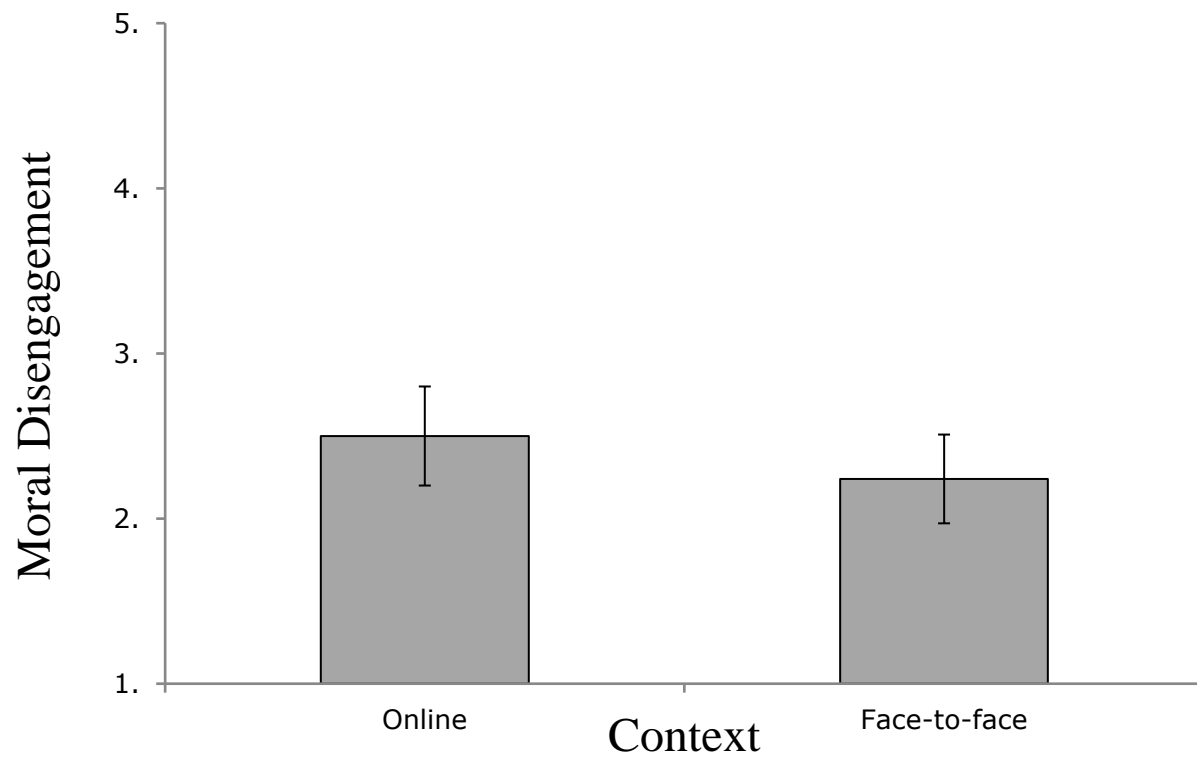
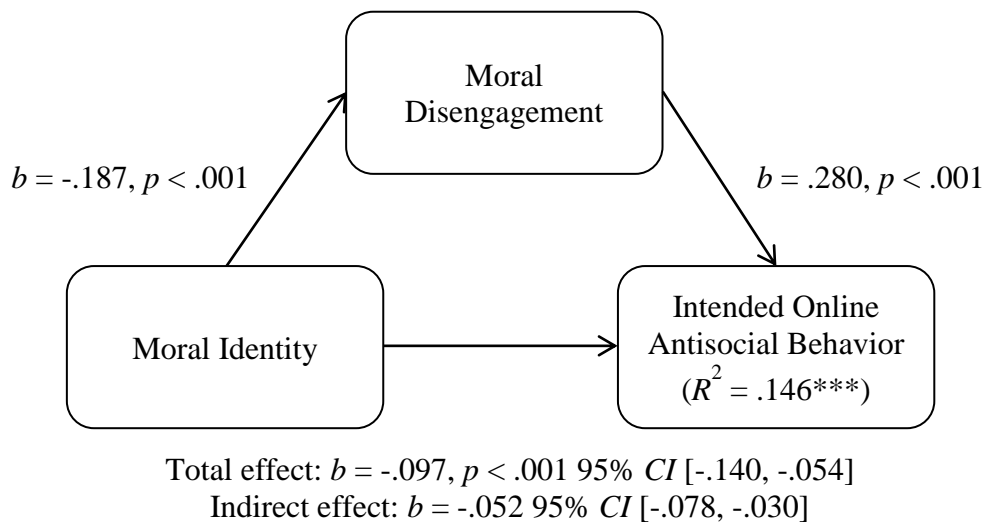
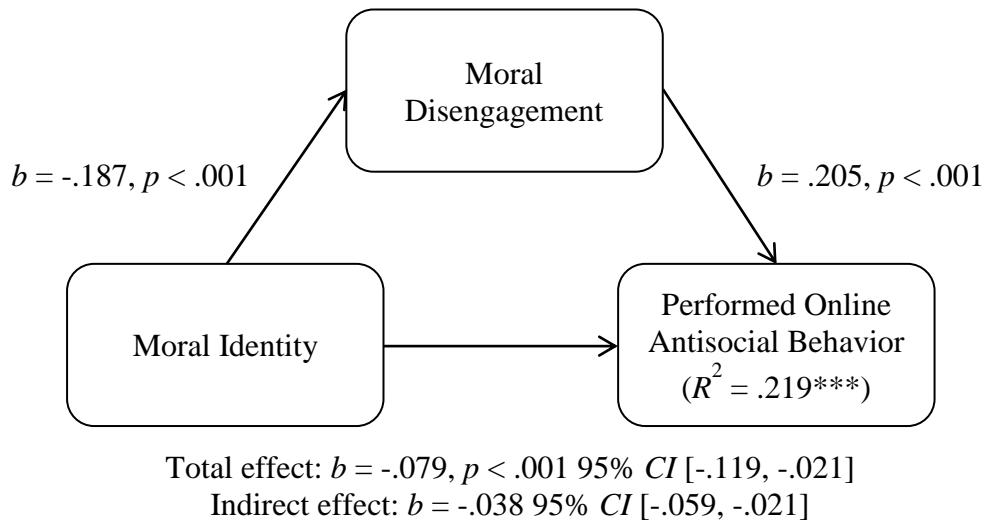


