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Intergroup Contact and Evaluations of Interracial Exclusion in Offline and Online Settings  
among Adolescents and Young Adults

by

Henry C. Park

A dissertation submitted to the Graduate Faculty in Developmental Psychology in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

2015

# EVALUATIONS OF INTERRACIAL EXCLUSION ONLINE



2015

HENRY PARK

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The manuscript has been read and accepted for the  
Graduate Faculty in Psychology in satisfaction of the  
Dissertation requirements for the degree of Doctor of Philosophy

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**Abstract****INTERGROUP CONTACT AND EVALUATIONS OF INTERRACIAL EXCLUSION IN  
OFFLINE AND ONLINE SETTINGS AMONG ADOLESCENTS AND YOUNG ADULTS**

By

Henry C. Park

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There is considerable research with adult samples documenting the benefits of intergroup contact, such as improved intergroup attitudes and prejudice reduction. However, developmental psychologists have only recently begun to consider the relationship between intergroup contact and evaluations of interracial exclusion in minority and majority youth. There has also been extensive research studying the social effects of the internet and its ability to influence wide audiences, but little research on the impact of online interactions on intergroup relations. The present study addresses this limitation. Using social media and various online forums to recruit and survey participants about their views of interracial exclusion in both online (internet) and offline (real-world) settings, data were collected from 151 adolescents and young adults ranging in age from 13 – 21 years. Participants were presented with scenarios depicting interracial peer exclusion occurring in both offline and online settings (e.g., playing soccer and playing online games) and asked to respond to an online survey composed of open-ended and scale questions to evaluate each scenario. Findings indicated that participants evaluated race-based exclusion as wrong in both the offline and online scenarios. Novel findings were significant interactions between intergroup contact and social identity for attribution of motives, evaluations of interracial exclusion, explanations and frequency estimates for interracial exclusion. These results illustrate the importance of online interactions to intergroup contact and social identity as well as the complexity of online relationships with respect to evaluations and judgments about interracial peer exclusion.

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## Introduction

The current study investigated how intergroup contact and other demographic factors affect the development of intergroup attitudes in an online peer culture. The study also examined how adolescents' and young adults' level of positive intergroup contact in online and face-to-face settings influenced their evaluation of racial and non-racial exclusion. Drawing from research on intergroup contact, social reasoning, social identity, and online interaction the study explored several hypotheses on the role of online interactions in increasing intergroup contact and whether different types of interracial exclusion are affected by online contact between groups. These findings have implications for the role of online peer culture in terms of the formation of intergroup contact and social identity, and their effect on adolescents' and young adult's evaluations of interracial exclusion.

The internet has provided an avenue through which individuals are able interact with others via a wide range of applications. Through its many faceted portals of communication, from interpersonal to mass broadcasting, the internet has altered the way different groups interact and relate to each other (Hoffman & Novak, 1998; Katz, Rice & Aspden, 2001). Children and adolescents in particular have been affected by the integration of the internet into modern society (Haugland, 1992; Nastasi & Clements, 1994; Papert, 1998). Their increasing access to and use of the internet has led to questions about how online interactions affect already established ideas of race, nationality, and ideology.

The internet provides a unique environment in which adolescents and young adults can explore intergroup consensus, stereotypes, and collective action (Haslam, 1997; Postmes, Haslam, & Swaab, 2005). Research has found that online dialogue can significantly increase young people's knowledge of different ethnic and racial groups (McKee 2002; Whittaker & Hill

1998). The ease of access to online dialogue allows different racial and ethnic groups to engage in intergroup communication, which has the potential to reduce racial prejudice (Pettigrew, 1998). As the internet becomes an integral part of our culture it is important to understand how adolescents and young adults can and do utilize online interactions to form ideas about race and prejudice. The contact hypothesis may provide a key to understanding how intergroup interactions that take place online can reduce racial prejudice. According to the contact hypothesis when four key conditions are met contact between members of different groups can enhance positive intergroup attitudes (Allport, 1954). These conditions are: (a) Equal status within the situation; both groups must have an equal status relationship within the situation, (b) Common goals; both groups must cooperate to resolve a shared problem or task, (c) Acquaintance potential; group members must have the opportunity to get to know each other as friends and not merely as actors playing out social roles or as representatives of a social group, and (d) Support of authority; some authority, law, or custom that both groups acknowledge must support the interactions between groups members.

Research has found that intergroup contact reduces prejudice even when only a few of Allport's conditions are met (Cameron, Rutland, Hossain, & Petley, 2011; Husnu & Crisp, 2010; Pettigrew & Tropp, 2006). In addition, vicarious or indirect contact with other races has also been shown to reduce prejudice. For example, adolescents who observe their friends interacting with out-group members can experience a reduction in prejudice toward the out-group. In one experiment children engaged in games with children from a different racial or ethnic group then discussed their experiences with members of their own group. Participants who received the indirect contact showed a reduction in prejudice, even though they never personally interacted with children from the out-group (Wright, Aron, McLaughlin-Volpe, & Ropp, 1997).

More recently, Husnu and Crisp (2010) found that even imagined contact had an effect on reducing prejudice. In their investigation, 60 British non-Muslim students were asked about the number of British Muslim people they knew. One group of participants was asked to imagine having a conversation with a Muslim stranger in which they discovered a number of interesting facts about this person. Another group of participants was asked to imagine the same conversation but instructed to add specific details such as time and place of the conversation. Participants then completed questionnaires that assessed how vividly they imagined the conversation and how favorably they perceived Muslims. The more vividly participants imagined the conversation, the more favorably they evaluated Muslims and the more likely they were to interact with British Muslims in the future. Taken together, the findings from these two studies (e.g., Husnu & Crisp, 2010; Wright et al., 1997) suggest that the internet can play a vital role in reducing prejudice by providing a medium through which various groups can have positive, albeit indirect interactions.

Although the internet has been studied extensively in regards to its social effects and ability to influence wide audiences, there is limited research on the impact of online interactions on intergroup relations. This is partly due to the fact that the internet is seen as a depersonalized space where the identity of individuals one interacts with becomes less visible or visible in a different way than in traditional face-to-face or offline interactions (Hiltz, Turoff, & Johnson, 1989; Jessup, Connolly, & Tansik, 1990; Kiesler, Siegel & McGuire, 1984). However, this sense of anonymity provides a setting in which all participants have relatively equal status thus meeting a key condition of the contact hypothesis (Allport, 1954; Postmes, Spears, & Lea, 1998).

Online interactions may have a particular impact on the intergroup contact of school-aged youth. Studies have shown that racial segregation has been resurging in primary and secondary

schools and college campuses across the country (Buttney, 1999). Orfield, Frankenburg and Lee (2003) reported that African American and Latino students have become more racially segregated from White students despite the growing diversity of the school-age population. They found that in the U.S. only 14 percent of White students attend schools where at least three races comprise more than 10 percent of the student population. In contrast, the majority of African American and Latino students attend schools that are predominantly ethnic minority in composition. As a result, in school settings young people are more likely to associate with members of their own group than have *face-to-face interactions* with peers of different racial groups (Lewis, 2003; Pollock, 2004; Tatum, 1997). As adolescents and young adults begin to use social media sites, surf the web, text message, and exchange emails more frequently it is possible that they have regular *online* interactions with peers of different racial and ethnic groups, even if those opportunities are not readily available in offline settings.

Research has shown that in monitored and unmonitored chat rooms discussion of race and ethnicity are common (Tynes, Giang, & Thompson, 2008). In instances where race and ethnicity are not explicitly stated or indicated via online avatars or screen names, adolescents and young adults often explicitly ask for information regarding race or ethnicity (Tynes, Reynolds, & Greenfield, 2004). Thus despite the depersonalized nature of the internet as a contact medium, personal information about race and group membership is regularly exchanged during interactions between adolescents online. This creates the potential for interracial exclusion in online settings. Valkenburg and Peter (2013) found in a longitudinal study that over the course of a year adolescents who talked about themselves online were more likely to form higher quality friendships than those who did not. Further research is needed to determine how such online interactions affect both the way adolescents' and young adults' form ideas and attitudes about

race and how they perceive and evaluate members of other groups. The sections below reviews key developmental theories relevant to how young people form ideas about members of other racial and ethnic groups and discuss how their reasoning about group membership and exclusion manifests in online interactions.

## Literature Review

### Social Cognitive Domain Theory

Social cognitive domain theory posits that young people learn to make judgments about others in their environment through social experiences with adults and peers (see Rogoff, 2003; Nucci, 1996; Smetana, 1995; Tisak, 1995; Turiel, 1983, 1998). Piaget (1932) laid the foundation for social domain theory, originally referred to as the *semi-structured interview methodology* which was designed to assess underlying reasoning and judgments. Turiel and colleagues expanded on social cognitive domain theory by documenting that individuals evaluate a wide range of social issues, including interracial exclusion, through the use of various types of social reasoning (Turiel, 1998; Turiel, Killen, & Helwig, 1987). Theories of social and moral development, such as Kohlberg's (1971) stages of moral development, helped establish the framework for social cognitive domain theory. According to this theory social judgments are not determined by individual developmental paths or cultural context alone. Instead adolescents' and young adults' construct and develop systems of judgment through interactions with their environment (Smetana, 2006; Turiel, 1983).

The theory makes a distinction between how young people develop an understanding of their own morality and how they develop an understanding of social conventions (Turiel, 1983). Actions within the moral domain, such as the unprovoked hitting of someone, have intrinsic effects (i.e., the harm that is caused) on the welfare of another person. Such intrinsic effects occur regardless of the nature of social rules that may or may not be in place regarding the action. Morality is structured by concepts of harm, welfare, and fairness. In contrast, actions within the social cognitive domain are judged without consideration for the well-being of persons. Judgments of right and wrong are instead centered on the smooth functioning of the

relevant social group. Social conventions and the child's understanding of social organization are used to determine the right course of action in any given social situation (Turiel, 1983). Thus, the moral and social conventional domains are distinct but parallel developmental frameworks, rather than a single system as described by Kohlberg (1969). However, Turiel (1983) also maintained that since all actions take place within the larger context of society a person's reasoning about the right course of action in any given situation would require them to access and coordinate their understandings of both personal morality and social convention.

Social cognitive domain theory is fundamentally different from previous theories of moral development in that it suggests that an individual's moral judgments are influenced by their interaction with a dynamically changing environment that includes changes in group dynamics (Abrams & Rutland, 2008) and group identity (Nesdale, 2004). Social domain theory conceptualizes development in terms of moral, societal, and psycho-social categories. These categories influence individuals' behavior, judgment, understanding, and evaluation of social events and are found across cultures through various social interactions (Killen, Mulvey & Hitti, 2013; Nucci, 2001; Smetana, 2006; Turiel, 2006). Depending on the social interaction, young people can form various intrinsic thoughts which lead to the development of prescriptive moral judgments about how individuals should behave towards each other (Smetana, 2006). These individual concepts are shaped through individual experiences, cultural systems, indirect and direct communication, and negotiations (Killen & Smetana, 1999; Smetana, 2006; Nucci, 1999, 2001). It has been hypothesized that different cultural systems can lead to different power dynamics, both within and between cultures, due to differences in hierarchy and social roles (Turiel, Hilderbrandt, & Wainryb, 1991; Turiel, 2002). Smetana (2006), posits that within social cognitive domain theory young people's understanding of these various events and behaviors



that occur through social interaction are coherently structured within the moral, social conventional, and psycho-social domains. Thus social cognitive domain theory provides a useful framework for the current study.

The proposed study aims to understand how adolescents' and young adults' positive exchanges with peers can alter their moral judgments about situations of social exclusion. I propose that individual's changes in moral judgment based on their social and environmental experiences will affect how they view racial exclusion. Ideally online interaction should provide the same or better experiences as real world interactions with peers, therefore leading to similar changes in young people's moral judgments as seen in face-to-face interactions.

### **Defining Social Exclusion in Adolescents and Young Adults**

Buhs, Ladd and Herald (2006) define peer exclusion as a form of peer maltreatment in which the targets of exclusion are restricted from engaging in peer relationships and activities and are unable to access the same social and material resources as non-excluded peers. The effect of this kind of peer exclusion on adolescents' and young adults' individual behavior and development has been an important topic of research for several decades (e.g., Bronfenbrenner, 1986; Baumeister & Leary, 1995; Juvonen & Wentzel, 1996; Killen, Sinno, & Margie, 2007b; Reis, Collins, & Berscheid, 2000). For young people social exclusion from the group can move beyond a simple feeling of rejection to a progressive multidimensional process that leads to detachment from individual and social relationships with the larger society (Buhs, Ladd, & Herald, 2006; Sen, 2000; Silver, 1994; Silver & Miller, 2006). Exclusion can place young people's basic need to be part of the social group and engage in relationships with other members at risk. In addition, exclusion can contribute to prejudice and intergroup tensions (Aboud, 1992; Maccaby, 1988). Consequently, exclusion can lead to stress, depression, anxiety, and antisocial

behavior, as well as lack of academic achievement, discrimination, and poverty (Asher & Coie, 1990; Dubow, Edwards, & Ippolito, 1997; Hutchinson, Adams, & Christian, 2007; Juvonen, 2006; Juvonen & Wentzel, 1996; Urdan & Maehr, 1995). It is also important to note that while these consequences may appear detrimental to a young person's development there may be several mitigating factors that play a role in peer exclusion. Furthermore, such consequences may occur regardless of whether exclusion takes place between individuals or between groups.

**Interpersonal vs. intergroup exclusion.** The contexts in which adolescents and young adults build and maintain friendships have been well researched. Understanding how these relationships form has enabled researchers to note the important role that friendship and peer rejection play in child development (Rubin, Bukowski, & Parker, 2006). Adolescents and young adults employ both interpersonal rejection and intergroup exclusion when interacting with peers. Interpersonal rejection focuses on individual differences in personality traits, such as shyness and aggression to explain bully-victim relationships, while intergroup exclusion focuses on in-group and out-group attitudes toward social exclusion based on group membership. These two forms of exclusion reflect different but complimentary aspects of child development. (Killen, Mulvey, & Hitti, 2013) Research on intergroup exclusion and interpersonal rejection has proposed that young people employ a range of reasons when deciding to exclude others in some contexts. It is suggested that types of interpersonal rejection may become intertwined with intergroup exclusion, such as social exclusion based on stereotypic expectations. Thus, interpersonal rejection based on shyness or fear, may in fact be a stereotypic expectation that a peer is shy because of their race or ethnicity, which turns an interpersonal encounter into an intergroup one (Killen, Mulvey, & Hitti, 2013). This implies that young people may be utilizing more than

stereotypic expectations when explaining intergroup exclusion, but may also be examining exclusion in terms of their own social identity.

Killen, Crystal, and Ruck (2007a) described three types of interracial exclusion common among adolescents and young adults: a) race-based exclusion; exclusion of an individual based on their racial background, b) non-race based exclusion; exclusion of an individual based on lack of shared interests, lack of familiarity, or lack of shared school affiliations, c) group functioning based exclusion; exclusion based on preventing disruption of group functioning, or group discomfort. It is important to note that not all forms of interracial exclusion are undesirable or harmful to the excluded. Although some social relationships have flexible boundaries, not all social groups are able to include everyone (Abrams, Hogg, & Marques, 2005). Some situations require different levels of intimacy or understanding and therefore are naturally exclusive of some individuals, making exclusion in these contexts less wrong. Examining how adolescents and young adults rate the wrongfulness of interracial exclusion in different contexts can lead to a better understanding of how they evaluate race-based exclusion and what role their social identity might play in their evaluations.

The current study draws on social cognitive domain theory to explore adolescents' and young adult's evaluation of interracial exclusion using moral and social-conventional reasoning. Moral reasoning includes concepts such as fairness, rights, equal treatment, and equal access (Turiel, 1998). Social-conventional reasoning encompasses several forms of reasoning such as group functioning, group identity, and stereotypes about others based on group membership (Brown, 1989; Turiel 1998; Stangor & Ruble, 1989). Killen and Stangor (2001) found that the majority of children used moral and social-conventional reasoning to justify exclusion from a peer group, while adolescents justified interracial exclusion using group functioning, a form of

social-conventional reasoning. Groups may exclude members who do not fit certain characteristics because inclusion of those individuals may affect the efficiency of the group. Older children are more likely than younger children to condone exclusion if it improves group functioning or if the inclusion of others would reduce the overall effectiveness of the group (Killen & Stangor, 2001). Leets and SunWolf (2005) found that of all the reasons adolescents use to exclude peers from social groups, the most common one was a perceived lack of physical or social attractiveness of a peer. Adolescents indicated that peer exclusion was legitimate when the excluded individual posed a threat to the group or had committed a past wrong. Furthermore, adolescents cited enforcing loyalty among group members and protecting the excluded from the group or maximizing group functioning as acceptable reasons for exclusion (Leets and SunWolf, 2005).