Figure 2. Moral disengagement values,  $M (SD)$ , per online: 2.50 (.61) and face-to-face: 2.23 (.60) contexts.



*Figure 3.* Mediation effect of moral disengagement on the negative association between moral identity and intended online antisocial behaviour as well as performed online antisocial behaviour.

## Appendix

### Demographic Information

Before starting with the main part of the questionnaire, we need some information about you.

**Please provide your personal code:**

First two letters in your mother's first name (e.g., MARY)

Your own birthday (e.g., February 12, 1991)

First two letters in your father's first name (e.g., DAVID)

What is **your father's** current occupation? (If your father is not working right now, what was his last job?) Please provide a job title and brief description of what your father is actually doing (e.g., Postman. He delivers mail to people's homes).

---

---

What is **your mother's** current occupation? (If your mother is not working right now, what was her last job?) Please provide a job title and brief description of what your mother is actually doing (e.g., Accounting officer. She manages payroll for a larger company).

---

---

**Things People Do or Don't Do**

In the following, you find a list of things people sometimes do or don't do. Please indicate for each behaviour, how often you have done this **in the past**.

0 = **Never**

1 = **Once or twice**

2 = **A few times**

3 = **Several times**

\_\_\_\_\_ Have you ever reported someone's post or tried to get them in trouble with the  
\_\_\_\_\_ website admin without good reason for fun (e.g., Instagram, Snapchat, Facebook  
etc.)?

\_\_\_\_\_ Have you ever over-charged for an item when selling it online?

\_\_\_\_\_ Have you ever-downloaded commercial music or videos from an online source  
without paying?

\_\_\_\_\_ Have you ever made negative comments about someone's race, ethnic group or  
disability online?

\_\_\_\_\_ Have you ever spread a rumour about someone online?

\_\_\_\_\_ Have you ever sent someone a threatening message online (i.e., via text, social  
media, email, etc.)?

\_\_\_\_\_ Have you sever stolen someone's personal information online?

\_\_\_\_\_ Have you ever purchased an item online that was a knockoff but told people it  
was real?

\_\_\_\_\_ Have you ever created a fake identity online? (e.g., changing your name, using a  
different picture, changes your daily dialogue).

\_\_\_\_\_ Have you ever posted a negative comment about someone's picture on a social  
media application?

\_\_\_\_\_ Have you ever "screenshotted" a picture without someone's permission or  
without them knowing? (e.g., Snapchat, Facebook, Instagram, Twitter).

\_\_\_\_\_ Have you ever used the Internet to plagiarize? (e.g., SparkNotes,

payforessay.com)

- \_\_\_\_\_ Have you ever accessed someone's online account without his or her permission?
- \_\_\_\_\_ Have you ever altered a photo of yourself before posting it online (e.g., photoshop, etc.)?
- \_\_\_\_\_ Have you ever posted an inappropriate picture of someone else?
- \_\_\_\_\_ Have you ever kicked somebody out of an online game or group conversation for no reason?
- \_\_\_\_\_ Have you ever insulted somebody online for fun? (e.g., trolling).

## ***What you Like to Do***

Please indicate how often you do each of the following on any technological device (i.e., phone, tablet, laptop, computer, etc.)

- 0 = **Never**
  - 1 = **Once a month**
  - 2 = **Once a week**
  - 3 = **Several times a week**
  - 4 = **Once a day**
  - 5 = **Several times a day**
  - 6 = **Once an hour**
  - 7 = **Several times an hour**
  - 8 = **All the time**
- 

- \_\_\_\_\_ How often do you check for text messages or instant messages?
- \_\_\_\_\_ How often do you play video games with other people in the same room?
- \_\_\_\_\_ How often do you meet with friends in person outside of school activities?
- \_\_\_\_\_ How often do you play games with other people online?
- \_\_\_\_\_ How often do you watch TV shows and movies online?
- \_\_\_\_\_ How often do you search the Internet for images, videos or photos?
- \_\_\_\_\_ How often do you meet people online?
- \_\_\_\_\_ How often do you check Facebook or Instagram pages or other social networks?
- \_\_\_\_\_ How often do you comment on social media postings, status updates, photos, etc.?
- \_\_\_\_\_ How often do you send and receive text messages or instant messages?
- \_\_\_\_\_ How often do you search the Internet for information and/or news?
- \_\_\_\_\_ How often do you post photos to social media (Snapchat, Facebook, Instagram, etc.)?