Killen, Henning, Kelly, Crystal, and Ruck (2007a) found that European-American adolescents with more cross-race friendships were less likely to use stereotypes and social conventional reasoning to explain racial discomfort in interracial exchanges than European-American adolescents with few cross-race friendships. Similarly, McGlothlin & Killen (2006) found that European-American children with little contact with minority children in school settings demonstrated an in-group bias when making attributions about children's intention to make friends. In contrast, European-American children with regular contact with minority children in school settings did not show in-group bias when discussing attributions about children's intentions to make friends. However, research on the use of stereotypes when evaluating interracial exclusion has shown that stereotypes may not directly affect justifications of interracial exclusion, instead social conventional and group functioning are more essential components (Killen et al., 2001; Killen et al., 2007a)

Research on young people's evaluations of interracial exclusion have found that minority children were more likely to view interracial exclusion as wrong than majority students, and are more likely to use moral reasoning rather than social conventional reasoning when evaluating peer exclusion (Killen et al., 2007a). Killen et al. (2007a) also found that ethnic minority children and adolescents were more likely to indicate that racial exclusion occurred more often than non-racial or group functioning based exclusion. In addition, the attribution of exclusion as being due to race increased with age for both majority and minority participants indicating that young people's explanations of exclusion change and adapt as they develop. While these studies clearly demonstrate the significant role ethnic status plays in how young people evaluate interracial exclusion, it is important to note the crucial role social context plays as well.

**Effects of social context on evaluations of interracial exclusion.** According to social cognitive domain theory social judgments such as those made when excluding a peer are not solely determined by individual developmental paths or cultural context. Instead young people tend to construct and develop systems of judgment through their interactions with their environment (Smetana, 2006; Turiel, 1983). Children often construct different forms of social knowledge through social experiences with parents, other authority figures (Colby & Kohlberg, 1987; Damon, 1977; Kohlberg, 1969; Piaget, 1932, 1965), and peers (Nucci, 1996; Smetana, 1995; Tisak, 1995; Turiel, 1983, 1998). Research has found that social contexts (e.g., classrooms, playgrounds, school lunch, etc.) in particular can play a critical part in social and mental development (Barth, Dunlap, Dane, Lochman, & Wells, 2004; Killen, Lee-Kim, McGlothlin, & Stangor, 2002).

Understanding the role of interactions with peers is particularly important to understanding moral development as it relates to peer exclusion in various social contexts.

Several studies have found that, whether or not children view race- and gender-based exclusion as morally wrong may be influenced by the context or setting where the exclusion takes place (Killen et al., 2007a; Killen & Stangor, 2001; Killen, Stangor, Price, Horn & Sechrist, 2004; Theimer, Killen, & Stangor, 2001). For example, European American students enrolled in heterogeneous school settings were more likely to use explicit stereotypes to explain why interracial interaction made their peers uncomfortable and were less likely to use moral reasoning (i.e., equality, fairness, empathy) to explain peer exclusion, than their European American counterparts in homogeneous schools (Killen, Kelly, Richardson, Crystal, & Ruck, 2010). Killen and Stangor (2001) found that children judged it wrong to exclude a peer from a group solely because of their gender or race in scenarios involving typically gender specific roles (e.g., a ballet club excluding a boy because he's a boy; a baseball club excluding a girl because she's a girl), and indicated that these types of exclusion would be unfair and discriminatory. Furthermore, examinations of majority youth found that they justify exclusion using group functioning justifications and the context in which exclusion occurs when estimating judgments of wrongfulness of racial exclusion (Killen & Stangor, 2001). Thus, the setting in which the exclusion takes place may be as important to perceived wrongfulness as the nature and type of the exclusion.

To date, several studies have examined how adolescents and young adults evaluate interracial exclusion in different social contexts of varying levels of intimacy (see Crystal, Killen & Ruck, 2008; Killen et al., 2007a, Ruck, Park, Killen & Crystal, 2011). Killen et al. (2002) found that children reported that it was less acceptable to exclude a peer from a school setting such as a table at lunch than it was to exclude them from a romantic or friendship scenario such as a dance or sleepover. The three scenarios were designed to assess how adolescents and young

adults evaluate situations of cross-race friendship (lunch), parental disapproval (sleepover), and interracial romance (dance) (Hallinan & Teixeira, 1987; Johnston & Jacobs, 2003; Killen et al., 2002). Each of the scenarios is designed so that the possible reason for exclusion is ambiguous. This allows researchers to assess young peoples judgments and evaluations of interracial exclusion as race-based, non-race based, and group functioning based.

Killen et al. (2007a) found that both minority and majority children found it more wrong to exclude a peer based on race than for non-race or group functioning based reasoning across contexts. Although few differences were found between majority and minority children when examining children's reasons for exclusion in social situations (e.g., school settings), in intimate contexts (e.g., sleepover) minority children were more likely to view exclusion of a minority peer as more wrong than majority children. Taken together, these studies illustrate how children's and adolescents' interactions with different environments and individuals can affect their evaluation of exclusion. They confirm that, in addition to age and gender, young people's evaluation of racial exclusion is influenced by social context. Other factors also come into play during adolescents' and young adult's evaluation of interracial exclusion such as attitudes about intergroup relations and interracial friendships.

Several studies by Killen and colleagues have found differences in how majority and minority youth evaluate race-based and non-race based exclusion. Through in-depth interviews, middle-income suburban ethnic minority youth articulated the wrongfulness of exclusion drawing on the use of moral judgments, such as empathy and fairness, to explain why excluding someone on the basis of race is wrong and did so in ways that differed from majority adolescents (Killen, Lee-Kim, McGlothlin & Stangor, 2002). Killen et al. (2007a) found that minority children evaluated interracial peer exclusion as wrong than majority children in instances of non-

race based exclusion, but all children found race-based exclusion as wrong than non-race based exclusion. This implies that regardless of the scenario in which exclusion occurs young people may evaluate interracial exclusion due to race as more wrong than other types of exclusion.

### **Intergroup Contact and Young People's Attitudes toward Racial Exclusion**

As previously discussed, Allport's (1954) contact hypothesis postulated that when certain key conditions were met members of different groups can enhance positive intergroup attitudes. Research on Allport's conditions has inspired research in various fields over the last half century (Pettigrew & Tropp, 2006). The contact hypothesis has been useful in studying prejudice in a wide range of situations, such as racial desegregation of schools (Pettigrew, 1971), exploration of regional differences in prejudice (Wagner, van Dick, Pettigrew, & Christ, 2003), and understanding prejudice towards lesbian, gay and bisexual groups (Conley, Devine, Rabow, & Evett, 2002; Liang & Alimo, 2005). The contact hypothesis has been used in fields such as criminology, psychology, and sociology as a way to improve intergroup relations during times of conflict (Brown & Hewstone, 2005; Wright, 2009). As the contact hypothesis has evolved, developmental, educational, and social psychological research on intergroup contact theory has suggested important short- and long-term benefits of positive associations between individuals from different racial and ethnic backgrounds (Aboud, Mendelson, & Purdy, 2003; Pettigrew & Tropp, 2005; Stephan, 1999; Whitley & Kite, 2010).

Pettigrew and Tropp (2006) found that samples with optimal contact conditions yielded significantly greater reductions in prejudice than other samples. However, they also found that in instances where optimal conditions were not present an inverse relationship between intergroup contact and prejudice still emerged. It was hypothesized that the tendency for intergroup contact to reduce prejudice outside of Allport's conditions was related to groups' tendencies to form



familiarity with each other, regardless of their backgrounds (Pettigrew & Troop, 2006). Research has also found that groups tend to become closer with continued exposure (Bornstein, 1989; Gaertner & Dovidio, 2000; Glasford & Calcagno, 2012; Harmon-Jones & Allen, 2001; Homans, 1950; Moreland & Zajonc, 1977; Zajonc, 1968; Zajonc & Rajecki, 1969) suggesting that intergroup contact can breed familiarity on a variety of levels even with minimal sustained contact.

With greater levels of intergroup contact we should expect to see increased levels of cooperation and reduced prejudice among majority groups. Pettigrew and Tropp (2006) found that intergroup contact had a stronger effect on prejudice reduction in situations where participants were not given a choice in the amount of contact they had (e.g., sports teams, school etc.), than in situations where they had a choice. In addition, intergroup contact effects were found to vary by age. Older participants were more likely to have more positive intergroup contact than younger participants (Pettigrew & Tropp, 2006). Crystal, Killen, and Ruck, (2008) also found that minority children and adolescents reported having more positive intergroup contact than majority participants, with older minority and majority participants having more positive intergroup contact than younger participants. These findings suggest that the likelihood that intergroup contact will reduce prejudice is greater for older participants than younger participants.

Several studies have found that children and adolescents are more open-minded toward diverse groups than adults, and that young people are more prone to experience reduction in prejudice as a result of intergroup contact than adults (Aboud et al., 2003; Ellison & Powers, 1994; Killen et al., 2007). Tropp and Prevenost (2008) found that youth from various backgrounds experience the positive effects of intergroup contact across many settings and

contexts. Studies on the positive effects of intergroup contact in the form of cross-race friendships found that intergroup contact improved attitudes in both majority and minority youth in Germany, Dutch and Muslim children in the Netherlands, and British and South Asian children in the United Kingdom (Binder et al. 2009; Feddes, Noack, & Rutland, 2009; Turner, Hewstone, & Voci, 2007; Verkuyten 2008). Recent research on the effects on positive intergroup contact in U.S. populations has helped confirm these previous findings (Aboud et al., 2003; Crystal et al., 2008; Killen et al., 2010; Ruck et al., 2011).

Crystal, Killen, and Ruck (2008) found that children and adolescents with higher levels of intergroup contact were more likely to perceive race-based exclusion as wrong than low contact peers. In addition, a recent study by Ruck et al. (2011) found that urban minority youth and adolescents with high levels of intergroup contact were also significantly more likely than those with low levels of intergroup contact to evaluate instances of race-based interracial exclusion as wrong. These findings support Killen et al., (2002) hypothesis that higher levels of intergroup contact may lead to feelings of moral transgression in the face of interracial exclusion, as well as an increased likelihood of viewing racial exclusion as wrong. To date only two published studies (Crystal et al., 2008; Ruck et al., 2011) have investigated the interaction between intergroup contact and children's and adolescents' evaluation of racial exclusion. In order to further address how intergroup contact may contribute to adolescents' and young adult's evaluations of racial exclusion online interracial interactions need to be considered.

### **Young People's Online Interaction**

Bailey (1996) defined online interaction as the "co-construction of shared meanings, norms, and activities" (p. 143), that occurs in internet settings. Tapscott (1998) labeled people who were raised with interactive media as the "Net-Generation", for this generation the internet has become a part of their everyday activities, including games, shopping, learning, and

communicating, making computers an essential component in the adolescent cultural toolkit. A recent report from the Pew Research Center indicated that 81% of teens 12-17 use some kind of social media (Pew Research Center, 2013). The results of a recent survey on internet use found that the average American child spends approximately seven and a half hours online per day (Lamontagne, Singh, & Palosky, 2010). Internet sites such as Facebook, MySpace, and Twitter along with widespread access to smartphones and online texting services provide children access to greater and more diverse communities than ever before (Garton, Haythornthwaite, & Wellman, 1999). Understanding how these connections influence children's and adolescents' views and beliefs about issues such as race and ethnicity are essential to our understanding of their intergroup interactions and judgments about interracial exclusion.

The internet has the ability to bring together people from diverse social backgrounds. It allows people to be in frequent contact with friends and family as well as form new connections with people outside of their usual social circles and communities. It enables people to connect to others who may share their interests and views but not necessarily belong to the same social or ethnic/racial group. In addition, research has found that for many individuals online communication can improve face-to-face communication in current relationships as well as facilitate the formation of new relationships (LaRose, Eastin, & Greeg, 2001; Schmitz, 1997). According to Boyd and Walther (2002) online social support offers benefits that face-to-face social networks cannot: anonymity, constant access to quality expertise, and enhanced modes of expression, with less chance of embarrassment and without incurring any obligation toward the support provider.

Tynes et al. (2004) have found that underrepresented individuals (i.e., those whose personal group identity is not the norm for their community) use the internet to engage with

online communities composed of members of their own group and discuss issues pertinent to group membership. Furthermore, these findings indicate that individuals may use online communities to subvert traditional societal norms. Tynes et al. (2004) reported that, in teen chat rooms, majority group teens were just as likely to be victims of racial attacks as teens of color. Adolescents can experience both direct and indirect racial attacks online, despite that fact that divulging one's racial group membership is optional in online interactions (Tynes, 2005; Tynes, Giang, Williams, & Thompson, 2008). Young people have been found to discuss personal identifications of race, racial composition of discussion groups, interracial dating, in-group/out-group relations, racial equality, and related topics in online interactions (Tynes, 2003; Tynes et al. 2004). Burnette (1997) has found young people who discuss racial topics freely in open forums experience a reduction in prejudice, which is essential to developing an accepting and positive racial environment online. This suggests that the internet is an environment where open discussions about race can and do occur. However, these findings contrast with studies that have found adolescents target members of other racial groups with verbal attacks when interacting online (Tynes, 2005; Tynes et al., 2004, 2008). This raises the question of why some adolescents and young adults may find the internet to be a welcoming and accepting environment, while other groups may find online interactions to be negative and hostile.

### **The Role of the Internet in Group Formation**

The internet provides participants with a level of anonymity that allows them to discuss sensitive topics or taboo subject matter more freely in an online setting without a researcher or interviewer being present (e.g. Barkhi, Jacob, Pirkul, 1999; Graetz, Boyle, Kimble, Thompson & Garloch, 1998). In contrast, in a face-to-face interview participants may be less willing to discuss or broach sensitive subjects with a researcher or interviewers present (Johnson, 1997). McKenna

and Seidman (2005) found that participants with high levels of anxiety reported feeling less anxious online than in face-to-face interactions. They also found that online data gathering can be more effective when collecting data on potentially sensitive or embarrassing topics such as racism or opinions about other races, and can elicit answers with less interviewer bias than face-to-face interviews on these subjects.

Unlike offline interactions where race is visible, and sometimes a barrier to interaction, online interaction is based more on shared interests between individuals and groups (McKenna, Green & Gleason, 2002). In addition, research has shown that online group's longevity is based more on group structure, smaller groups stay together longer, than factors like past growth rates or connectedness (Kairam, Wang & Leskovec, 2012). Research by Amichair-Hamburger (2005) has found that online groups will maintain cohesiveness regardless of the quality of their shared views. These findings suggest that adolescents and young adults may form online social networks with peers of varying races and ethnicities, whereas in offline situations young people may be unwilling or unable to engage in interethnic practices because of social stigma or a desire to associate with their own ethnic group (Lewis, 2003; Pollock, 2004; Tatum, 1997).

It has been suggested that the internet is a safe haven from discrimination and provides an environment for an increased understanding between diverse groups (Kang, 2000). According to Kang (2000), cyberspace will become a place that will remove hierarchical structures due to the use of semi-anonymous informal communication networks, and differences will be based on someone's representation in the virtual community not their race or ethnicity. Kang (2000) further suggests that online interactions will facilitate the mingling of people from various socioeconomic groups, intergroup cooperation, and the promotion of "honest and uninhibited race talk" (pg. 1174). In contrast, other researchers have noted that the anonymous and

spontaneous nature of the internet may bring out the “worst in people” (Siegel, Dubrovsky, Kiesler, & McGuire, 1986), leading to bullying, racism, and other hostile interactions (Kowalski, Limber, & Agatston, 2008; Tynes, 2008; Tyler, 2002). Thus, the relative anonymity of the internet allows young people to create a world where they can avoid social stigma and racial prejudice (Eller & Abrams, 2004), but also puts those who share personal information such as race, gender, and ethnicity (Liau, Khoo, & Hwaang, 2005; Whitlock, Powers, & Echenrode, 2006) at risk of mistreatment (Tynes, 2008; Tyler, 2002).

As the number of young people engaging online has increased so have the instances of online victimization and racism, making (Moessner, 2007; Tynes et al., 2008; Ybarra, Leaf, Diener-West, 2004) online engagement critical to better understanding adolescents’ and young adult’s evaluation of racial exclusion. Numerous studies on how the internet and race intersect and the effects this has on young people have been conducted (Tynes, 2007, 2008; Tynes, Giang, Thompson, 2008; Tynes, Giang, Williams, & Thomson, 2008; Walther, 2009). Social identity has also been well researched in terms of how it can guide our understanding of the formation of online groups (e.g. Bargh & McKenna, 2004; McKenna & Bargh, 2000; Sassenberg, 2002; Valkenburg, Schouten, & Peter, 2005). Furthermore, research on how young people engage in online activities is quite active. For example, online surveys conducted by the Pew Research Center found that 94% of adolescents aged 14-17 post photos of themselves on social media, 92% post their real names, and 84% post about their interests in books, movies, etc. Adolescents and young adults who have large friend networks (600+ friends) tend to have more ethnic variety within those networks and interact with more people they have never met offline (Madden et al., 2013). In contrast, there have been a limited number of studies examining the effects of intergroup contact online (Amichai-Hamburger & McKenna, 2006; Kang, 2000; Postmes,

Spears, & Lea, 2002). As young people increasingly use social media sites and forums to interact with various peers from different socio-economic, ethnic, and cultural origins it is even more important that we understand how they engage peers online. In order to examine how intergroup contact affects adolescents and young adults online, we need to investigate how groups form in offline and online settings.