- \_\_\_\_\_ How often do you check you emails?
- \_\_\_\_\_ How often do you read or look at social media postings (i.e., Facebook, Snapchat, Instagram, etc.)?
- \_\_\_\_\_ How often do you watch video clips online?
- \_\_\_\_\_ How often do you play video games by yourself?
- \_\_\_\_\_ How often do you post a social media status update?
- \_\_\_\_\_ How often do you browse social media profiles and photos?



## ***Things You May (or May not) Do in the Future***

In the following, you find a list of things people sometimes do or don't do. Please indicate for each behaviour, whether you could imagine yourself engaging in it by choosing one of the following options.

- 0 = I would **never** do this  
1 = I **possibly** would do this  
2 = I **likely** would do this  
3 = I **surely** would do this
- 

\_\_\_\_\_ I would use an online source to plagiarize an assignment or an essay.

\_\_\_\_\_ I would "screenshot" a picture without someone's permission or without them knowing (e.g., Snapchat, Facebook, Instagram, Twitter).

\_\_\_\_\_ If I were able to, I would steal someone's personal information while I was online.

\_\_\_\_\_ I would over-charge for an item when selling it online.

\_\_\_\_\_ If I had to, I would create a fake identity online (e.g., changing your name, using a different picture).

\_\_\_\_\_ I would spread a rumour about someone online, given the opportunity.

\_\_\_\_\_ I would have no issues with posting a negative comment on someone's picture on Facebook, or Instagram in the future.

\_\_\_\_\_ I would send threatening messages online (i.e., via text, social media, email, etc.) if I had to.

\_\_\_\_\_ I would state that an item was newer than it actually is online (e.g., Kijiji, Facebook market, etc.).

\_\_\_\_\_ I would consider insulting somebody online for fun (e.g., trolling).

\_\_\_\_\_ I would be willing to post an inappropriate picture of someone else online.

\_\_\_\_\_ I would consider accessing someone's online account without their permission.

\_\_\_\_\_ I would kick somebody out of an online game or group conversation for no reason.

\_\_\_\_\_ I would have no problems with altering a photo of myself before posting it online (e.g., photoshop)

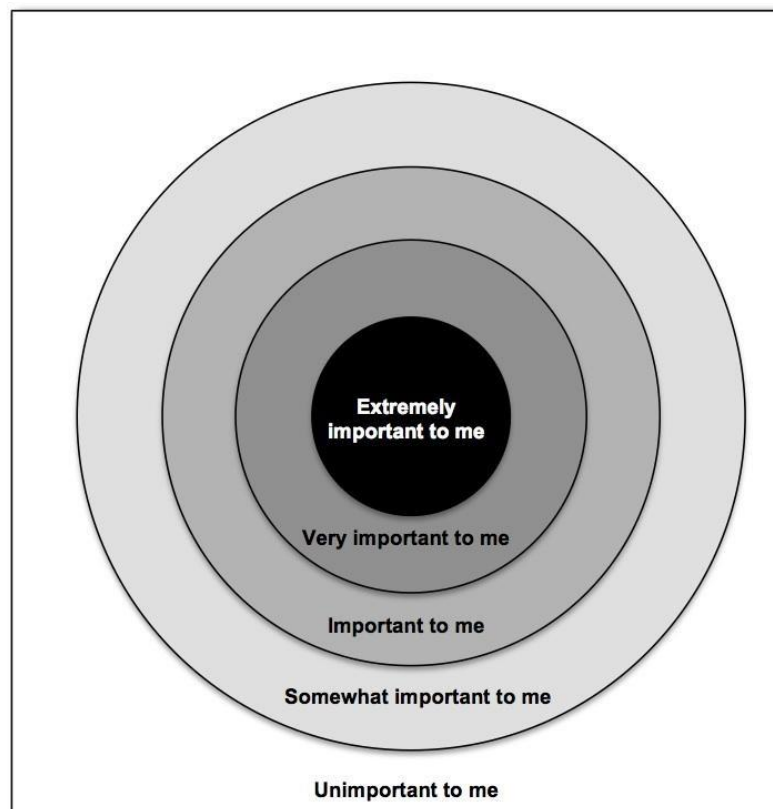
\_\_\_\_\_ Without hesitation, I would repost someone's post just to get them in trouble with the website admin without good reason (e.g., Facebook, Instagram, Snapchat, etc.).

\_\_\_\_\_ I could see myself downloading music or videos online without paying in the future.

\_\_\_\_\_ I would have no issue with saying a negative comment about someone's face, ethnic group or disability if it was while I was online.

## ***Personal Characteristics That Are Important to You ...***

The following pages are about characteristics, such as being honest and being trustworthy, that are personally important to you. Imagine the diagram below is a diagram of you. All characteristics that are extremely important to you belong to your core. Qualities that are still important but are a less central part of you are outside the core area. Qualities that are unimportant are outside the circle diagram, they do not belong to you.



**The following part of the questionnaire is about the importance of values in your personal life. To get started we would like to ask a general question.**

What characterizes a highly moral person, from your personal point of view?

Please write down 3-5 characteristics that spontaneously come to your mind:

---

**In the following you find a list of characteristics that people use to describe a highly moral person. Please rate each quality according to how well it describes a highly moral person on a scale from *Not at all* to *Extremely well*.**

	Not at all	A little bit	Somewhat	Fairly well	Extremely well
Self-disciplined					
Non-judgmental					
Nice					
Trustworthy					
Thrifty					
Exemplary					
Self-assured					
Humble					
Rational					
Considerate					
Just					
Understanding					

	Not at all	A little bit	Somewhat	Fairly well	Extremely well
Good					
Fair					
Genuine					
Dependable					
Optimistic					
Has integrity					
Sharing					
Loving					
Virtuous					
Sociable					
Truthful					
Honorable					
Ethical					
Courteous					
Open-minded					
Compassionate					
Kind					
Forgiving					
Obedient					
Wise					
Cooperative					
Honest					

	Not at all	A little bit	Somewhat	Fairly well	Extremely well
Hard-working					
Consistent					
Responsible					
Tolerant					
Happy					
Religious					
Proud					
Grateful					
Accepting					
Selfless					
Strong					
Intelligent					
Friendly					
Proper					
Upstanding					
Empathic					
Law-abiding					
Righteous					
Patient					
Courageous					
Faithful					
Independent					

	Not at all	A little bit	Somewhat	Fairly well	Extremely well
Cheerful					
Makes the right choices					
Generous					
Perseveres					
Educated					
Fun					
Caring					
Knows what is right/wrong					
Clean					
Modest					
Loyal					
Respectful					
Follows rules					
Confident					
Has high standards					
Reliable					
Listens					
Altruistic					
Healthy					
Sincere					
Benevolent					
Helpful					

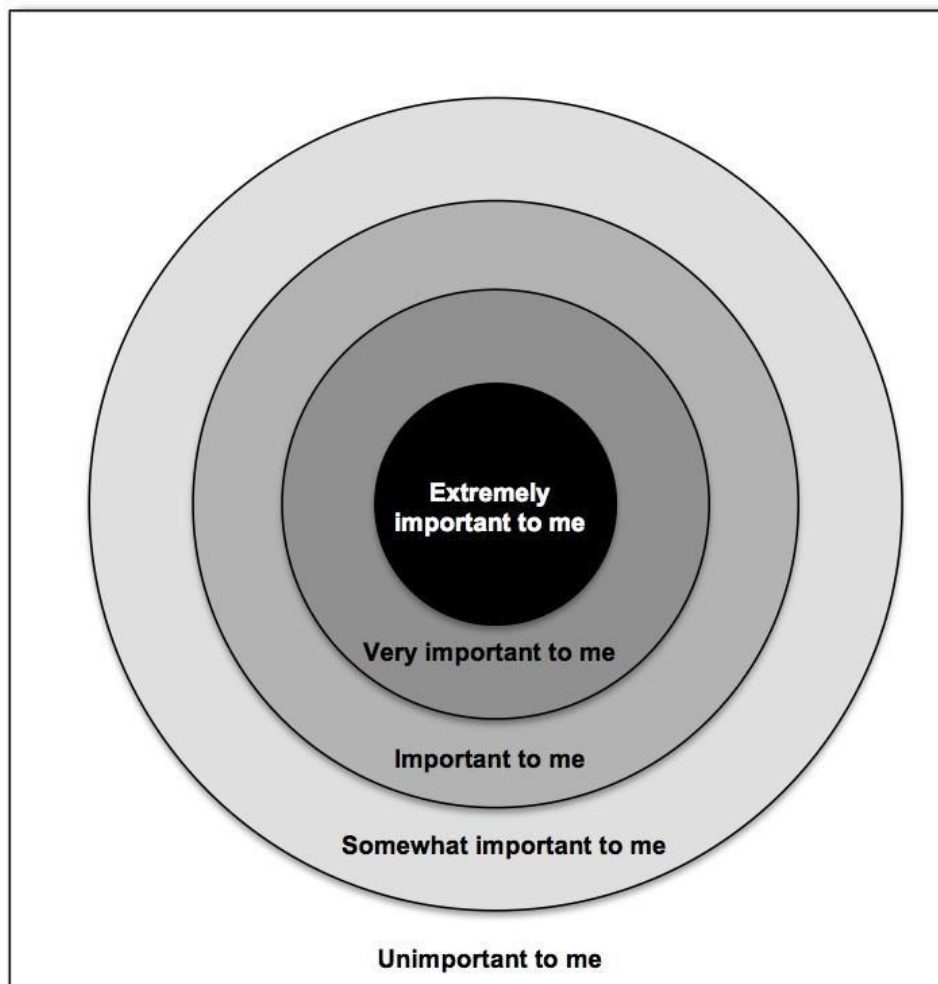
Knowledgeable					
---------------	--	--	--	--	--



So far we asked you about what characteristics make a moral person. We now would like to learn from you how important these characteristics are **for you in different areas of your personal life:**

- **When you are with your family.**
- **When you are with your friends.**
- **When you are online.**

Imagine the diagram below is a diagram of you. All characteristics that are extremely important to you in the various areas of your life (family, friends, online) belong to your core. Characteristics that are still important but are a less central part of you are outside the core area. Characteristics that are unimportant are outside the circle diagram, they do not belong to you.