### **Social Identity Theory and the Formation of Groups**

Social Identity Theory (SIT) provides a useful lens for examining the formation of online social groups. Unlike other social psychological theories SIT begins with the social group. Tajfel (1979) proposed that cognition develops through group processes and through these processes individuals form in-groups and the mere categorization of said groups can cause discrimination against an out-group. Group behaviors such as in-group solidarity and discrimination of the out-group are part of the social identity process, with the ultimate goal being to achieve positive self-esteem and self-enhancement (Hogg & Abrams, 1988). Early research on SIT showed that groups that had no previous connection could be simply categorized and through these minimal conditions in-groups would form and show favoritism toward other in-group members and discrimination toward the out-group (Tajfel, Flament, Billig, & Bundy, 1971).

Tajfel and Turner (1979) theorized that social groups are able to form with very few membership requirements and structured the definition of a group based on three criteria: 1) *cognitive component*; knowledge of group membership, 2) *evaluative component*; positive or negative evaluation of group membership, and 3) *emotional component*; positive or negative feelings about group membership. Based on these criteria Tajfel & Turner (1979) suggested four underlying principles of SIT: *social categorization* (i.e. process of deciding what group to belong to); *social identity* (i.e. process of identifying with an in-group more overtly); *social comparison*

(i.e. social concept of others becomes closely meshed in with perceptions of group membership); and *self-esteem* (estimate of self is enhanced or detracted from by perceptions of in-group and out-group behavior). Social groups use these principles to communicate ideas and process information from their surroundings.

Tajfel and Turner (1979) suggest that we categorize people into groups to simplify our understanding of the world and to structure social interaction. Social groups give individuals the tools required to undertake many forms of social action and define their place in society (Tajfel & Turner, 1979). The importance of the social group is reflected in how individuals understand and treat potential obstacles to group cohesion. When differences arise within the group individuals will de-emphasize their importance in order to strengthen the group, in contrast, differences found between the in-group and out-group are accentuated to strengthen cohesion within the in-group (see Hogg & Abrams, 1988; Tajfel, 1979; Tajfel & Wilkes, 1963). Social categorizations function as social stereotypes for the group and help interpret, explain, and justify behavior (Tajfel, 1981). While all individuals belong to a number of different groups at any given time, (e.g., sport teams, work groups, subway riders), group membership needs to be salient to the individual in order to initiate behavior in terms of social identity (Tajfel, 1979). Through the activation of social categorization individuals engage in social comparison. Comparisons must be made with other groups in order to define an individual's place in society. SIT assumes that we not only categorize our own groups but also judge the inferiority or superiority of other groups and compare them to our own (Tajfel & Turner, 1979). Social comparison allows us to gain information and evaluate other groups for similarity and proximity to our own groups (Tajfel & Turner, 1979). Social identity is driven by the individual's ability to make positive comparisons between their own group and those of a relevant out-group. Through



this differentiation the in-group acquires a relatively positive social identity in comparison to the out-group. In turn increased differentiation between the in-group and out-group leads to a strengthening of individual social identities for in-group members (Tajfel, 1978).

Social comparisons are in constant flux, requiring the individual to negotiate their social identity as categories change, defining features are modified, and their relationships with other categories change. This constant negotiation is always present and works to motivate individuals to reach positive social identity (Hogg & Abrams, 1988). Tajfel and Turner (1979) postulated that as individuals increase their positive social identity they may change groups depending on their evaluations of inferiority or superiority of their current group. Through “social mobility” an individual may leave their in-group as their individual social identity becomes stronger and join higher status groups or lower status groups depending on factors such as perceived characteristics, group boundaries, strength of objects, and sanctions of the group. If social mobility is not possible individuals can discriminate against lower status groups in order to emphasize the superiority of their in-group and increase their personal status (Tajfel, 1972). Hogg and Abrams (1990) proposed that self-esteem may not be the only motivation driving intergroup comparisons and that there may be a number of different motives and forms of group behavior behind evolving social identity.

### **Application of Social Identity Theory to the Formation of Online Groups**

The internet provides an ideal environment to investigate the evolution of social identity among adolescents and young adults. Social identity theory has been used to show that, like face-to-face interactions, online interactions can be used as a means of increasing an individual’s status and power (Postmes & Spears, 2002; Zomeran, Postmes, & Spears, 2008). Spears and Lea (1994) suggested the social identity mode of de-individuation (SIDE) to account for both the

liberating and repressive nature of interactions online and predict when and why they occur. During anonymous online interaction the SIDE model states that a user's personal or social identity can be more or less salient. As a social identity becomes salient the individual begins to identify with the group, and strongly conforms to the group norm. This normative and stereotyping effect is thought to be even stronger in online interactions because individual characteristics of other individuals cannot be identified. Spears, Lea, and Lee (1990) studied the effect of individuation among different groups discussing topics such as government subsidies or nuclear power with peers via online chats. Participants that were separated (de-individuation) by rooms were found to produce less polarization in the direction of pre-established group norms than participants in individual groups (individuation) who chatted online in a shared room. These findings support Spears and Lea's SIDE model hypothesis that the more individuals are immersed in groups under the anonymous conditions of de-individuation the more likely they are to obey group norms.

Research has shown that when confronted with opposing viewpoints or challenged individuals in anonymous online settings are more likely to react with hostility, aggressiveness, and non-conforming behavior than face-to-face groups (Culnan & Markus, 1987; Dubrovsky, Kiesler, & Sethna, 1991; Kiesler, Siegel, & McGuire, 1984; Siegel, Dubrovsky, Kiesler, & McGuire, 1986). Online anonymity has also been shown to reduce group consensus, task focus, and promote racism and harassment of minority groups (Siegel et al., 1986). However, de-individuation does not by itself produce negative behavior; rather it decreases the influence of internal standards or guides to behavior, and increases the power of external situational cues (Johnson & Downing, 1979).

The anonymity of internet communication allows individuals to express their true feelings and thoughts (Spears & Lea, 1994), as well as try out various selves and identities (Turkle, 1995; Valkenburg, Schouten, & Peter, 2005). Self-exploration (i.e. to explore how others react), social compensation (i.e., to overcome shyness), and social facilitation (i.e. to facilitate relationship formation) have been found to be important motives in internet-based identity research (Valkenburg, Schouten, & Peter, 2005). Research has shown that individuals who claim multiple roles or aspects of self enjoy more benefits than those who have only a few identities. For example, individuals with large numbers of self-defining identities are better prepared for life changes and stress (Sarbin & Allen, 1968), have better overall health (Linville, 1985; Verbrugge, 1983, 1986), and greater life satisfaction (Spreitzer, Snyder, & Larson, 1979).

In traditional (non-internet or off-line) settings it can be difficult for individuals to effect changes in their self-concept when the surrounding social environment remains static. Gollwitzer (1986) found that when individuals attempt to change their self-concept, peers may be unwilling to accept, acknowledge, or provide validation for these new aspects. Without this validation individuals are unable to adopt these new roles as part of their persona and therefore the roles available to them are limited by peers. This along with constraints associated with physical appearance (e.g., weight, age, race, ethnicity) provide further hurdles to individuals who are attempting to successfully adopt alternative roles or personalities (Bargh, 1995; Brewer, 1988). The identity of an individual as well as their ability to express that identity is constrained by their current role and relationships in social settings (Stryker & Statham, 1985). The internet, however, provides an alternative setting for individuals to test out new personalities and identities among peers that have no previous knowledge of the individual (Turkle, 1995). Relationships formed online can be very similar in terms of quality and depth as well as in the

potential for the formation of close personal friendships as those relationships formed in person (McKenna, Green & Gleason, 2002; Parks & Floyd, 1995) However, these online friendships are more likely to be formed among young people who are more likely to engage in identity exploration (Valkenburg et al., 2005). Past research has found that children usually make friends rapidly while older adolescents prefer to focus on improving existing relationships (Aboud & Mendelson, 1996; Berndt & Hoyly, 1985; Schaffer, 1996). It is important to understand how adolescents and young adults create social identities online as well as how and when they engage with peers of different racial/ethnic backgrounds, and how this might affect their perceptions about race and evaluations of interracial exclusion.

### **Study Purpose and Hypothesis**

The purpose of the current study is to investigate adolescents' and young adult's evaluation of interracial exclusion in offline and online settings. Specifically, the study aims to investigate how young people's intergroup attitudes, online activity, social identity, and age, affect their evaluations of interracial exclusion, attributions of motives for exclusion, and estimations of the frequency of occurrence of exclusion, employing offline and online scenarios. Building on previous research the study aims to answer the following research questions:

#### **Research Questions**

1. Do adolescents' and young adults' show similar levels of intergroup contact offline and online?
2. Does intergroup contact play a factor in adolescents' and young adults' attributions of racial motives?
3. Does the strength of social identity affect adolescents' and young adults' attributions of racial motives?
4. Do adolescents' and young adults' attributions of racial exclusion differ for online and offline scenarios?
5. Do adolescents' and young adults' rate the wrongfulness of interracial exclusion differently by scenario?
6. Do adolescents' and young adults' view interracial exclusion differently in the offline scenario compared to the online scenario in terms of intergroup contact and social identity?
7. Do adolescents' and young adults' justifications of interracial exclusion vary by type of scenario in terms of intergroup contact and social identity?

8. Do adolescents' and young adults' estimations of interracial exclusion vary by type of scenario?

### **Hypotheses**

*Hypothesis 1.* Based on research in offline settings indicating that individuals with high levels of intergroup contact will seek out peers with high levels of intergroup contact (Gaetner & Dovidio, 2000; Glasford & Calcagno, 2012; Valkenburg & Peter, 2013) it was expected that individuals with high levels of offline intergroup contact will have high levels of online intergroup contact.

*Hypothesis 2.* Based on research in offline settings reporting that young people's attribution of interracial exclusion is significantly related to positive levels of intergroup contact (McGlothlin & Killen, 2006) we expect that similar findings will be observed in online settings.

*Hypothesis 3.* Given that research conducted in offline settings has found that social identity becomes more salient as individuals conform to the group norm (Tahfel, 1972; Postmes & Spears, 2002; Spears & Lea, 1994), we expect to observe similar findings in online settings.

*Hypothesis 4.* Based on research in offline settings suggesting young people's attribution of race-based motives when evaluating interracial exclusion increases with age (Crystal, et al., 2008) we expect to observe similar findings in online settings.

*Hypothesis 5.* Based on research in offline settings indicating that young people are more likely to rate race-based exclusion as wrong than non-race based or group functioning based exclusion (Killen et al., 2002; Killen et al., 2007a; Killen et al., 2010) we expect that similar findings will be observed in online settings.

*Hypothesis 6a.* Research in offline settings suggests that young people with high levels of intergroup contact were more likely to rate race-based exclusion as wrong than their peers with

low levels of intergroup contact (Killen et al., 2007a; Killen et al., 2010) based on this finding we expect that, similar results will be observed in online settings.

*Hypothesis 6b.* Given that research conducted in offline settings suggests that individuals with more salient social identities and higher levels of intergroup contact will evaluate interracial exclusion as more wrong than individuals with less salient social identities and high levels of intergroup contact (Killen et al., 2007a; Killen et al., 2010; Spears & Lea, 1994; Tajefel & Turner, 1979) we expect that similar results will be observed in online settings.

*Hypothesis 7.* Based on previous research in offline settings showing that the majority of young people utilized moral reasoning when explaining race-based exclusion (Killen, Mulvey & Hitti, 2013; Smetana, 2006) we expect that similar results will be observed in online settings.

*Hypothesis 8.* Based on research in offline settings reporting that individuals were more likely to estimate that the frequency of occurrence of non-race based exclusion would be higher than any other type of interracial exclusion (Killen et al., 2007a) we expect to observe similar findings in online settings.

## Method

### Participants

The sample included 151 young adults ranging from 13-21 years old recruited through online forums. There were 46 13-16 year olds ( $M = 14.88$ ,  $SD = 1.11$ ), 52 17-18 year olds ( $M = 17.59$ ,  $SD = .50$ ), and 53 19-21 year olds ( $M = 20.16$ ,  $SD = .86$ ). The sample was predominately male (135 males and 16 females) and White (78% White Non-Hispanic, 1% Black, 12% Asian, 4% Hispanic and 4% Biracial). Participants were recruited from five popular website/forums among teens and young adults: Facebook, MySpace, World of Warcraft, Starcraft 2, and Reddit. Only participants between the ages of 13 and 17 who received parental consent and provided child assent were allowed to participate in the survey, participants between the ages of 18 and 21 only needed to give adult consent.

### Procedure

Data for the current study were collected from individuals who participate in various online forums (e.g., gaming forums, teen forums), social media networks (e.g., Facebook, MySpace, Google+, Reddit), bulletin boards, newsgroups (e.g., Google groups, usenet), and blogs (e.g., wordpress, mycyc). The target population included young people ranging in age from 13-21 who use the internet. Participants were recruited through the online forums and social media sites listed above. A link was made available in an online advertisement that directed participants to the study website hosted by the Graduate Center, CUNY. Once there participants followed a link to the first part of the survey where they were asked to enter their age. Participants who self-reported that they were 12 years of age or younger were routed to a page on the study website that explained they were not eligible to participate in the survey and thanked for their time. To prevent participants from re-entering the survey site and responding



with a different age, the server recorded their initial answer and their IP address using ‘cookies’ (used to temporarily record a user’s browsing history), these IP addresses were retained by the recruitment server to prevent participants from resetting their ‘cookies’ to bypass the system, all ‘cookies’ pertaining to the study were deleted from the server at the end of the recruitment phase. This effectively locked participants out of the study who self-reported that they were below the age of consent (e.g., 12 and under). For participants between 13 and 17 years of age FTC guidelines were employed to protect personal information when conducting research for minors as recommended by the COPPA FAQ question 8 ([www.ftc.gov/privacy/coppafaqs.shtml](http://www.ftc.gov/privacy/coppafaqs.shtml)).

### **Obtaining Consent: 13 to 17 years of age**

Participants who indicated that they were between the ages of 13 and 17 were redirected to WuFoo, a secure third party recruitment site and asked to give their e-mail address and their parents e-mail address. Once they entered their information they were informed that they would be contacted about taking the survey once parental consent had been received. In line with Section 16 Code of Federal Regulations (CFR) § 312.4, participants whose parent(s) refused to permit them to participate or failed to respond within 30 days had their e-mail addresses deleted and received no further contact from the researcher. Parents/guardians who did not have access to email were able to print a portable document format (pdf) version of the consent form, sign it, and mail or fax the signed copy back to the researcher. Parents/guardians with access to email received an e-mail which contained an explanation of the project and a consent form with a link that allowed parents to visit the survey site to give consent. Once on the site the consent form was repeated and parents were asked to give consent to allow their child to participate in the survey by following a link to WuFoo and providing their name, e-mail address, and phone number as a facsimile for a written consent. This allowed parents to give consent without

burdening them by requiring mailed or faxed written consent forms (see Sec 16 CFR § 312.5 (2)). Parents were informed that the only personal information being collected were e-mail addresses and no other personal information would be collected from their child (Sec 16 CFR § 312.6 (1)).

Once parental consent was obtained a link to the online survey was emailed to the address participants provided when they first entered the recruitment site. A digital copy of the child assent form was also included in the email for participants' records. After participants entered the survey site (e.g. SurveyMonkey) they were again asked to enter their age. This allowed the survey to redirect participants to the appropriate consent form for their age group. Participants were then able to indicate if they were willing to participate in the survey or not. This also eliminated any link between the participant's survey answers and the e-mail address they gave previously. To further protect participants' identity no names or personal information beyond email addresses were collected during any phase of the survey process (see Sec 16 CFR § 312.4(4)(5)).

#### **Obtaining Consent: 18 years of age and Older**

Participants who self-reported as 18 and older on the recruitment site were able to follow a link directly to the survey site. Once there participants were asked to fill out an adult consent form and indicate if they were willing to participate in the survey. A digital copy of the consent form was made available on the survey site for participants to download at any time. A copy of their adult consent form was retained for the researchers' records. As with participants who were 17 and younger no names or personal information beyond email addresses were collected,

**Incentives**

Once participants completed the survey they were given the opportunity to participate in a drawing for one of four \$100 Amazon gift cards. Participants who wanted to enter the raffle simply submitted their email address to a separate raffle survey created specifically for the drawing. The raffle survey did not collect any information beyond email address (Sec 16 CFR § 312.7) and the four winners of the drawing received an e-mail containing a digital gift card directly from Amazon.com. This served to further limit contact between participants and the researcher. No physical addresses were needed to send the gift cards, which were distributed through Amazon.com.

During data collection all consent forms, assent forms, and e-mail addresses were maintained under an encrypted file only accessible by the researcher and his advisor. To maintain security and confidentiality, at the end of the raffle all email addresses collected from adolescents and young adults throughout the survey were deleted (see Sec 16 CFR § 312.8.) Consent, assent, and survey records will be maintained in a secure encrypted file for a minimum of 3 years as per IRB guidelines.

**Demographic Information**

General demographic information was collected on age, race, and gender from all participants (see Appendix A).

**Social Reasoning about Exclusion**

The Social Reasoning about Exclusion measure used in this study was modified from Crystal et al.'s (2008) original depicting situations in which racial exclusion might occur (cross-race friendship, cross-race dating in high school, and cross-race friend at home). The modified version of the Social Reasoning about Exclusion measure (see Appendix B) consists of two

scenarios both based on cross-race friendship. The current study focused on cross-race friendships in offline and online settings. The modified scenarios depict excluding a cross-race peer from playing soccer and excluding a cross-race peer from playing online games.

The offline scenario described two white children who play soccer, who meet a new child who is black. One child decides that he does not want to invite the other child to hang out because he doesn't think they'll have much in common. In the online scenario, two white children who play online games meet a new child who is black through online forums. One child decides that he does not want to invite the other child to chat online because he doesn't think they'll have much in common.

After the presentation of each scenario participants were asked to respond to seven assessments:

- 1) Attribution of Motives (Why do you think that Michael believes that they won't have much in common?). Responses to the reason for exclusion were coded into three categories: race (e.g., Michael doesn't want to hang out with Doug because he's black.), non-race (e.g., Michael doesn't want to hang out with Doug because he doesn't think they'll have much in common), or both race and non-race based (e.g., Michael doesn't want to hang out with Doug because he's black and they won't have much in common).
- 2) Wrongfulness of Race-Based Exclusion (What if Michael thinks they won't have much in common because Doug is Black? How good or bad is that?). Responses to the two wrongfulness rating assessments ranged from 1 ("very, very bad") to 8 ("very, very good").
- 3) Justification (Why?).
- 4) Wrongfulness of Non-Race Based Exclusion (What if Michael thinks they won't have much in common because Doug doesn't like the same games? How good or bad is that?) Responses to

the two wrongfulness rating assessments ranged from 1 (“very, very bad) to 8 (“very, very good”).

5) Justification (Why?).

6) Wrongfulness of Group Functioning Based Exclusion (What if Michael doesn’t invite Doug to chat because he thinks that Doug won’t fit in with Will and him? How good or bad is that?)

Responses to the two wrongfulness rating assessments ranged from 1 (“very, very bad) to 8 (“very, very good”).

7) Justification (Why?),

Estimations of the Frequency Race-Based Exclusion, Non-Race Based Exclusion, and Group Functioning Based Exclusion (How often do you think someone your age might not chat with someone online because they are a different race? How often do you think people your age might not invite someone to chat because they do not share the same interests? How often do you think people your age might not invite someone to chat because they might not fit in with their group?). Responses to the three frequency of estimation rating assessments ranged from 1 (“never”) to 5 (“always”).

### **Social Identity Measure**

To measure social identity (see Appendix C), participants were asked for their level of agreement with four different statements used in past research (see Verkuyten, 2005). The measures include: “I am proud of my ethnic background”, “I strongly identify with my ethnic group”, “I really feel connected to my ethnic group”, and “My ethnic identity is an important part of myself”, to which respondents could respond on a five point scale ranging from 1 for “Strongly disagree” to 5 for “Strongly agree”. The scores were ranked on a 5-point Likert scale

summed and divided by the number of items to create a single scale ranging from 1 for “No ethnic identification” to 5 for “Strong ethnic identification”.

### **Internet Use Measure**

The Internet Use Measure (see Appendix D) consists of 4 short questionnaires designed to quantify participants’ average internet use (Teo, Lim, & Lai, 1999). For all measures participants were asked to only think about their internet usage from yesterday, or the day before they participated in the survey. The measure first asked participants if they used a computer yesterday, if the participants said no, they were skipped to the intergroup contact measures. Three additional questions were used to measure participants’ internet use, where participants used the internet, how much time did they spend in online activities, and the type of online activities they engaged in. For where participants used the internet they were asked whether they accessed the internet at home, at school, on a smart phone or mobile device, or somewhere else.

Participants’ time spent in online activities and engagement in online activities online were measured as well. For participants time spent online a list of activities were presented to the participant and they were asked to rank on a 5-point Likert scale the amount of time they spent on each activity 1 for “None” to 5 for “More than 3 hours”. For participants’ engagement in online activities participants were presented a list of potential online activities and asked to indicate “yes” or “no” which activities they participated in (see Appendix D for a list of items used for time spent online and engagement in online activities).

### **Developmental Intergroup Contact Measure**

Participants completed an adapted two-part measure of intergroup contact (see Appendix E). Part 1, the Developmental Intergroup Contact Survey (Crystal et al., 2008) an 8-item measure originally adapted from Kurlaender and Yun’s (2001) Diversity Attitudes Questionnaire, asked

participants to report on their intergroup contact in offline settings (e.g., How many of your friends are from a different racial or ethnic group than you?). Part 2 adapted the Developmental Intergroup Contact Survey by changing the 8-items to refer to intergroup contact in online settings (e.g., How many of your online friends are from a different racial or ethnic group than you?).

### **Response Rate**

Over 2,500 individuals visited the study website and of those 1,543 followed the study link to begin the process of obtaining consent. Overall, 526 participants completed the initial age verification survey to begin the consent/assent process. Of the 526 participants who completed the age verification survey 443 were under the age of 18 and applied for parental consent. Ninety individuals eventually obtained parental consent and began the survey, 68 participants (75%) under the age of 18 completed the survey. One hundred and thirteen participants did not require parental consent and began the survey after giving their consent, 83 participants (74%) 18 or older completed the survey. The relatively low occurrence of incomplete surveys may have been a result of the incentive program. Overall, 151 (10%) of the 1,543 individuals who began the consent process went on to complete the survey. For a standard assessment these returns would be dismal, however, since the amount of effort required by the researcher was minimal (e.g. posting to message boards and forums, answering initial questions in forum threads, and updating posts as needed) the results are quite encouraging. In the end data collection only lasted 3 months and nearly 50% of the completed responses were obtained in the first month.

### **Measurement Scoring and Data Analysis Plan**

As explained above, the measures for wrongfulness of interracial exclusion, attribution of motives, estimations of the frequency of exclusion, and intergroup contact referenced either the offline or online scenario, depending on the scenario for which the participant was responding. The following sub-sections describe how each measure was scored and provides an overview of the data analysis.

**Dependent variable construction.** For wrongfulness of interracial exclusion, attribution of motives, estimations of the frequency of exclusion, and intergroup contact the mean difference was found for each measure. Consistent with previous studies on interracial exclusion (e.g., Crystal et al., 2008; Killen et al., 2007a; Ruck et al., 2011), where appropriate participants were then split into high and low groups depending on where they fell on the mean distribution. This was done for each scenario (offline or online) and each type of exclusion (race-based, non-race based, and group functioning based exclusion).

**Coding and reliability for open ended questions.** Open ended questions for attributions of motives and explanations of interracial exclusion were coded by the researcher and his advisor and interrater reliability was calculated. Responses for attributions of motives were coded into three categories (race: e.g. “Because he’s black”, non-race: e.g. “He doesn’t like the same stuff”, and both race and non-race: e.g. “Because he is different from what they are used to”). Participants’ reasoning or justification for their wrongfulness ratings were analyzed using a coding scheme adapted from previous research (Crystal et al., 2008; Killen et al., 2007). The coding categories included: Moral (subcategories: racial prejudice, empathy, protecting the excluded), Social-Convention (subcategories: conforming to peer pressure, maintaining the status quo, socialization, personal choice, unfamiliarity/wariness), Stereotypes (subcategories:



appearance, affirming stereotypes), and Uncodable (I don't know, other) (see Appendix F). Justification/explanation of interracial exclusion were scored dichotomously with a score of 1 if the category was used and a score of 0 if the category was not used. Twenty percent ( $n = 28$ ) of the open-ended questions were randomly selected for coding to calculate interrater reliability. Interrater reliability was calculated at Cohen's  $k = .96$  (percentage agreement =98%) for attribution of motives for both online and offline scenarios. For explanations of interracial exclusion and their subcategories interrater reliability was calculated at Cohens  $k = .94$  (percentage agreement=95%) in both the offline and online scenarios.

**Demographic measures.** The demographic measures consisted of age, gender, and ethnicity. For both gender (90% male, 10% female or other) and ethnicity (80% white, 20% minority or not specified) the amount of variance found was too low to include these factors in the overall analysis. For age, participants were originally divided into three traditional groups [adolescents: 13-14 ( $n = 17$ ), teenagers: 15-17( $n = 51$ ), and young adults: 18-21 ( $n = 83$ )]. However, because of the small group size this lead to an increase in type II errors across the analysis. Ultimately, in order to maintain power and effect size, age was measured as a continuous variable throughout the analysis.

**Intergroup contact.** As described above, one 7-item measure captured offline intergroup contact and another 7-item measure captured online intergroup contact. Both measures were assessed on 5-point Likert scale with high scores indicating higher levels of positive intergroup contact. To ensure that the measure did indeed separate into two scales the questions were subjected to a principal axis factor analysis with varimax rotation (Kaiser normalization) on the online and offline intergroup contact questions. This yielded two primary factors explaining 62% and 63% of the variance, respectively. One item from each scale was dropped and the remaining

items split evenly with 7 items that measure offline intergroup contact on one factor, and the same 7 items that measure online intergroup contact on the other factor. In order to maintain consistency with previous work on intergroup contact (Crystal, et al. 2007; Killen, et al. 2007 & 2010; Ruck, et al. 2011) the scale was dichotomously split along the mean into groups of “high” and “low” intergroup contact for offline and online settings.

**Internet use measure.** The internet use measure consisted of two independent measures, amount of time spent on online activities, and the type of activities engaged in online. In order to reduce the number of independent variables the duration of time spent in interactive and non-interactive activities was combined into a single independent variable. Additionally, the measures for whether a participants used the internet was discarded, since it was used as a filter to allow participants to skip the additional internet use measures if they indicated “no”, 100% of participants indicated that they had used the internet “yesterday”. The measure for where participants went online was also discarded since the majority of participants 90% indicated they used the internet at home, at school, or with a smart phone device. Duration of time spent in interactive and non-interactive activities were summed separately and then divided by the number of variables in each category. The interactive activity score was then subtracted from the non-interactive activity score. This score was mean centered and dichotomized to form a single measure for the duration of time spent in non-interactive and interactive activities online (0 = high amount of time spent in non-interactive activity, 1 = high amount of time spent in interactive activity).

For type of activities engaged in online, a similar method was employed. A single dichotomous independent variable was created for participants’ engagement in non-interactive

and interactive activities online (0 = high level of engagement in non-interactive activity, 1 = high level of engagement in interactive activity).

**Social identity.** Social identity was measured on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). The mean was determined and a dichotomous variable was created for participants' social identity (0 = weak social identity, 1 = strong social identity).

**Data analysis overview.** Data were processed in response to the problems posed in Chapter 1 and detailed in the research questions. Binary logistic regression and univariate analyses of variance (ANOVAs) were used to test hypotheses pertaining to online and offline intergroup contact. These initial tests were done to examine the binary nature of online and offline intergroup contact. ANCOVAs with repeated measures were used to test hypotheses pertaining to attribution of motives, evaluation of interracial exclusion, and estimation of the frequency of occurrence of interracial exclusion. In cases where sphericity was violated the Huynh-Fedlt adjustment was used to interpret the results. Follow-up analyses included pairwise comparisons for between subject effects (univariate ANOVAs), and interaction effects using the Bonferonni t-test adjustment where appropriate. Independent variables included age, intergroup contact, duration and type of online activity, and social identity. The repeated measure analysis was used for type of exclusion (race, non-race, group functioning) or type of condition (offline, online). Analysis models used were documented throughout the study.

For participants' explanations of interracial exclusion descriptive statistics were used to determine the primary type of reasoning used (moral, social conventional or stereotype reasoning). Additionally, once the primary type of reasoning was determined further descriptive analysis was used to determine the type of sub-category of reasoning the majority of participants referenced. Binary logistic regressions were used to examine differences between participant's

referral to moral, social conventional, or stereotype reasoning. Post-hoc analysis used univariate analysis to examine any significant differences found. For subcategories of reasoning the same method was employed.

## Results

### Offline and Online Intergroup Contact

Binary logistic regressions were performed on the online and offline intergroup contact scales with age, social identity, duration of online activities, and frequency of online activities. Significant main effects between offline and online levels of intergroup contact were found, Wald's  $\chi^2 = 40.22$ ,  $p < .001$ ,  $\text{Exp}(B) = .08$ . Follow-up univariate analysis indicated that participants who reported high levels of offline intergroup contact ( $M = .76$ ,  $SD = .43$ ) had significantly higher levels of online intergroup contact than their peers with low levels of offline contact, ( $M = .21$ ,  $SD = .41$ ),  $F(1, 139) = 45.82$ ,  $p < .001$ ,  $\eta_p^2 = .25$ . A significant interaction was found between online intergroup contact and social identity in regards to offline intergroup contact. Participants with weak social identities and low levels of online intergroup contact ( $M = .15$ ,  $SD = .36$ ) showed significantly higher levels of offline intergroup contact than their peers with high levels of online intergroup contact ( $M = .80$ ,  $SD = .40$ ),  $F(1, 144) = 4.92$ ,  $p < .05$ ,  $\eta_p^2 = .03$ .

A significant interaction was also found between participants' engagement in online activities and the duration of time they spent on those activities in regards to offline intergroup contact. Participants who were more likely to engage in interactive activities online ( $M = .90$ ,  $SD = .30$ ) were significantly more likely to spend time on interactive activities online as offline intergroup contact decreased ( $M = .58$ ,  $SD = .50$ ). In contrast the opposite was true for participants who were more likely to engage in non-interactive activities online ( $M = .66$ ,  $SD = .49$ ), as these participants spent more time in interactive online activities ( $M = .90$ ,  $SD = .32$ ) their levels of positive offline intergroup contact levels increased,  $F(1, 134) = 8.87$ ,  $p < .005$ ,  $\eta_p^2 = .06$ .

Follow-up analysis for online intergroup contact using univariate ANOVA found a significant effect for level of offline intergroup contact as well as a significant interaction between social identity and offline intergroup contact. Participants with high levels of offline intergroup contact ( $M = .80, SD = .40$ ) were significantly more likely to have high levels of online intergroup contact when compared to their peers with low levels of offline contact ( $M = .25, SD = .44$ ),  $F(1, 139) = 45.427, p < .001, \eta_p^2 = .25$ . Significant effects were found for an interaction between social identity and online and offline intergroup contact. Participants with weak ( $M = .85, SD = .36$ ) or strong ( $M = .70, SD = .47$ ) social identities who reported high levels of positive offline intergroup contact were significantly more likely to have high levels of online intergroup contact than those participants with weak ( $M = .24, SD = .44$ ) or strong ( $M = .35, SD = .49$ ) social identities who reported low levels of offline intergroup contact,  $F(1, 139) = 3.92, p < .05, \eta_p^2 = .03$ . No significant age effects were found.

### **Offline Attributions of Motives**

Separate binary logistic regressions were performed to determine if there were differences for attribution of motives for offline scenarios (see Table 1 for means by context). Analysis revealed significant differences for attributions of racial motives for exclusion in the offline scenario for social identity, Wald's  $\chi^2 = 3.81, p < .05, \text{Exp}(B) = 7.92$ . Follow-up univariate analysis revealed that participants with a strong social identity ( $M = .02, SD = .13$ ) were significantly less likely to attribute offline exclusion to racial motives than those participants with weak social identities ( $M = .12, SD = .33$ ),  $F(1, 149) = 4.77, p < .05, \eta_p^2 = .03$ . For attributions of non-racial and group functioning motives in the offline scenario no further significant differences were found.

Table 1.  
*Attributions of motives for race-based, non-race based, and race and non-race based exclusion by contexts*

Measures	n	Context by type of exclusion												
		Offline						Online						
		Race		Non-Race		Race and Non-Race		Race		Non-Race		Race and Non-Race		
M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	
Offline Intergroup Contact														
High	75	0.05	0.23	0.71	0.56	0.12	0.33	0.13	0.34	0.68	0.37	0.11	0.31	
Low	76	0.12	0.33	0.68	0.47	0.12	0.33	0.7	0.25	0.83	0.38	0.08	0.27	
Online Intergroup Contact														
High	79	0.09	0.29	0.68	0.47	0.11	0.32	0.13	0.33	0.7	0.46	0.1	0.3	
Low	72	0.08	0.28	0.71	0.46	0.13	0.33	0.07	0.26	0.82	0.39	0.08	0.28	
Social Identity														
Strong	53	0.02	0.14	0.68	0.47	0.13	0.34	0.11	0.31	0.73	0.45	0.12	0.32	
Weak	98	0.12	0.33	0.7	0.46	0.11	0.32	0.09	0.29	0.79	0.41	0.06	0.24	
Engagement in Activity Online														
Interactive	85	0.12	0.32	0.66	0.48	0.12	0.32	0.11	0.31	0.73	0.45	0.12	0.32	
Non-interactive	66	0.05	0.21	0.74	0.44	0.12	0.33	0.1	0.29	0.79	0.41	0.06	0.24	
Duration of Time Spent Online														
Interactive	81	0.07	0.26	0.69	0.47	0.11	0.32	0.07	0.26	0.78	0.42	0.11	0.32	
Non-interactive	70	0.1	0.3	0.7	0.46	0.13	0.34	0.13	0.34	0.73	0.45	0.07	0.26	

*Note.* N=151 1= Yes, 0= No, Race = race based exclusion (due to race of peer); Non-race = non-race based exclusion (peer lacks shared interest); Race and Non-race = both race and non-race based exclusion (exclusion due to lack of shared interests and peer's race or ethnicity)

### **Online Attributions of Motives**

For attributions of racial motives for exclusion in the online scenario no significant main effects were found. Follow-up analysis indicated a significant interaction between social identity and the amount of time participants spent in online activities. Participants with strong social identities who spent more time in interactive activities online ( $M = .29, SD = .46$ ) were significantly more likely to attribute racial motives to exclusion in the online scenario than their peers with weak social identities ( $M = .04, SD = .21$ ),  $F(1, 139) = 8.72, p < .005, \eta_p^2 = .06$ .