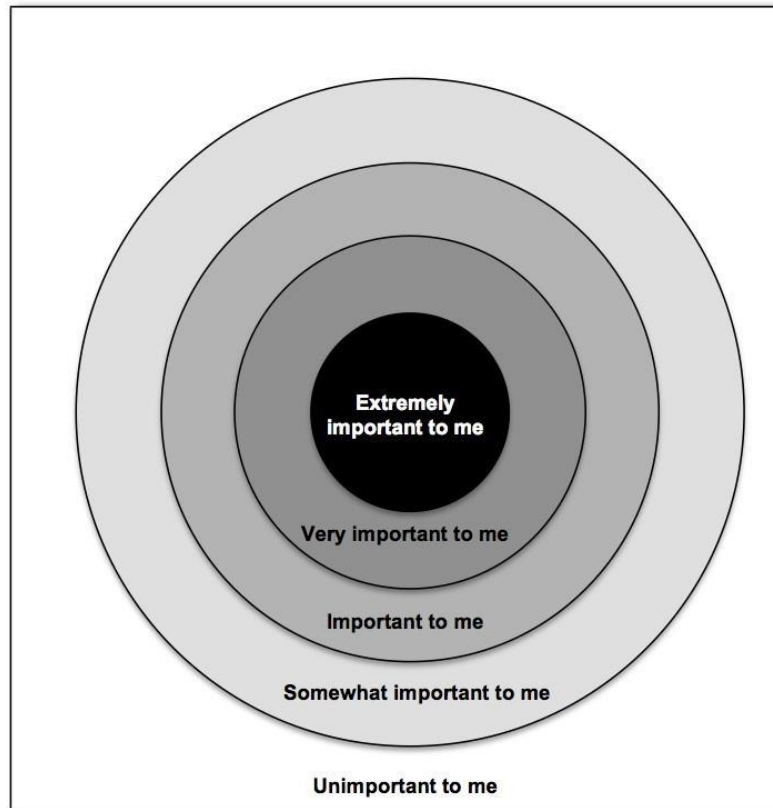
In the next step please select 12-15 of the below qualities that define the core of a highly moral person from your point of view. Please select 12-15 attributes that define the core of a highly moral person in your personal point of view.

Accepting	Considerate	Exemplary	Genuine	Honest
Altruistic	Consistent	Fair	Good	Honorable
Benevolent	Cooperative	Faithful	Grateful	Humble
Caring	Courageous	Follows the rules	Happy	Independent
Clean	Courteous	Forgiving	Hard-working	Intelligent
Compassionate	Dependable	Friendly	Has high standards	Just
Confident	Educated	Fun	Healthy	Kind
Conscientious	Ethical	Generous	Helpful	Knowledgeable
Knows what is right/wrong	Obedient	Reliable	Sincere	Has integrity
Law-abiding	Open-minded	Religious	Sociable	Wise
Listens	Optimistic	Respectful	Strong	Virtuous
Loving	Patient	Responsible	Thrifty	Upstanding
Loyal	Perseveres	Righteous	Tolerant	Self-assured
Makes the right choices	Proper	Self-disciplined	Trustworthy	Nice
Modest	Proud	Selfless	Truthful	Empathic
Non-judgmental	Rational	Sharing	Understanding	Cheerful

	Unimportant to me (1)	Somewhat important to me (2)	Important to me (3)	Very Important to me (4)	Extremely important to me (5)
#1					
#2					
#3					
#4					
#5					
#6					
#7					
#8					

#9					
#10					
#11					
#12					
#13					
#14					
#15					

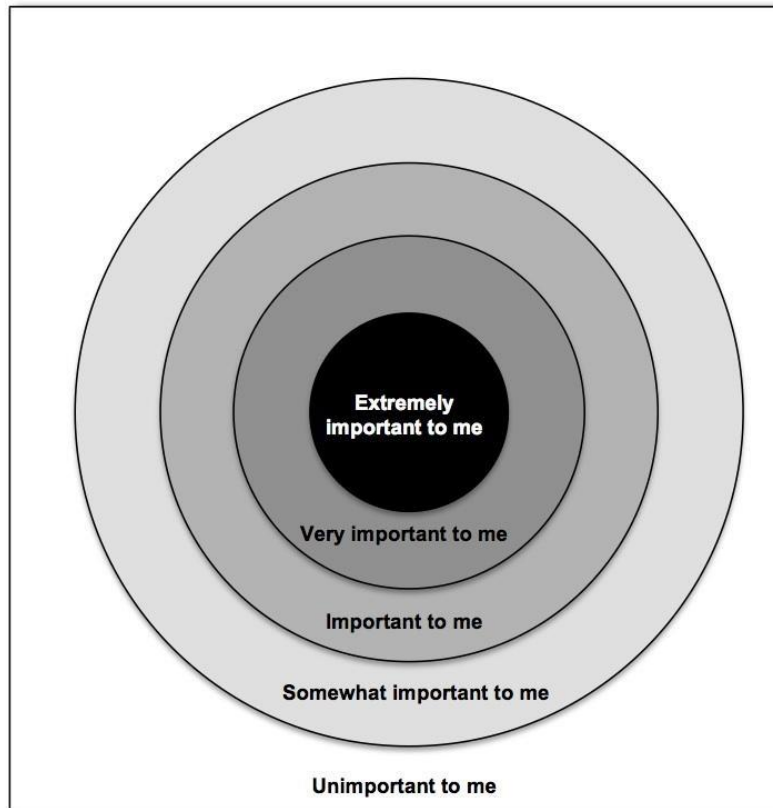
How important are these **15 qualities** you chose to describe a highly moral person **for you personally** when you are with **your friends**?