Binary logistic regressions showed significant differences for attributions of non-racial motives in the online scenario for offline intergroup contact, Wald's  $\chi^2 = 4.41, p < .05, \text{Exp(B)} = 2.28$ . Follow-up analysis indicated significant interactions between offline intergroup contact and social identity, and between social identity and the amount of time participants spent in online activities. Participants with strong social identities and low levels of offline intergroup contact ( $M = .96, SD = .20$ ) were significantly more likely to attribute non-racial motives to exclusion than their peers with high offline intergroup contact ( $M = .56, SD = .50$ ),  $F(1, 134) = 6.67, p < .05, \eta_p^2 = .05$ . In addition, participants with strong social identities who spent more time in interactive activities online ( $M = .93, SD = .26$ ) were significantly more likely to attribute non-racial motives to exclusion than their peers who spent more time in non-interactive activities ( $M = .54, SD = .51$ ),  $F(1, 134) = 9.26, p < .005, \eta_p^2 = .07$ . No significant effects were found for attributions of group functioning motives for exclusion in the online scenario. No significant age effects were found.

### **Online and Offline Attributions of Motives**

In order to examine whether there were significant differences between the offline and online attribution of racial motives a 2 (Online Intergroup Contact: high, low) X 2 (Offline



Intergroup Contact: high, low) X 2 (Social Identity: strong, weak) X 2 (Online Activities: non-interactive, interactive) X 2 (Time Spent Online: non-interactive, interactive) with age ANCOVA with repeated measures on the last factor was conducted on attributions of offline and online racial motives. A significant main effect was found, as well as interactions between offline intergroup contact and social identity, and offline contact and time spent online. For main effects participants were significantly more likely to attribute racial motives to online exclusion ( $M = .13, SD = .33$ ) than offline exclusion ( $M = .08, SD = .28$ ),  $F(1, 118) = 5.07, p < .05, \eta_p^2 = .04$ . For the interaction between offline intergroup contact and social identity, participants with low offline intergroup contact and weak social identities ( $M = .13, SD = .33$ ) were more likely to attribute racial motives to exclusion than their peers with strong social identities ( $M = .02, SD = .08$ ). Conversely, participants with high offline intergroup contact and strong social identities ( $M = .15, SD = .23$ ) were more likely to attribute racial motives for exclusion than their peers with weak social identities ( $M = .06, SD = .11$ ),  $F(1, 118) = 9.69, p < .005, \eta_p^2 = .08$ . Additionally, participants with high offline intergroup contact who spent more time on non-interactive activities ( $M = .13, SD = .33$ ) were significantly more likely to attribute racial motives for exclusion across both scenarios than their peers who spent more time on interactive activities ( $M = .05, SD = .23$ ),  $F(1, 118) = 10.31, p < .005, \eta_p^2 = .08$ .

A similar repeated measures analysis was run for attributions of non-racial motives for online and offline settings. Significant effects were found for the interaction between levels of offline intergroup contact and social identity, as well as between social identity and time spent in online activities. Similar to the findings for racial attributions, there was a significant interaction between offline intergroup contact and social identity. Participants with low levels of offline intergroup contact and strong social identities ( $M = .73, SD = .44$ ) were more likely to attribute

non-racial motives to exclusion than their peers with low levels of offline intergroup contact and strong social identities ( $M = .65$ ,  $SD = .48$ ). In contrast, participants with high offline intergroup contact and weak social identities ( $M = .73$ ,  $SD = .45$ ) were more likely to attribute racial motives to exclusion than their peers with high levels of offline intergroup contact and strong social identities ( $M = .62$ ,  $SD = .47$ ),  $F(1, 134) = 5.60$ ,  $p < .05$ ,  $\eta_p^2 = .04$ .

Participants with weak social identities who spent more time in non-interactive activities ( $M = .74$ ,  $SD = .35$ ) were more likely to attribute non-racial motives to exclusion than their peers with strong social identities ( $M = .62$ ,  $SD = .47$ ). Conversely, participants with weak social identities who spent more time in interactive activities online ( $M = .70$ ,  $SD = .45$ ) were less likely to attribute non-racial motives to exclusion than their peers with strong social identities ( $M = .82$ ,  $SD = .36$ ),  $F(1, 134) = 5.60$ ,  $p < .05$ ,  $\eta_p^2 = .04$ . Finally, participants with low levels of offline intergroup contact and who spent more time on non-interactive activities online ( $M = .73$ ,  $SD = .45$ ) were significantly more like to attribute non-racial motives to exclusion than their peers with high levels of offline contact ( $M = .73$ ,  $SD = .45$ ),  $F(1, 134) = 17.10$ ,  $p < .001$ ,  $\eta_p^2 = .12$ . No significant effects were found for attributions of group functioning motives for exclusion in the online or offline scenarios. No significant age effects were found across scenarios.

### **Wrongfulness Ratings for Offline Exclusion**

To examine how adolescents and young adults evaluated the three types of exclusion in the offline scenarios, a 2 (Online Intergroup Contact: high, low) X 2 (Offline Intergroup Contact: high, low) X 2 (Social Identity: strong, weak) X 2 (Online Activities: non-interactive, interactive) X 2 (Time Spent Online: non-interactive, interactive) with age ANCOVA with repeated measures on the last factor was conducted on young people's wrongfulness ratings of the offline scenario for race-based, non-race based, and group functioning based offline

exclusion (refer to Table 2 for means by context). A significant main effect was found with respect to offline exclusion. For interracial exclusion in the offline scenario participants were significantly more likely to rate race-based exclusion ( $M = 2.18, SD = 1.03$ ) as more wrong than non-race based ( $M = 4.51, SD = 1.45$ ) or group functioning based exclusion ( $M = 4.27, SD = 1.31$ ),  $ps < .0001$ . Follow-up analysis for the wrongfulness of race-based exclusion in the offline scenario revealed significant interactions between social identity and both offline and online levels intergroup contact. Participants with strong social identities and high offline intergroup contact ( $M = 1.96, SD = 1.22$ ) were significantly more likely to rate race-based exclusion as wrong than their peers with low levels of offline contact ( $M = 2.60, SD = .76$ ),  $F(1, 134) = 3.71$ ,  $p < .05$ ,  $\eta_p^2 = .03$ . The opposite was true for online intergroup contact, those participants with weak social identities and low levels of online intergroup contact ( $M = 1.99, SD = .82$ ) were more likely to rate race-based exclusion as wrong than their peers with high levels of online intergroup contact ( $M = 2.57, SD = .65$ ),  $F(1, 134) = 3.86$ ,  $p < .05$ ,  $\eta_p^2 = .03$ .

For group functioning based exclusion significant interactions were also found between offline intergroup contact and the types of activities participants engaged in online. Participants with high levels of offline intergroup contact who engaged in interactive activities online ( $M = 3.73, SD = 1.22$ ) were significantly more likely to rate offline group functioning based exclusion as wrong than their peers who engaged in non-interactive activities online ( $M = 4.31, SD = 1.35$ ),  $F(1, 134) = 5.90$ ,  $p < .05$ ,  $\eta_p^2 = .04$ . No significant differences were found for non-race based exclusion in the offline scenario. No effects for age were found for wrongfulness ratings in the offline scenario.

Table 2.  
*Wrongfulness of exclusion ratings of race-based, non-race based, and group functioning based exclusion by contexts*

Measures	n	Context by type of exclusion											
		Offline						Online					
		Race		Non-Race		Group Functioning		Race		Non-Race		Group Functioning	
M	SD	M	SD	M	SD	M	SD	M	SD	M	SD		
Offline Intergroup Contact													
High	75	2.11	1.09	4.43	1.41	4.16	1.38	2.09	1.04	4.59	1.59	4.13	1.46
Low	76	2.25	0.98	4.59	1.49	4.38	1.22	2.38	0.95	5.25	1.49	4.32	1.33
Online Intergroup Contact													
High	79	2.18	1.06	4.34	1.54	4.18	1.3	2.15	1.03	4.87	1.65	4.18	1.39
Low	72	2.18	1.01	4.69	1.32	4.38	1.31	2.33	0.98	4.97	1.48	4.28	1.41
Social Identity													
Strong	53	2.32	1.17	4.74	1.68	4.34	1.39	2.47	1.08	5.7	1.63	4.4	1.46
Weak	98	2.1	0.95	4.39	1.3	4.23	1.26	2.11	0.94	4.79	1.53	4.13	1.36
Engagement in Activity Online													
Interactive	85	2.16	1.05	4.48	1.5	4.09	1.22	2.65	1.04	4.92	1.57	4.14	1.38
Non-interactive	66	2.19	1.03	4.55	1.38	4.5	1.37	2.33	0.95	4.92	1.58	4.33	1.42
Duration of Time Spent Online													
Interactive	81	2.17	0.98	4.43	1.41	4.28	1.22	2.22	1	4.9	1.59	4.26	1.41
Non-interactive	70	2.19	1.09	4.6	1.5	4.26	1.4	2.26	1.02	4.94	1.55	4.19	1.39

*Note.* N=151. 1 = very, very bad, 8 = very, very good. Race=race based exclusion (due to race of peer). Non-race = non-race based exclusion (lack of shared interest). Group functioning = exclusion due to ‘lack of fit’ with the group.

### **Explanations for Exclusion in the Offline Scenario**

The types of reasoning or justifications participants employed for their wrongfulness ratings were examined and analyses revealed that the majority of participants used moral reasons when discussing race-based exclusion in the offline ( $M = .76, SD = .43$ ) scenario. Analyses for subcategories of reasoning found that the majority of participants referred to racial prejudice ( $M = .64, SD = .48$ ) and empathy ( $M = .12, SD = .33$ ) when discussing the wrongfulness of race-based exclusion. For reasoning about non-race based exclusion in the offline scenario participants employed both moral reasoning ( $M = .52, SD = .50$ ) and social conventional reasoning ( $M = .35, SD = .48$ ). Further analysis found that participants referred to empathy for the story character ( $M = .41, SD = .49$ ) and conforming to peer pressure ( $M = .24, SD = .43$ ) when explaining non-race based exclusion. No significant differences were found for non-race based justifications. Justifications for group functioning based exclusion in the offline scenario indicated that participants referenced both moral reasoning ( $M = .64, SD = .48$ ) and social conventional reasoning ( $M = .32, SD = .47$ ). Participants made reference to empathy ( $M = .51, SD = .33$ ), protecting the excluded ( $M = .12, SD = .33$ ), and conforming to peer pressure ( $M = .26, SD = .44$ ) when explaining group functioning based exclusion in the offline scenario. No significant differences were found for race-based justifications.

Analysis revealed significant effects for participants' references to empathy and conforming to peer pressure when explaining group functioning based exclusion in the offline scenario. Separate binary logistic regressions were run for empathy and conforming to peer pressure. Binary logistic regressions showed significant differences for empathy in the offline scenario for justifications of group functioning based exclusion, Wald's  $\chi^2 = 4.77, p < .05$ ,  $\text{Exp(B)} = 2.06$ . Follow-up univariate analysis revealed significant effects for offline intergroup

contact and the use of empathy. When discussion group functioning based exclusion, participants with low levels of offline intergroup contact ( $M = .69, SD = .49$ ) were significantly more likely to refer to empathy than their peers with high levels of offline intergroup contact ( $M = .41, SD = .50$ ),  $F(1, 149) = 4.915, p < .05, \eta_p^2 = .03$ . Binary logistic regression also showed a significant effect for participants use of willingness to conform to peer pressure to explain of group functioning based exclusion in the offline scenario, Wald's  $\chi^2 = 4.77, p < .05, \text{Exp(B)} = 2.06$ . Additional analysis indicated significant effects for levels of online intergroup contact and conforming to peer pressure. Participants with high levels of online intergroup contact ( $M = .67, SD = .48$ ) were significantly more likely to refer to conforming to peer pressure when explaining group functioning based exclusion than their low level peers ( $M = .47, SD = .50$ ),  $F(1, 149) = 4.41, p < .05, \eta_p^2 = .03$ . No further significant interactions were found, no significant effects for age were found.

### **Estimations of the Frequency of Occurrence for Offline Exclusion**

In order to examine adolescents' and young adult's estimations of the frequency of occurrence of exclusion in the offline scenario, a 2 (Online Intergroup Contact: high, low) X 2 (Offline Intergroup Contact: high, low) X 2 (Social Identity: strong, weak) X 2 (Online Activities: non-interactive, interactive) X 2 (Time Spent Online: non-interactive, interactive) with age ANOVA with repeated measures on the last factor was conducted on participants' estimations of exclusion for race, non-race, and group functioning based exclusion (see Table 3 for means by context). A significant main effect was found for type of exclusion. Participants were significantly more likely to estimate that non-race based ( $M = 3.72, SD = .71$ ) and group functioning based offline exclusion ( $M = 3.78, SD = .72$ ) occurred more frequently than race-based offline exclusion ( $M = 2.68, SD = .94$ ),  $ps < .0001$ .

Follow-up tests using univariate analysis indicated significant effects for estimates of race based exclusion and social identity. Analysis revealed that in the offline scenario participants with strong social identities ( $M = 2.78, SD = .93$ ) were significantly more likely to provide higher estimates of the frequency of race-based exclusion than their peers with weak social identities ( $M = 2.34, SD = .92$ ),  $F(1, 134) = 4.82, p < .05, \eta_p^2 = .04$ .

For estimations of the frequency of non-race based exclusion a significant interaction between offline and online intergroup contact was found. Participants with high levels of online intergroup contact and high levels of offline intergroup contact ( $M = 3.80, SD = .66$ ) were significantly more likely to provide higher estimates of the frequency of occurrence for non-race based exclusion than their peers with low levels of offline intergroup contact ( $M = 3.31, SD = .95$ ),  $F(1, 134) = 5.73, p < .05, \eta_p^2 = .04$ .

Significant effects were also found for the estimates of group function based exclusion in the offline scenario. Significant interactions were found between offline intergroup contact and social identity, as well as between online intergroup contact and online activity in the offline scenario. Participants with strong social identities and high levels of offline intergroup contact ( $M = 4.17, SD = .70$ ) were significantly more likely to provide higher estimates of the frequency of group functioning exclusion in the offline scenario than their peers with low levels of offline intergroup contact ( $M = 3.24, SD = .75$ ),  $F(1, 49) = 4.12, p < .05, \eta_p^2 = .08$ . Additionally, participants with strong social identities and low levels of online intergroup contact ( $M = 4.14, SD = .91$ ) were significantly more likely to estimate that group functioning exclusion occurred more often in the online scenario than their peers with high levels of online intergroup contact ( $M = 3.27, SD = .75$ ),  $F(1, 49) = 4.55, p < .05, \eta_p^2 = .09$ . No significant age effects were found.

EVALUATIONS OF INTERRACIAL EXCLUSION ONLINE

Table 3.  
*Estimation of frequency of occurrence of race-based, non-race based, and group functioning exclusion by contexts*

Measures	n	Context by type of exclusion											
		Offline						Online					
		Race		Non-Race		Group Functioning		Race		Non-Race		Group Functioning	
M	SD	M	SD	M	SD	M	SD	M	SD	M	SD		
Offline Intergroup Contact													
High	75	2.51	0.95	3.76	0.67	3.95	0.62	2.11	0.92	3.57	0.79	3.45	0.81
Low	76	2.49	0.95	3.67	0.76	3.72	0.84	2.11	0.86	3.54	0.84	3.64	0.72
Online Intergroup Contact													
High	79	2.44	1.02	3.68	0.76	3.94	0.64	2.06	0.91	3.58	0.81	3.53	0.8
Low	72	2.56	0.85	3.75	0.67	3.74	0.82	2.15	0.87	3.53	0.82	3.57	0.75
Social Identity													
Strong	53	2.35	0.92	3.7	0.74	3.88	0.7	2.23	0.93	3.62	0.79	3.66	0.76
Weak	98	2.35	0.92	3.7	0.74	3.88	0.7	2.04	0.86	3.52	0.83	3.49	0.78
Engagement in Activity Online													
Interactive	85	2.49	0.98	3.65	0.78	3.88	0.82	2.07	0.94	3.51	0.87	3.54	0.8
Non-interactive	66	2.5	0.9	3.8	0.61	3.78	0.52	2.15	0.83	3.62	0.74	3.56	0.75
Duration of Time Spent Online													
Interactive	81	2.36	0.95	3.67	0.76	3.77	0.81	2.01	0.84	3.52	0.84	3.43	0.81
Non-interactive	70	2.66	0.92	3.77	0.66	3.96	0.59	2.21	0.93	3.6	0.79	3.69	0.71

*Note.* N=151. 1 = never, 5 = Always. Race=race based exclusion (due to race of peer). Non-race = non-race based exclusion (lack of shared interest). Group functioning = exclusion due to “lack of fit” with the group



### Wrongfulness Ratings for Online Exclusion

To examine how young people evaluated the three types of exclusion in the online scenarios, a 2 (Online Intergroup Contact: high, low) X 2 (Offline Intergroup Contact: high, low) X 2 (Social Identity: strong, weak) X 2 (Online Activities: non-interactive, interactive) X 2 (Time Spent Online: non-interactive, interactive) with age ANOVA with repeated measures on the last factor was conducted on participants' wrongfulness ratings for race-based, non-race based, and group functioning based online exclusion. A significant main effect was found for type of online exclusion. Analysis revealed significant main effects for ratings of the wrongfulness of interracial exclusion. Participants were significantly more likely to evaluate race-based online exclusion ( $M = 2.24, SD = 1.01$ ) as more wrong than non-race based online exclusion ( $M = 4.92, SD = 1.57$ ) and group functioning based online exclusion ( $M = 4.23, SD = 1.40$ ),  $ps < .0001$ .

Follow-up tests for the wrongfulness of race-based exclusion in the online scenario revealed significant differences for social identity. Participants with weak social identities ( $M = 2.11, SD = .94$ ) were significantly more likely to rate race-based exclusion in the online scenario as wrong compared to those with strong social identities ( $M = 2.54, SD = 1.08$ ),  $F(1, 134) = 4.39$ ,  $p < .05$ ,  $\eta_p^2 = .03$ . In addition, a significant interaction emerged between online intergroup contact and social identity. Participants with high levels of online intergroup contact and weak social identities ( $M = 1.90, SD = .90$ ) were significantly more likely to indicate that race-based exclusion in the online scenario was wrong compared to their peers with strong social identities ( $M = 2.61, SD = 1.10$ ),  $F(1, 134) = 10.51$ ,  $p < .001$ ,  $\eta_p^2 = .07$ .

Significant effects were also found for non-race based exclusion for the online scenario. Participants with high levels of offline intergroup contact ( $M = 4.59, SD = 1.59$ ) were

significantly more likely to rate non-race based exclusion in the online scenario as wrong than their peers with low levels of offline intergroup contact ( $M = 5.25$ ,  $SD = 1.48$ ),  $F(1, 134) = 7.01$ ,  $p < .01$ ,  $\eta_p^2 = .05$ .

For group functioning based exclusion in the online scenario, significant interactions were found between offline intergroup contact and type of online activities, as well as the interaction between the amount of time spent in online activities and the type of online activities in which participants engaged. Participants with high levels of offline intergroup contact who were more likely to spend time engaged in non-interactive activities online ( $M = 3.83$ ,  $SD = 1.41$ ) were significantly more likely to rate group functioning based exclusion in the online scenario as wrong than their peers who engaged in interactive activities online ( $M = 4.50$ ,  $SD = 1.46$ ),  $F(1, 134) = 4.81$ ,  $p < .05$ ,  $\eta_p^2 = .04$ . Additionally, participants who spent time engaged in both interactive and non-interactive activities online ( $M = 3.83$ ,  $SD = 1.41$ ) were significantly more likely to rate group functioning based exclusion in the online scenario as wrong than their peers who spent their time engaged in non-interactive online activities alone ( $M = 4.56$ ,  $SD = 1.33$ ),  $F(1, 134) = 4.96$ ,  $p < .05$ ,  $\eta_p^2 = .04$ . No significant age effects were found for wrongfulness ratings in the online scenario.

### **Explanations of Exclusion in the Online Scenario**

The types of reasoning or justifications participants employed for their wrongfulness ratings were examined and analyses revealed that the majority of participants referred to moral explanations when discussing race-based exclusion in the online scenario ( $M = .82$ ,  $SD = .39$ ). Binary logistic regressions found significant interactions between participants engagement in online activities and use of moral reasoning for race-based online exclusion, Wald's  $\chi^2 = 3.911$ ,  $p < .05$ ,  $\text{Exp}(B) = .43$ . Post-hoc univariate analysis revealed that participants who were more

likely to engage in interactive activities online ( $M = .60$ ,  $SD = .49$ ) were significantly more likely to use to moral explanations for race-based exclusion than those participants who engaged in non-interactive activities online ( $M = .39$ ,  $SD = .50$ ),  $F(1, 149) = 4.09$ ,  $p < .05$ ,  $\eta_p^2 = .03$ .

Analysis of the subcategories of reasoning found that the majority of participants referred to racial prejudice ( $M = .74$ ,  $SD = .44$ ) when explaining race-based exclusion. Binary logistic regression showed a significant interaction between references to racial prejudice and participants engagement in online activities, Wald's  $\chi^2 = 4.96$ ,  $p < .05$ ,  $\text{Exp(B)} = .43$ . Follow-up analysis revealed that participants who engaged in interactive activities online ( $M = .62$ ,  $SD = .49$ ) were significantly more likely to refer to racial prejudice when discussing race-based exclusion in the online scenario than their peers who engaged in non-interactive activities ( $M = .41$ ,  $SD = .50$ ),  $F(1, 149) = 5.08$ ,  $p < .05$ ,  $\eta_p^2 = .03$ .

For explanations about non-race based exclusion in the online scenario participants used both moral reasoning ( $M = .45$ ,  $SD = .50$ ) and social conventional reasoning ( $M = .45$ ,  $SD = .49$ ). Binary logistic regressions found significant differences for social identity for social conventional reasoning for non-race based exclusion, Wald's  $\chi^2 = 7.53$ ,  $p < .01$ ,  $\text{Exp(B)} = .37$ . Follow-up analysis revealed that when discussing non-race based exclusion in the online scenario participants with strong social identities ( $M = .47$ ,  $SD = .50$ ) were significantly more likely to refer to social conventional reasons than participants with weak social identities ( $M = .25$ ,  $SD = .44$ ),  $F(1, 149) = 8.08$ ,  $p < .005$ ,  $\eta_p^2 = .05$ .

Analysis of the subcategories of reasoning found that participants referred to empathy ( $M = .37$ ,  $SD = .48$ ) and conforming to peer pressure ( $M = .30$ ,  $SD = .46$ ) when discussing non-race based exclusion. Binary logistic regressions found significant differences in social identity for referral to conforming to peer pressure when explaining non-race based online exclusion, Wald's

$\chi^2 = 3.94, p < .05, \text{Exp}(B) = .48$ . Follow-up analysis revealed that when explaining non-race based exclusion in the online scenario participants with strong social identities ( $M = .47, SD = .50$ ) were significantly more likely to refer to conforming to peer pressure than participants with weak social identities ( $M = .30, SD = .46$ ),  $F(1, 149) = 3.81, p < .05, \eta_p^2 = .03$ .

For reasoning about group functioning based exclusion in the online scenario participants again referenced both moral reasoning ( $M = .57, SD = .50$ ) and social conventional reasoning ( $M = .34, SD = .47$ ). However, no significant differences were found. When examining participants references to the subcategories of reasoning, analysis found that participants referred to empathy ( $M = .48, SD = .50$ ), protecting the excluded ( $M = .12, SD = .33$ ), and conforming to peer pressure ( $M = .24, SD = .43$ ). No significant age differences were found.

### **Estimations of the Frequency of Occurrence for Online Exclusion**

To examine adolescents' and young adult's estimations of the frequency of exclusion in the online scenario a 2 (Online Intergroup Contact: high, low) X 2 (Offline Intergroup Contact: high, low) X 2 (Social Identity: strong, weak) X 2 (Online Activities: non-interactive, interactive) X 2 (Time Spent Online: non-interactive, interactive) with age ANOVA with repeated measures on the last factor was conducted on participants' estimations of exclusion for race-based, non-race, and group functioning based exclusion in the online scenario. A significant main effect was found for type of exclusion. Analysis found that participants were significantly more likely to provide higher estimates of the frequency of non-race ( $M = 3.56, SD = .81$ ) and group functioning based offline exclusion ( $M = 3.55, SD = .77$ ) than race-based exclusion ( $M = 2.10, SD = .88$ ),  $ps < .0001$ .

Follow-up tests using univariate analysis showed significant effects for the estimations of group functioning based exclusion in the online scenario. Significant effects were found for the

duration of time spent in online activities as well as the interaction between offline intergroup contact and social identity. Participants who spent more time engaged in non-interactive activities online ( $M = 3.68, SD = .71$ ) provided significantly higher estimates for the occurrence of group functioning based exclusion than those participants who spent more time engaged in interactive activities online ( $M = 3.43, SD = .80$ ),  $F(1, 134) = 4.05, p < .05, \eta_p^2 = .03$ . In addition, participants with weak social identities and low levels of offline intergroup contact ( $M = 3.75, SD = .71$ ) provided significantly higher estimates of the frequency of group functioning based exclusion than their peers with high offline intergroup contact ( $M = 3.18, SD = .75$ ),  $F(1, 134) = 4.75, p < .05, \eta_p^2 = .04$ . No significant effects were found for estimations of the frequency of race-based, non-race based exclusion or age.

### **Wrongfulness Ratings for Offline and Online Exclusion**

To explore the possible relationship between the online and offline scenarios participants wrongfulness ratings by type of exclusion (race, non-race, and group functioning) was examined across the two scenarios. No significant findings were found for participant's ratings of race-based or group functioning based exclusion across scenarios. However, for non-race based exclusion, a 2 (Online Intergroup Contact: high, low) X 2 (Offline Intergroup Contact: high, low) X 2 (Social Identity: strong, weak) X 2 (Online Activities: non-interactive, interactive) X 2 (Time Spent Online: non-interactive, interactive) with age ANOVA with repeated measures on the last factor was conducted on wrongfulness ratings for offline and online scenarios. Significant main effects were found for type of exclusion and offline intergroup contact. Participants were significantly more likely to rate non-race based exclusion in the offline scenario ( $M = 4.50, SD = 1.45$ ) as more wrong than in the online scenario ( $M = 4.92, SD = 1.48$ ),  $F(1, 149) = 3.81, p < .05, \eta_p^2 = .03$ . In addition, participants with low levels of offline intergroup

contact ( $M = 2.10$ ,  $SD = 1.08$ ) were significantly more likely to evaluate non-race based exclusion across the two scenarios as more wrong than their peers with low levels of offline contact ( $M = 2.25$ ,  $SD = .98$ ),  $F(1, 134) = 8.05$ ,  $p < .005$ ,  $\eta_p^2 = .06$ . No significant differences for age were found. For participants explanations of exclusion across the online and offline scenario no significant differences were found.

### **Estimations of the Frequency Occurrence of Online and Offline Exclusion**

In order to examine adolescents' and young adult's estimations of the frequency of exclusion across the offline and online scenarios three separate, 2 (Online Intergroup Contact: high, low) X 2 (Offline Intergroup Contact: high, low) X 2 (Social Identity: strong, weak) X 2 (Online Activities: non-interactive, interactive) X 2 (Time Spent Online: non-interactive, interactive) with age ANOVA with repeated measures on the last factor were conducted for both online and offline scenarios. Only significant findings are reported. For estimations of the frequency of occurrence for race-based exclusion a significant main effect, as well as a significant interaction between social identity and time spent on online activities was found. Analysis indicated that participants were significantly more likely to provide higher estimates of the frequency of race-based exclusion in the offline scenario ( $M = 2.55$ ,  $SD = .97$ ) than in the online scenario ( $M = 2.13$ ,  $SD = .91$ ),  $F(1, 134) = 23.36$ ,  $p < .001$ ,  $\eta_p^2 = .15$ . In addition, participants who were more likely to spend time online in non-interactive activities and had strong social identities ( $M = 2.60$ ,  $SD = .88$ ) provided higher estimates of the frequency of race-based exclusion across scenarios than their peers with weak social identities ( $M = 2.28$ ,  $SD = 1.21$ ),  $F(1, 134) = 4.07$ ,  $p < .05$ ,  $\eta_p^2 = .03$ .

Repeated measure analyses found significant effects for the amount of time spent on interactive and non-interactive activities online. Participants who spent more time online in non-

interactive activities ( $M = 3.93$ ,  $SD = .66$ ) provided significantly higher estimates of the frequency of group functioning based exclusion across scenarios than those participants who spent more time in interactive activities ( $M = 3.39$ ,  $SD = .81$ ),  $F(1, 49) = 5.34$ ,  $p < .05$ ,  $\eta_p^2 = .10$ . No significant differences were found for estimates of non-race based exclusion across the online and offline scenarios. No significant age effects were found.

## Discussion

The purpose of this study was to determine the role that online interactions play in adolescents' and young adults' evaluation of interracial exclusion in situations depicting intergroup relations in offline and online settings. Also of interest were the roles of social identity, intergroup contact, online activity, and age in young people's evaluations of both online and offline scenarios. The study revealed a number of interesting findings in terms of intergroup contact, social identity, online activity, evaluation of interracial exclusion, estimates of the frequency of exclusion, and explanations of interracial exclusion. It is important to note that the majority of the participants in this study were male European American ("White") adolescents and young adults, from across the continental United States, and that any generalizations of these findings to other racial or ethnic groups should be done with caution. The following section summarizes the key findings for this study in terms of the research questions and hypothesis in the order they were presented. Generalizations of our findings are shown in Table 4.

### Key Findings

**Intergroup Contact.** Previous research found that individuals with high levels of intergroup contact often seek out peers with similar levels of intergroup contact (Gaetner & Dovidio, 2000; Glasford & Calcagno, 2012; Valkenburg & Peter, 2013). Based on this research it was hypothesized that individuals with positive levels of intergroup contact would associate with other individuals with similar levels of intergroup contact in both offline and online settings. Consistent with this hypothesis, participants with high levels of offline intergroup contact had significantly higher levels of online intergroup contact than their peers with low levels of offline intergroup contact (see Table 4, H1). This suggests participants may be seeking out peers with similar levels of intergroup contact in offline and online scenarios.



Table 4.

*Summary of research hypotheses, results, and conclusions*

Hypothesis	Results	Conclusion
H1: Individuals with high levels of offline intergroup contact were expected to have high levels of online intergroup contact.	Supported	Participants with high levels of offline intergroup contact also had significant high levels of online intergroup contact when compared to their peers.
H2: Attributions of interracial exclusion will be significantly related to positive levels of intergroup contact.	Not supported	Social identity was found to significantly predict attributions of interracial exclusion in the offline scenario, in contrast social identity and intergroup contact predicted attributions of interracial exclusion.
H3: Social identity would become more salient as individuals conform to group norms.	Supported with qualification	Individuals with increased social identity were less likely to attribute interracial exclusion to race, in order to attribute positive characteristics to their in-group and the out-group.
H4: Attribution of race-based motives when evaluating interracial exclusion should increase with age.	Not supported	No age related findings were found
H5: Young people would rate race-based exclusion as more wrong than non-race based or group functioning based exclusion.	Supported	In both the offline and online scenarios young people rated race-based exclusion as more wrong than those types of exclusion not involving race.
H6a: Participants with high levels of intergroup contact will be more likely to rate race-based exclusion as wrong than their peers with low levels of intergroup contact.	Not supported	High levels of intergroup contact did have a significant effect on participant's evaluation of non-race based exclusion in the online scenario
H6b: Individuals with more salient social identities and high levels of intergroup contact will be more likely to evaluate interracial exclusion as more wrong than their peers.	Supported with qualification	Offline individuals with high levels of offline intergroup contact and strong social identities were more likely to evaluate interracial exclusion as wrong. However, in the online scenario participants with low levels of intergroup contact and weak social identities were more likely to evaluate interracial exclusion as wrong.
H7: Young people would utilize moral reasoning when explaining race-based exclusion.	Supported	Participants who engaged in more interactive activities online were also significantly more likely to use moral explanations explain race-based exclusion.
H8: Young people will be more likely to estimate that the frequency of occurrence of non-race based exclusion would be higher than any other type of interracial exclusion.	Supported	Participants were more likely to report higher estimates of the frequency of occurrence of non-race based exclusion than race-based exclusion in both the offline and online scenarios

Alternatively, it is possible that rather than individuals seeking out groups with high or low levels of intergroup contact, individuals with high levels of positive intergroup contact may be generalizing their positive intergroup attitudes to the group they associate with. Recent research supports this explanation. Tausch et al. (2010) found a negative relationship between intergroup contact and prejudice such that individuals with high levels of positive intergroup contact sought out groups with less prejudice. Moreover, individuals' positive intergroup contact may spill over to the group. Pettigrew and Tropp (2006) found that individuals with positive intergroup attitudes were able to influence other individuals within their in-group in terms of intergroup attitudes and racial prejudice. Together, these studies suggest that individuals are not only seeking out groups with high levels of positive intergroup contact and less prejudice toward the out-group, but also further disseminating their positive intergroup attitudes by joining these groups.