	Unimportant to me (1)	Somewhat important to me (2)	Important to me (3)	Very Important to me (4)	Extremely important to me (5)
#1					
#2					
#3					
#4					
#5					

	Unimportant to me (1)	Somewhat important to me (2)	Important to me (3)	Very Important to me (4)	Extremely important to me (5)
#6					
#7					
#8					
#9					
#10					
#11					
#12					
#13					
#14					
#15					

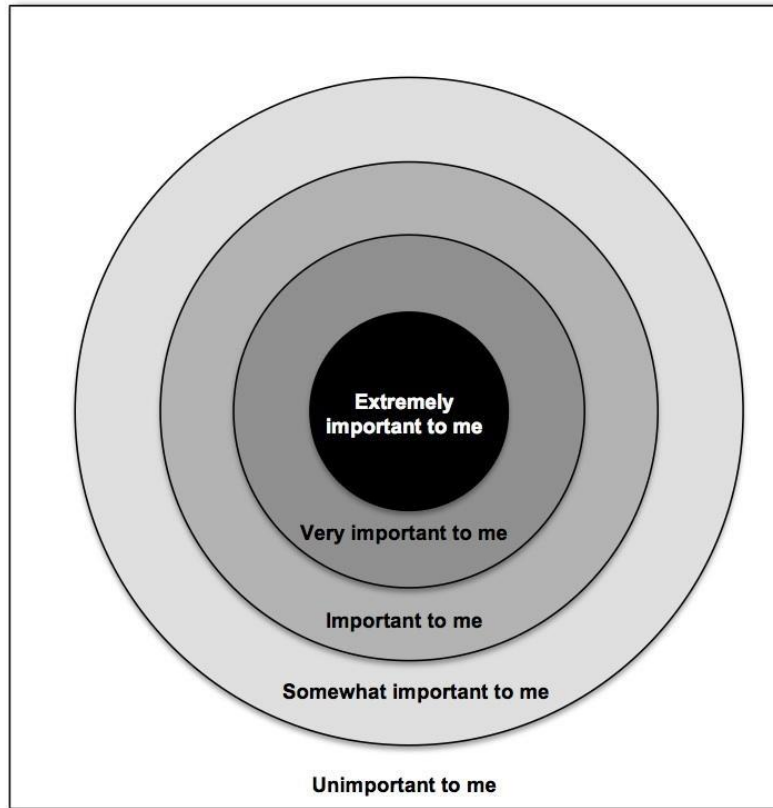
How important are the qualities you chose to describe a highly moral person **for you personally** when **you are online**?



	Unimportant to me (1)	Somewhat important to me (2)	Important to me (3)	Very Important to me (4)	Extremely important to me (5)
#1					
#2					
#3					
#4					
#5					

	Unimportant to me (1)	Somewhat important to me (2)	Important to me (3)	Very Important to me (4)	Extremely important to me (5)
#6					
#7					
#8					
#9					
#10					
#11					
#12					
#13					
#14					
#15					

How important are these **15 qualities** you chose to describe a highly moral person **for you**



**personally** when you are with **your friends**?

	Unimportant to me (1)	Somewhat important to me (2)	Important to me (3)	Very Important to me (4)	Extremely important to me (5)
#1					
#2					
#3					
#4					
#5					



	Unimportant to me (1)	Somewhat important to me (2)	Important to me (3)	Very Important to me (4)	Extremely important to me (5)
#6					
#7					
#8					
#9					
#10					
#11					
#12					
#13					
#14					
#15					



**Imagine:** You send inappropriate photos of your friend to other people via text message.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
I don't want to see my friend for the next couple of days. -----	r	r	r	r	r
I want to apologize to my friend and attempt to stop the photo from going any further. -----	r	r	r	r	r
It is my friend's fault that an inappropriate photo exists in the first place. -----	r	r	r	r	r
Other people were asking me if they could see the photo so it is their fault. -----	r	r	r	r	r

**Imagine:** You take a couple of DVDs of your favourite movies from a video store without paying.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
I am a thief if I take things without paying. -----	r	r	r	r	r
In the future I should reconsider and pay for the movie. -----	r	r	r	r	r
Many people do this, so why shouldn't I? -----	r	r	r	r	r
The movie business makes enough money that I do not have to pay for every DVD I want. -----	r	r	r	r	r

**Imagine:** You purposefully anger somebody in an online forum.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
I want to leave this online forum immediately. -----	r	r	r	r	r
I want to make sure that this does not happen to me again in the future. -----	r	r	r	r	r
This is just "trolling", nothing else. -----	r	r	r	r	r
Only stupid people fall for this. -----					

**Imagine:** You sell a T.V. worth \$150 online for \$300. The buyer is unaware that you are overcharging.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
The buyer should have known better how much the TV is actually worth. -----	r	r	r	r	r
It is OK to overcharge. -----	r	r	r	r	r
In the future, I will be honest about the real price of an item.	r	r	r	r	r
I feel ashamed. Other people would not do this. -----	r	r	r	r	r