**Attributions of Interracial Motives.** Several hypotheses about attributions of interracial motives were presented in this study. Prior research on attribution of motives indicated that participants with high levels of intergroup contact would be less likely to attribute racial motives to interracial exclusion (McGlothlin & Killen, 2006). In the current study it was hypothesized that adolescents' and young adult's attributions of motives would be significantly related to levels of intergroup contact (see Table 4, H2). However, no significant findings emerged in this regard. The lack of findings for intergroup contact and attributions may have been caused by mediating independent factors such as social identity, age, or online activity. Previous research has found that individuals with stronger or more salient social identities would be less likely to attribute racial motives to exclusion (Tajfel, 1972; Postmes & Spears, 2002; Spears & Lea, 1994) our findings lend support for such a mediating effect. It was hypothesized that social identity

would have a significant effect on young people's attributions of racial motives (see Table 4, H3). A novel finding in this study was that participants in the offline scenario who reported stronger levels of social identity were less likely to attribute interracial exclusion to race. According to social identity theory (Tajfel, 1978) as individuals gain strength in their social identity they are more likely to seek solidarity with their in-group which may lead to discrimination against the out-group. This suggests that participants with a strong social identity should have attributed interracial exclusion as being due to race. Instead, increased salience of social identity seems to be decreasing the likelihood of attributing interracial exclusion to race in the offline scenario. Tajfel & Turner (1979) provide a possible explanation for this finding suggesting that as individuals become more established in their own social identity they are more likely to attribute positive characteristics to both their in-group and the out-group. This in turn makes individuals more likely to assume that others in their in-group would not attribute interracial exclusion to racial discrimination (Spears & Lea, 1994). The work of Verkuyten (2005) provides a second possible explanation for these findings. When examining dominant and minority groups he found that dominant group participants who identified most strongly with their in-group members were more likely to endorse multiculturalism and provide a positive out-group evaluation. Taking into account that the samples for this study were mostly White we can hypothesize that strong social identities would make participants less likely to attribute racial motives to exclusion.

In contrast, findings for the online scenario revealed that participants with strong social identities and high levels of positive online intergroup contact were more likely to attribute racial motives to exclusion. It may be that in the online scenario participants with strong social identities were more willing to adapt their evaluation of their current group as a result of their

higher levels of online contact with out-group members. Perhaps, individuals with strong social identities who spend a significant amount of time interacting with peers of a different race online are more willing to accept that interracial exclusion may be attributed to a person's race (Tajfel, 1978; Tajfel & Turner, 1979). This implies that individuals with salient social identities are actively adapting their evaluations of both their in-group and out-group dependent on their positive intergroup contacts with peers in online settings. While the initial hypothesis for intergroup contact and attributions did not reveal significant findings, these results do lend support to the hypothesis that intergroup contact is mediated by social identity.

Also of interest was how attribution of motives for interracial exclusion differs by age (see Table 4, H4). However, no significant age differences were found for attributions of motives, evaluation of interracial exclusion, or estimations of the frequency of occurrence of exclusion. A possible explanation for the lack of age findings may be due to the composition of age groups among participants. Based on previous research, 13-14 year olds represented an age range where significant age related findings have been previously reported with regards to participants' evaluations of interracial exclusion (Crystal et al., 2008; Killen et al., 2007a, Ruck et al., 2011). When comparing 15-18 and 19-21 year old age groups, the 13-14 year old group ( $n = 17$ ) was significantly smaller, which may have contributed to the lack of significant findings. Furthermore, previous studies on evaluations of interracial exclusion have included younger participants (those under the age of 12), which was not possible in this study due to federal regulations concerning online data collection from minors. The combination of small sample sizes for younger participants and the inability to recruit children under 12 may have led to the lack of age findings across the study.

**Wrongfulness Ratings for Interracial Exclusion.** With respect to adolescents' and young adult's evaluation of interracial exclusion, it was hypothesized that participants would view race-based exclusion as wrong in both the offline and online settings (see Table 4, H5) than for those types of exclusion not involving race (non-race based, group functioning based). In the current investigation, participants were asked to rate the wrongfulness of (race-based, non-race based, and group functioning based) exclusion from "very very bad" to "very very good". Consistent with Killen et al. (2010) participants in the offline and online scenario reported race-based exclusion as more wrong than non-race based exclusion. For example, in the current investigation 98% of participants in both offline and online scenarios rated race-based exclusion as wrong ("a little bad" to "very very bad"). Whereas, in both the offline and online scenarios only 49% of participants rated non-race based exclusion as wrong and 67% rated group functioning based exclusion as wrong. When wrongfulness ratings for race-based interracial exclusion were examined, no significant differences were found between participants' ratings in the offline and online scenarios. This finding suggests that young adults perceived both scenarios similarly in terms of their ratings of wrongfulness of race-based interracial exclusion. In addition, it implies that any findings for participants' wrongfulness ratings for race-based interracial exclusion may be due to mediating independent variables, such as levels of intergroup contact, salience of social identity, or online activity, and not differences between the online or offline scenarios.

Research on intergroup contact and evaluations of interracial exclusion has found that participants with high levels of intergroup contact perceived race-based exclusion as more wrong than those with low levels of intergroup contact (e.g., Crystal, et al., 2008; Killen et al., 2007a; Killen et al., 2010). In the present study, it was hypothesized that adolescents and young adults

with high levels of intergroup contact would have similar evaluations in both the offline and online scenarios (see Table 4, H6a). This study was unable to demonstrate that high levels of intergroup contact had a significant effect on participants' evaluation of race-based exclusion. However, significant effects for intergroup contact were found for non-race based exclusion in the online scenario.

In the online scenario adolescents and young adults with high levels of offline intergroup contact were significantly more likely to evaluate non-race based interracial exclusion as wrong than their peers with low levels of offline intergroup contact. This finding is consistent with previous research on intergroup contact and interracial peer exclusion (e.g. Crystal et al., 2008; Killen et al., 2006; Ruck et al., 2011). Additional analysis found significant interactions between intergroup contact and social identity. It was hypothesized that individuals with high levels of intergroup contact and strong social identity would be more likely to evaluate race-based exclusion as wrong than their peers with weak social identities (see Table 4, H6b). In line with this hypothesis, in the offline scenario participants with high levels of offline intergroup contact and strong social identities were significantly more likely to rate race-based exclusion as wrong compared to their peers with low levels of offline intergroup contact. Past research provides a possible explanation for these results (e.g. Crystal et al., 2008; Killen et al., 2006; Ruck et al., 2011). In the offline scenario participants with high levels of offline intergroup contact and strong social identities may be motivated to evaluate race-based exclusion as wrong in order to differentiate themselves from the out-group and strengthen their individual social identities (Tajfel, 1978; Tajfel & Turner, 1979). It is also important to note that while there were significant differences for participants' evaluations of race-based exclusion between groups, both groups still rated racial exclusion as "very bad" to "very very bad".

In the online scenario participants with low levels of online intergroup contact and weak social identities were more likely to rate race-based exclusion as wrong than their peers with weak social identities and high levels of online intergroup contact. While previous research has shown that high levels of intergroup contact were significantly related to participants' likelihood of rating race-based exclusion as wrong (Crystal et al., 2008; Killen et al., 2006; Ruck et al., 2011), participants with low levels of intergroup contact and weak social identities also rated race-based exclusion as wrong. A possible explanation may be that adolescents and young adults with weak social identities being more likely to rate race-based exclusion as wrong in order to increase the strength of their social identity. Previous research found that individuals with weak social identities may be more likely to rate race-based exclusion as wrong to accentuate their difference from the out-group and strengthen cohesion within the in-group which in turn strengthens their social identity (Hoggs & Abrams, 1988; Tajfel, 1959, 1981; Tajfel & Wilkes, 1963). Additionally, it is possible that weak social identities for dominant group members can be related to an increase in multiculturalism, or recognition of cultural diversity (Verkuyten, 2005) which may contribute to White participants with weak social identities in this study viewing race-based exclusion as wrong. Further investigation is needed in order to better understand how interactions between social identity and intergroup contact can effect evaluations of interracial exclusion.

**Explanations for Exclusion.** Based on past research (Killen et al., 2007a) it was hypothesized that adolescents and young adults would use moral reasoning when explaining racial exclusion in both the online and offline scenarios. However, the current study only confirmed this hypothesis for the online scenarios, and only when the type of online activities participants engaged in was taken into account (see Table 4, H7). Results showed that

participants who engaged in more interactive activities online were also significantly more likely to use moral explanations such as references to “racial prejudice” to explain race-based exclusion than participants who engaged in more non-interactive activities online. Such statements were typically in the form the wrongfulness of prejudices concerning race that would lead to exclusion. For example, as one 14 year old European-American male suggested, “Race shouldn’t decide who your friends are.” Along the same lines a 15 year old European-American male noted, “Just because someone is of a different ethnicity then you, you shouldn't be judging people by it. There are many things that people say about different races. And some people choose to believe it,” as a possible reason why a White adolescent would exclude a Black adolescent based on their race. These findings were similar to prior U.S. studies in which majority and minority participants used moral reasoning when explaining race-based exclusion (Killen, et al., 2007a). Tynes et al. (2004) found that individuals who engaged in interactive activities online were more likely to discuss racial topics (e.g. interracial dating, racial equality, racial compositions of groups, etc.). Additionally, Burnette (1997) found that young people who discussed racial topics in open forums were more likely to experience a reduction in racial prejudice. Taken together these findings demonstrate that individuals who engage in more interactive activities online may become more aware of racial prejudice due to increased discussion of topics pertaining to race and therefore may show greater awareness of racial prejudice as an explanation for race-based exclusion.

Past research (Killen et al., 2007a) has also indicated that adolescents and young adults would be more likely to use moral and social conventional reasoning for non-race based and group functioning based explanations of interracial exclusion. In the offline scenario participants with high levels of online intergroup contact were more likely to use social-conventional



reasoning, specifically “conforming to peer pressure” when explaining group functioning based exclusion than those with low levels of online intergroup contact. Typically such responses came in the form of references to maintaining group functioning or lack of shared interest to justify exclusion. For example a 15 year old European-American male stated. “If you don't play the same games as someone, you can't really play with them. He [the Black story character] has different opinions of games and that might not mesh well with him [the White story character].” Similarly, a 16 year old European-American male noted. “Probably because Doug [the Black story character] has different interests in videogames Michael [the White story character] is making the assumption that Doug won't be able to engage in conversation with he and Will [the other White story character],” as a possible reason for why the White adolescent wouldn't want the Black adolescent to join their group. These findings are consistent with past research that indicated that both majority and minority participants were more likely to use social-conventional reasoning over moral reasoning when explaining non-race based exclusion (Killen et al., 2007a).

In addition, social identity was also a significant predictor of participants' use of social conventional reasoning in the online scenario. Results showed that adolescents and young adults with strong social identities were significantly more likely to offer social-conventional reasoning, referring to “conforming to peer pressure”, when explaining non-race based exclusion than their peers with weak social identities. Individuals with strong social identities use of “conforming to peer pressure” may be related to their group dynamics. Previous research has reported that individuals were more likely to allow context and group dynamics to affect explanations of exclusion such as social-conventional reasoning, but not others such as moral justifications (Abrams & Rutland, 2008; Abrams et al. 2009; Killen et al. 2002). Therefore, it is conceivable

that young people with strong social identities may be more likely to refer to social-conventional reasoning, specifically referring to “conform to peer pressure”, to maintain in-group cohesion for non-race based exclusion (Abrams et al. 2008), but not for race-based exclusion.

**Estimations of the Frequency of Occurrence of Interracial Exclusion.** Previous research with majority and minority participants has found that adolescents provided higher estimates of the frequency of non-race based exclusions than race-based exclusion (Killen et al., 2007a). Consistent with this work, results for the current study showed that adolescents and young adults were more likely to report higher estimates of the frequency of occurrence of non-race based exclusion than race-based exclusion in both the offline and online scenarios (see Table 4, H8). In addition, effects were found for level of intergroup contact and strength of social identity. In the offline setting participants with high levels of online intergroup contact and high levels of offline intergroup contact were significantly more likely to estimate that non-race based exclusion occurred more often than their peers with high levels of online intergroup contact but low levels of offline intergroup contact. A possible explanation for this result can be drawn from Harris et al. (1990) who that found that individuals will base their frequency estimates on domain-specific knowledge. This suggests that when making estimates for the frequency of exclusion in offline settings, participants most likely referenced their offline intergroup contact as the relevant domain. Therefore it is likely that level of offline intergroup contact has more impact on the estimation of frequency in the offline setting than levels of online intergroup contact, depending on whether the exclusion occurred online or offline.

With regard to social identity, participants with strong social identities and high levels of offline intergroup contact were more likely to estimate a higher frequency of occurrence of group functioning based interracial exclusion in the online scenario than participants with strong social

identities and low levels of offline intergroup contact. In contrast, participants with strong social identities and low levels of online intergroup contact were more likely to estimate a higher frequency of occurrence for group functioning based interracial exclusion than participants with strong social identities and high levels of online intergroup contact.

Previous research on social identity and the formation of online groups suggests that as adolescents' and young adults' social identities become more salient they are more willing to diversify their in-group by including more diverse out-groups online (Tukle, 1995; Spears & Lea, 1994). This may lead adolescents and young adults with salient social identities to view offline interracial exclusion as being caused by lack of fit with the social group rather than being due to racial differences (Aboud & Mendelson, 1996; Spears & Lea, 1994; Valkenburg et al., 2005). Further research is required to better understand the relationship between online and offline intergroup contact and social identity with respect to estimations of the frequency of interracial exclusion.

### **Limitations and Future Research**

There were several limitations in the present study that should be considered moving forward. First, the small sample size of participants between 13 and 14 years of age may have contributed to the lack of age related findings. With a larger sample size for this group it would be expected that significant differences would emerge, since previous research on evaluation of interracial exclusion have found various differences for this age group (Crystal et al., 2008; Killen et al., 2007a; Ruck et al., 2011). Alternatively, the lack of age differences for participants may be due to how they interact through online forums. Additionally, the predominately White and male make-up of the sample group reduces the findings generalizability. It should be further

noted that in terms of intergroup contact and social identity majority and minority group members responded in line with the findings of prior research. For example, previous research has found that majority participants were more likely to rate race-based exclusion as wrong compared to minority participants (Crystal et al., 2008). Also, more salient social identities lead to strong in-group identification among minorities and weaker identification among dominant groups (Verkuyten, 2005). Future research must take into account differences between how majority and minority groups react to various measures. Future research should also focus on achieving minimum sample sizes for underrepresented groups and specific age ranges before data collection could be concluded. This method would allow the determination of whether ethnic minority status, gender, or age played a more significant role in participants' evaluations of racial exclusion.

Second, while the current study revealed a number of significant differences in terms of intergroup contact, social identity, wrongfulness ratings, estimations, and the frequency of occurrence of exclusion, the cross-sectional design limits any inferences pertaining to causal relationships. Future work employing a longitudinal design may allow us to better understand any age-related changes relating to online activity, intergroup contact, social identity and young people's understanding of judgments of racial exclusion.

Third, the two scenario design of the study did limit the exploration of how these interactions may have affected the dependent factors in other situations where interracial interactions may lead to exclusion (e.g., parental fears over cross race friendships or dating). Future work employing additional types of interracial interaction (e.g. inviting a cross-race friend to one's home for a sleepover party, engaging in intimate online relationships) would allow for

more in depth analysis of the affects of interracial scenarios on adolescents and young adults in offline and online settings.

Fourth, currently available social identity measures originally developed by Tajfel & Turner (1979) do not take into account online interactions or more subtle effects of peer interactions when it comes to measuring social identity. Spear and Lea's (1994) SIDE model does offer a better explanation of social identity in relation to online groups, but focuses to a greater degree on isolation and anonymity in various contexts. While the model itself helps explain interactions between social identities and online groups the measures used in the SIDE model were not fully appropriate for this study. Additionally, future studies employing social identity measures need to take into account how salience of ethnic identity differs for majority and minority group members. Specifically, research on how majority participants' understand and identify with their particular ethnic backgrounds and how it affects their personal sense of social identity is essential to future research, especially when making comparison between majority and minority groups. Integrating and developing more robust social identity measures specific to intergroup contact and online activity may lead to a clearer understanding of young people's judgments of racial exclusion.

Finally, an obvious weakness to online data collection is the inability to interact with participants during the interviewing process. Current online survey technology is limited and does not allow the researcher to clarify or further explore participants' responses, as is possible in face-to-face interviews. Researches in the fields of education and computer science have already begun developing programs that allow automated question generation based on key words and phrases (Le, Nguyenm, Seta, & Pinkwart, N., 2014; Liu, Calvo, & Rus, 2014). This type of question generation would allow researchers to continue gaining the benefits of online

surveying while being able to ask specific interview questions based on key words and phrases that participants supply. While this technology will not replace the need for face-to-face interviews in the near future, it will help expand the possibilities for online research.

### **Conclusions**

The current research findings revealed a complex pattern of judgments between the dependent and independent variables, and indicate that adolescent and young adults are able to make context specific decisions about interracial exclusion. Future research examining the interaction between intergroup contact and social identity could reveal important findings for adolescents and young adults concerning their broader views about interracial peer exclusion, especially in online settings. The present study also illustrated the potential benefits of online interaction with peers of different ethnicities, especially for individuals who may have limited opportunities for contact in offline settings. For example, young people who live in predominately white neighborhoods with little opportunity for interaction with peers of different ethnicities may be able to access online communities with potentially greater ethnic diversity thus increasing their opportunity for positive intergroup contact. Through these positive online interactions these individuals may be more willing to seek out peers of different ethnicities to interact with in their communities. Additionally, this study provides an important examination of the relationship between online activity, social identity, intergroup contact, and evaluations of interracial exclusion among adolescents and young adults in the U.S. Moreover, the study addresses questions about the applicability of intergroup contact (Allport, 1954) and social identity measures (Tajfel, 1978) in online settings.