**Imagine:** You plagiarize on an assignment you hand in in class to be graded by your teacher.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
Why blame me, if everyone is plagiarizing? -----	r	r	r	r	r
Others would have cited properly cited the source. ---	r	r	r	r	r
I should put more effort into developing my own thoughts and ideas when writing assignments. -----	r	r	r	r	r
“Copying” for a school assignment is fine. -----	r	r	r	r	r

**Imagine:** You find a way to download your favourite movies from an online source without having to pay.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
Everyone else does this. -----	r	r	r	r	r
I am a bad person if I take things without paying. ----	r	r	r	r	r
I promise to pay for movies in the future because that is the right thing to do. -----	r	r	r	r	r
The amount of money the movie industry loses by people downloading movies pales in comparison to what they make each year. -----	r	r	r	r	r

**Imagine:** Mistakenly, a woman leaves her credit card information online. You use this information to make a \$100 online purchase.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
I am just "borrowing" her credit card for a small purchase.	r	r	r	r	r
I should attempt to find the person to tell them their information is online. -----	r	r	r	r	r
Others would not taken advantage of the situation. ---	r	r	r	r	r
Someone leaving this information online basically asks others to take it. -----	r	r	r	r	r

**Imagine:** You emailed a bunch of people posing as a charity and obtained \$50 from them. They are unaware that you are not a charity.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
I avoid these individuals and hide from the situation. -----	r	r	r	r	r
I want to give the money to a real charity. -----	r	r	r	r	r
Others do things that are much worse. -----	r	r	r	r	r
People should be better informed and know what a real charity is. -----	r	r	r	r	r



**Imagine:** You show inappropriate photos of your friend to other people.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
It is my friend's fault that they took an inappropriate photo of themselves. -----	r	r	r	r	r
I want to tell my friend what I've shown people and apologize. -----	r	r	r	r	r
I want to avoid my friend now. -----	r	r	r	r	r
Everyone was asking if they could see the photo so I had no choice. -----	r	r	r	r	r

**Imagine:** While passing somebody at school, you state that she looks ugly.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
Other people say much meaner things when passing people in the hallway. -----	r	r	r	r	r
It does not matter how I feel about someone, I should not be so mean. -----	r	r	r	r	r
I feel like the meanest person on earth. -----	r	r	r	r	r
Ugly people should be told the truth -----					

**Imagine:** You sell a T.V. worth \$150 at a garage sale for \$300. The buyer is unaware that you are overcharging.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
The buyer should have checked the TV better to find out if I am overcharging. -----	r	r	r	r	r
Next time I sell an item I will be honest with the buyer about the price. -----	r	r	r	r	r
It is OK to overcharge for items if the buyer does not know. -----	r	r	r	r	r
I am greedy and selfish. -----	r	r	r	r	r

**Imagine:** You plagiarize on an online assignment to be graded by a computer program.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
I should procrastinate less so that there is no need plagiarize. -----	r	r	r	r	r
Others would not have done this. -----	r	r	r	r	r
This is just "copying" from others. -----	r	r	r	r	r
You should not be blamed for something everyone is doing. -----	r	r	r	r	r

**Imagine:** You create a fake email account to obtain online coupons.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
I am a liar. -----	r	r	r	r	r
I am not hurting anyone by obtaining online coupons. -----	r	r	r	r	r
I do not want to use these coupons. -----	r	r	r	r	r
Others use a fake ID to do much worse things. -----	r	r	r	r	r

**Imagine:** You provide false personal information to obtain coupons from a sales representative in a store.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
Others use fake personal information to do much worse things. -----	r	r	r	r	r
I want to give these coupons to people who need them more than I do. -----	r	r	r	r	r
I am so greedy. -----	r	r	r	r	r
I am not hurting anyone by doing this. -----	r	r	r	r	r

**Imagine:** You spread a rumour about your classmate by passing an anonymous note in your class.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
It is okay to spread rumours once in awhile. -----	r	r	r	r	r
It is just a rumour, it's nothing serious. -----	r	r	r	r	r
I want to stop the note from spreading any further and apologize to my classmate. -----	r	r	r	r	r
I want stay home for a few days to avoid seeing my classmate. -----	r	r	r	r	r

**Imagine:** You cheat to win in an in-person game (e.g., Soccer, Monopoly, etc.).

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
Nobody cares if you cheat during a game. -----	r	r	r	r	r
I want to be fair to others, even in a game. -----	r	r	r	r	r
I am the worst cheater. -----	r	r	r	r	r
Everyone else is cheating so it would not be fair if I did not cheat. -----	r	r	r	r	r

**Imagine:** You use a cheat sheet in an in-class exam, even though it is not allowed.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
It is not fair to cheat. In the future I want to study properly. -----	r	r	r	r	r
I need to get a good grade on this exam to impress my parents and teachers. -----	r	r	r	r	r
I am worthless. -----	r	r	r	r	r
Everybody uses a cheat sheet once in awhile. I put myself at a disadvantage if I don't cheat. -----	r	r	r	r	r

**Imagine:** You spread a rumour about your classmate on Reddit or Yik-Yak.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
It is just a rumour it does not cause any harm. -----	r	r	r	r	r
It is OK to spread rumours. -----	r	r	r	r	r
I want to apologize and make sure my classmate is OK. -----	r	r	r	r	r
I want to hide from my classmate and avoid contact. -----	r	r	r	r	r

**Imagine:** You exclude somebody from a group in-person game (e.g., Tag, Chess, etc.).

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
It is OK to exclude someone from a game. -----	r	r	r	r	r
I want to make sure that this does happen again. -----	r	r	r	r	r
I am rude. -----	r	r	r	r	r
I do not play games with losers. -----					

**Imagine:** You knocked at a few people's doors while posing as a charity and obtained \$50. People who donated were unaware that you are not a charity.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
Others have done this before. -----	r	r	r	r	r
It is not my fault if people can be convinced so easily. -----	r	r	r	r	r
I want to give these people their money back. -----	r	r	r	r	r
I want to avoid the neighbourhood in the future. -----	r	r	r	r	r

**Imagine:** You find a credit card that does not belong to you on the ground. You use this credit card to spend \$100 in a store.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
I should call the bank so they can deactivate the card and alert the owner. -----	r	r	r	r	r
I am only doing this because someone leaves the card on the ground basically for me to use. -----	r	r	r	r	r
I am just "borrowing" their credit card to buy a few things in the store. -----	r	r	r	r	r
I am a thief. -----	r	r	r	r	r



**Imagine:** While writing an online exam you Google the answer, even though the rules clearly state that you must not use any extra material.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
Everybody does this once in awhile, so really I'm at a disadvantage if I don't cheat. -----	r	r	r	r	r
I am a cheater. -----	r	r	r	r	r
I have to cheat to achieve good grades and to get ahead in life. -----	r	r	r	r	r
I want study harder in the future because it is unfair to cheat. -----	r	r	r	r	r

**Imagine:** You are meeting a new friend and you make things up about yourself in the conversation to make yourself sound better.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
It is okay to lie about certain aspects of yourself. -----	r	r	r	r	r
I would not want to meet this person again. -----	r	r	r	r	r
I should be more truthful about myself. -----	r	r	r	r	r
A little bit of "self-promotion" is okay. -----	r	r	r	r	r

**Imagine:** You cheat to win in an online multi-player game (e.g., Overwatch, Candycrush, etc.).

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
It is not a big deal to cheat in a game. -----	r	r	r	r	r
Everyone else cheats, so why shouldn't I? -----	r	r	r	r	r
Even it is tempting, I should not cheat in games. -----	r	r	r	r	r
Others are much better at fair play than I. -----	r	r	r	r	r

**Imagine:** You try to provoke a stranger on the street.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
This is just "poking fun". -----	r	r	r	r	r
I want to be nicer to people I do not know and not do this in the future. -----	r	r	r	r	r
I feel awful and want to hide from others. -----	r	r	r	r	r
You have to be really stupid to be bothered by a stranger -----					

**Imagine:** You are updating your social media profile and you insert some things about yourself that make you look good but that are not true.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
I hope no one will contact me. -----	r	r	r	r	r
I should be more honest with others. -----	r	r	r	r	r
It is okay to lie about yourself once in awhile. -----	r	r	r	r	r
This is "boosting" yourself, nothing else. -----	r	r	r	r	r

**Imagine:** You exclude or kick somebody from an online game (e.g., Clash Royale, Tetris, etc.).

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
I don't want to let similar things happen in the future again.	r	r	r	r	r
I have terrible sportsmanship. -----	r	r	r	r	r
It is OK because it is just a game. -----	r	r	r	r	r
This person is a loser, so they do not deserve to play with me. -----					

**Imagine:** You post an item for sale online, in the description you state that it is one year old while it is actually three years old.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
Even though it is tempting, I should not give a wrong description of the item. -----	r	r	r	r	r
Others exaggerate much more when trying to sell things. -----	r	r	r	r	r
Others would be more honest in this situation. -----	r	r	r	r	r
Stupid buyers deserve to be ripped off. -----					

**Imagine:** You comment on someone’s Facebook photo, and say that she looks ugly.

**How would you feel about yourself in this situation?**

Extremely bad 1 ----- 2 ----- 3 ----- 4 ----- 5 ----- 6 ----- 7 Extremely good

**Why would you feel good (or bad) about yourself in this situation?**

	Strongly disagree	Somewhat disagree	Neither disagree nor agree	Somewhat agree	Strongly agree
Others say much meaner things on people’s profiles. -----	r	r	r	r	r
Regardless of how I feel about others, I should not say mean things to them. -----	r	r	r	r	r
Ugly people do not deserve compliments.	r	r	r	r	r
Others would not be so mean. -----					

## ***Nobody is Perfect***

Below you find a list of questions. Please read each question carefully and decide if it describes you or not. If it describes you, check the box for "YES", if not check "NO".

	YES	NO
Do you always do the right things? .....	r	r
Are there sometimes when you don't like to do what your parents tell you? .....	r	r
Do you sometimes feel angry when you don't get your way? .....	r	r
Sometimes, do you do things you've been told not to do? .....	r	r
Do you sometimes feel like making fun of other people? .....	r	r
Are you always careful about keeping you clothing neat an your room picked up? .....	r	r
Do you always listen to your parents? .....	r	r
Do you sometimes wish you could just play around instead of having to go to school? .....	r	r
Do you ever say anything that makes somebody else feel bad? .....	r	r
Have you ever felt like saying unkind things to a person? .....	r	r
Do you sometimes get mad when people don't do what you want them to do? .....	r	r

Have you ever broken a rule? ----- r r

Are you always polite, even to people who are not very nice? ----- r r