A promising finding from this investigation is that adolescents and young adults who reported high levels of offline intergroup contact and low levels of online intergroup contact were more likely to seek out interactions with peers of different ethnicities through online

activities, thus increasing their levels of online intergroup contact. In addition, this interaction between offline and online settings could help bring much needed alternative perspectives to young people who may not have access to positive levels of intergroup contact in offline settings. This may translate into individuals with high levels of online intergroup contact being able to transfer those experiences to offline intergroup contact and engage with peers of different ethnic or racial backgrounds in real world settings. Encouraging young adults and adolescents to interact with others through mutual online spaces (forums, message boards, social media websites, etc.) may increase individuals' understanding of ethnic and minority groups (McKee, 2002). Additionally, cultivating young people's positive interactions through social networking and various online media may lead to adolescents and young adults with more diverse perspectives and attitudes than they would have had without such interventions.

Another promising finding from this investigation was the interaction between high levels of intergroup contact and a strong social identity being associated with individuals evaluating race-based exclusion as wrong. Available research suggests that individuals with weak social identities often seek out groups with stronger more salient social identities to bolster their own social identities (Hogg & Abrams, 1988). This may lead individuals with weak social identities and low levels of intergroup contact to actively seek out and engage with groups with strong social identities and high levels of intergroup contact, in turn strengthening their own social identities and levels of positive intergroup contact which under the right circumstances could lead to greater awareness of racial prejudice and interracial peer exclusion. Further experimental investigations are needed to estimate social identity and the methods in which participants form in-group bonds.

In conclusion, future research needs to focus on the types of intergroup contact and social identities that may lead to differences in how adolescents and young adults think about interracial peer exclusion and contact across various settings. What makes these findings novel is that the study was able to address questions about the applicability of intergroup contact (Allport, 1954) and social identity (Tajfel, 1978) in online settings. Moreover, confirming the validity of scenarios depicting interracial exclusion in online settings opens new avenues for the study of evaluations of interracial exclusion. This study also opens new avenues of research for understanding interpersonal relationships and the promotion of positive intergroup relationships. This research will improve our understanding of the benefits of the online interaction as well as enable researchers to develop effective models for explaining how online interactions play a significant role in adolescents' and young adult's views on discrimination and prejudice as well as the formation of social identity. The development of online intervention programs to reduce prejudice and improve positive intergroup relations for youth is an important goal for future research.



*Appendix A*  
Demographic Measures

Age (insert age)

Gender (Male or Female or Other)

Ethnicity (White, Black, Asian, Hispanic, other (please fill in))

Zip Code: (fill in)

*Appendix B*

## Social Reasoning Measures (Crystal, Killen, &amp; Ruck, 2008)

**Online Social Reasoning Scenario-**

Michael is very picky about his friends online. He gets along best with people who like the things he likes. Michael has a friend online named Will, with whom he chats with everyday online. Both Michael and Will are White and they both like playing online games and often meet people to chat with through online forums. One day a new boy, who is black, introduces himself on a forum Michael and Will read. Michael tells Will he's heard that Doug doesn't like the same games. He says that he doesn't want to invite Doug to chat with them because he thinks that they won't have much in common.

- 1) Why do you think that Michael believes that they won't have much in common?
- 2) What if Michael thinks that they won't have much in common because Doug is Black? How good or bad is that?
  - a. *Very, very bad: Very bad: Kind of bad: A little bad: A little good: Kind of good: very good: Very. Very good*
  - b. Why?
- 3) What if Michael thinks that they won't have much in common because Doug doesn't like the same games? How good or bad is that?
  - a. *Very, very bad: Very bad: Kind of bad: A little bad: A little good: Kind of good: very good: Very. Very good*
  - b. Why?
- 4) What if Michael doesn't invite Doug to chat because he thinks that Doug won't

fit in with Will and him? How good or bad is that?

a. *Very, very bad: Very bad: Kind of bad: A little bad: A little good: Kind of good:  
very good: Very. Very good*

b. Why?

5) How often do you think others your age might not chat with someone online  
because they are a different race?

a. *Never; Rarely; Sometimes; Often; Always*

6) How often do you think others your age might not chat with someone online  
because they do not share the same interests?

a. *Never; Rarely; Sometimes; Often; Always*

7) How often do you think people your age might not invite someone to chat because they  
might not fit in with their group

a. *Never; Rarely; Sometimes; Often; Always*

**Offline Social Reasoning Scenario:**

Dan is very picky about his friends. He gets along best with people who like the things he likes. Dan has a friend named Steve, with whom he hangs out with everyday. Both Dan and Steve are White and they both like playing soccer. One day a new boy, who is black, moves into their neighborhood named James. Dan tells Steve he's heard that James doesn't like soccer. He says that he doesn't want to invite James to hang out with them because he thinks that they won't have much in common.

- 1) Why do you think that Dan believes that they won't have much in common?
- 2) What if Dan thinks that they won't have much in common because Doug is Black? How good or bad is that?
  - a. *Very, very bad: Very bad: Kind of bad: A little bad: A little good: Kind of good: very good: Very. Very good*
  - b. Why?
- 3) What if Dan thinks that they won't have much in common because Doug doesn't like soccer? How good or bad is that?
  - a. *Very, very bad: Very bad: Kind of bad: A little bad: A little good: Kind of good: very good: Very. Very good*
  - b. Why?
- 4) What if Dan doesn't invite Doug to hangout because he thinks that Doug won't fit in with Steve and him? How good or bad is that?
  - a. *Very, very bad: Very bad: Kind of bad: A little bad: A little good: Kind of good: very good: Very. Very good*

- b. Why?
- 5) How often do you think others your age might not invite someone to hangout because they are a different race?
- a. *Never; Rarely; Sometimes; Often; Always*
- 6) How often do you think others your age might not invite someone to hangout because they do not share the same interests?
- a. *Never; Rarely; Sometimes; Often; Always*
- 7) How often do you think people your age might not invite someone to hangout because they might not fit in with their group
- a. *Never; Rarely; Sometimes; Often; Always*

The two scenarios above were adapted from The Social Reasoning about Exclusion interview which consists of three short scenarios depicting a context in which interracial exclusion might occur.

Crystal, D., Killen, M., & Ruck, M. D. (2008). It's who you know that counts: Intergroup contact and judgments about race-based exclusion. *British Journal of Developmental Psychology*, 26, 51–70.

*Appendix C*

## Social Identity Measure (Verkuyten, 2005)

- 1) I am proud of my ethnic background
  - a. Strongly Disagree; Disagree; Neither agree nor disagree; Agree; Strongly Agree
- 2) I strongly identify with my ethnic group
  - a. Strongly Disagree; Disagree; Neither agree nor disagree; Agree; Strongly Agree
- 3) I really feel connected to my ethnic group
  - a. Strongly Disagree; Disagree; Neither agree nor disagree; Agree; Strongly Agree
- 4) My ethnic identity is an important part of myself
  - a. Strongly Disagree; Disagree; Neither agree nor disagree; Agree; Strongly Agree

Verkuyten, M. (2005). *Ethnische identiteit: theoretische en empirische benaderingen (Ethnic identity: Theoretical and empirical approaches)*. Amsterdam: Spinhuis.

*Appendix D*

Internet Use Measures (Rideout, Foehr & Roberts, 2010)

1. Did you use a computer yesterday?

Yes    No    Don't know    Never used a computer

2. Thinking only about yesterday, did you go online or use the Internet at the following places?

(Yes or No)

A. At home

B. At school

C. Smart phone or mobile device

D. Somewhere else

3. Thinking only about yesterday, about how much time did you spend using the computer for the following activities?

	None	5 Minutes - Less than 30 Minutes	30 Minutes – 1 Hour	More than 1 Hour - 3 Hours	More than 3 Hours
Doing School Work					
Playing games (non- multiplayer)					
Playing games (MMORPG's, multiplayer games)					
Instant Messaging					
Emailing					
Reading magazines or newspapers online					
Doing graphics (Powerpoint, photo editing, web design)					
Going to social networking sites like MySpace or Facebook					
Going to websites to watch or upload videos (such as YouTube or Google Video)					
Going to any other type of website (such as Yahoo, mtv.com or Wikipedia) for anything besides schoolwork					
Doing something else on the computer (do not include listening to music or watching DVDs or TV shows)					



4. Which of the following have you ever done?

(Mark as many answers as you need)

Downloaded music from the Internet

Used Instant Messaging

Gotten information on the Internet about a health issue that affects you or someone you know†

Listened to the radio through the Internet

Visited MySpace or Facebook

Created a profile for yourself on MySpace or Facebook

Visited some other social networking site besides MySpace or Facebook

Created a profile on some other social networking site besides MySpace or Facebook

Created your own character or pet online

Watched a TV show on the Internet from a computer

Watched a TV show on a cell phone or iPod or other MP3 player

Read a blog

Written a blog

Watched a video on a site like YouTube or Google Video

Posted a video to a site like YouTube or Google Video

None of these

Internet usage measures were adapted from:

Rideout, V. J., Foehr U. G., & Roberts, D. F. (2010). *Generation M<sup>2</sup>: Media in the lives of 8 to*

*18-year-olds*. Retrieved from The Henry J. Kaiser Family Foundation website:

<http://files.eric.ed.gov/fulltext/ED527859.pdf>

*Appendix E*  
Intergroup Contact Measures (Crystal, Killen & Ruck, 2005)

**Online Intergroup Contact Measures:**

The following questions are about your daily activities online.

- 1) How many of the people that you interact with online do you think are from a racial or ethnic group different from your own?
  - a. *None or a few; Quiet a few but less than half; About Half; Most*
- 2) Do you ever discuss or explore racial issues online with other people?
  - a. *None or a few; Quiet a few but less than half; About Half; Most*
- 3) How much have these discussion changed your understanding of different points of view?
  - a. *Not at all; A little; Quite a bit; A lot*
- 4) How often do you collaborate/work/play with people of different racial/ethnic background online?
  - a. *Never; Rarely; Sometimes; Often; Always*
- 5) How comfortable would you be collaborating/working/playing with someone of a different racial/ethnic background online?
  - a. *Very comfortable; Somewhat comfortable; Somewhat uncomfortable; Very uncomfortable*
- 6) How many of your online friends are from a different racial or ethnic group than you?
  - a. *None; One or two; A few; Many*
- 7) Consider the places you spend the most time online:
  - a. *Nearly everyone is your racial/ethnic group; Most of the people are from your*

*racial/ethnic group; there is about an equal mix of your racial/ethnic group and other groups; most of the people are from racial/ethnic groups different from you;*

- 8) From the places online you spend the most time how many of your online friends are from a different racial/ethnic group than you?
- a. *None; One or two; A few; Many*

### **Offline Intergroup Contact Measures:**

The following questions are about your daily activities offline (i.e. school, work, etc).

- 1) How many of the people that you interact with in your everyday life are from a racial or ethnic group different from your own?
- a. *None or a few; Quiet a few but less than half; About Half; Most*
- 2) Do you ever discuss or explore racial issues with other people (i.e. at school)?
- a. *None or a few; Quiet a few but less than half; About Half; Most*
- 3) How much have these discussion changed your understanding of different points of view?
- a. *Not at all; A little; Quite a bit; A lot*
- 4) How often do you work with people of different racial/ethnic backgrounds?
- a. *Never; Rarely; Sometimes; Often; Always*
- 5) How comfortable would you be working with someone of a different racial/ethnic background?
- a. *Very comfortable; Somewhat comfortable; Somewhat uncomfortable; Very uncomfortable*
- 6) How many of your friends are from a different racial or ethnic group than you?

- a. *None; One or two; A few; Many*
- 7) In the neighborhood where you live:
- a. *Nearly everyone is your racial/ethnic group; Most of the people are from your racial/ethnic group; there is about an equal mix of your racial/ethnic group and other groups; most of the people are from racial/ethnic groups different from you;*
- 8) How many of your friends from your neighborhood are from a different racial/ethnic group than you?
- a. *None; One or two; A few; Many*

Intergroup contact measures were adapted from the Developmental Intergroup Contact Survey Crystal, D., Killen, M., & Ruck, D. (2005). *Intergroup contact assessment for children and adolescents*. Washington, D.C.: Georgetown University.

*Appendix F*

## Justifications Coding System (Crystal, Killen, &amp; Ruck, 2008)

## Coding categories for Social Reasoning Measure

- For Question Number: 1
  1. Race only: Use of “race” only. The participant evaluates the scenario in terms of “race”.
  2. Non-race: Use of “non-race” only. The participant evaluates the scenario in terms of something other than race
    - a. Sports/rival school
    - b. New/Unfamiliarity
    - c. Friends
    - d. Culture/Different country
  3. Race and Non-race (use of both). The participant uses both race (#1) and non-race (#2).
- For Questions Numbered: 2b, 3b, 4b
  1. Race, racial prejudice, discriminations, stereotypes, segregated and historical patterns (Wrongfulness of segregations); Fairness, equality, and universality. This code requires and evaluative judgment.
    - a. All races are equal.
    - b. It’s bad to exclude because all races are equal
    - c. It’s bad to exclude based on someone’s skin color
    - d. It doesn’t matter what the color of your skin is.
    - e. That’s racist.
    - f. Race shouldn’t matter
    - g. People can’t tell what a person is like based on their race.

- h. Skin color has nothing to do with personality
  - i. You can't judge someone based on their race; you might have something in common with them if you get to know them.
2. Undifferentiated empathy, potential for shared interest, non-racial prejudice, and fairness without referring to race.
- a. They are judging him without taking time to figure out more about him.
  - b. Don't judge someone until you at least have a little information about them.
  - c. They could have a lot in common, it's not fair to not invite them.
  - d. That's dumb, who cares if they don't like the same games there could be other things they have in common.
  - e. Pre-judging someone is not fair.
  - f. Michael shouldn't jump to conclusions before he has met someone
  - g. It's not fair.
  - h. You can't judge someone based solely on one thing
  - i. He doesn't even know him yet, so he can't really judge him.
3. Protecting the excluded individual to justify exclusion.
- a. If games are a large part of Michael's life, it would be hard to carry on a conversation
  - b. He's taking Doug's preferences into consideration.
  - c. They don't know what he likes, so it might be awkward.
  - d. If they don't like the same games it is hard to bond.
  - e. If they mainly play the same game, but Doug plays a different game, they might not enjoy each other's company.

- f. If they try to force themselves to play a game they don't enjoy they will end up not getting along.
4. Conforming to peer pressure (not parental), maintaining friendship, preserving group functioning, and lack of shared interest to justify exclusion.
  - a. When you don't share common interests, there isn't much ground for interaction.
  - b. It's understandable that someone who doesn't have the same interests as them wouldn't be a good fit.
  - c. He hasn't met his other friends and doesn't know if they will get along.
  - d. Maybe the others won't like him and they will all have a bad time.
  - e. It's okay because what would they have to talk about?
  - f. If Doug doesn't like the same games, they will find it difficult to have interesting conversations.
  - g. He might not fit in and there would be a fight with the other friends.
  - h. One person might want to play with him and the other doesn't, and that wouldn't be fun for everyone.
  - i. Maybe the others won't like him and have a bad time.
  - j. Not inviting him makes the chance of having fights smaller.
5. Status Quo, current practices and traditions.
  - a. That's normal behavior.
  - b. The gaming community is very fragmented and rivalries, often harsh and nasty ones, exist between different games and game types.
  - c. This is the way society is.

- d. Certain people like certain games and other like different games, that's just how it is.
  - e. None of his friends are Black.
  - f. They are used to being around a lot of white people.
  - g. That's what a lot of people think, that's what a lot of people would probably feel.
  - h. They don't know much about his race.
6. Socialization (how one is raised); Parent's authority and prenatal expectations (learned from parents or family); Parent's prior interracial experiences.
- a. They were raised that way.
  - b. Maybe he was just raised in a poor environment and it is a subconscious reaction.
  - c. She might have been brought up to think bad stuff about black people.
  - d. Probably never hung out with a Black person before.
7. Personal choice; rejecting of external influences (including peer and parental pressure)
- a. It's his choice who he plays with.
  - b. It's his own prerogative to decide who his friends should be.
  - c. If he decides to hang out with him then that is his decision.
  - d. If he wants to do it, he should do it!
  - e. He shouldn't worry about what his friends want.
  - f. It only matters what you think not what your friends think.
8. Appearance: how they look (no mention or suggestion of wrongfulness).
- a. Because she looks different.
  - b. They have a different skin color.
  - c. Just because of how she looks.



- d. They just look different.
9. Unfamiliarity/Wariness (with no reference to race)
- a. He might feel uncomfortable around someone he doesn't know.
  - b. He doesn't know Doug well enough to make an informed decision.
  - c. They don't know what kind of games he likes to play.
  - d. It's not the worst thing to not invite him, they should get to know him first.
  - e. They just don't know him.
10. Affirming stereotypes, using stereotypes, or negative prior interracial experiences (Note if the participant refers to the parents' negative experiences then code this as #6, Socialization).
- a. If you think of the stereotypical video game nerd, you don't picture a black guy.
  - b. It's fair to make assumptions based off of his race, and assume he may have different interests.
  - c. He might have different tastes because he's black.
  - d. He thinks black people are different.
  - e. People of different races often have different "ways of life" in some places.
  - f. Different races act differently.
  - g. He might be relying on stereotypes to fill in the gaps of information he doesn't know about him.
11. I don't know
12. Other

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