Social Development in the Era of New Digital Media

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Abstract

This is the second of three papers in a series. The GoodWork paper " New Digital Media, Social Institutions and the Changing Roles of Youth" delves into issues relating to NDM and development as they manifest in an individual's engagement with social institutions such as school and civic engagement; the GoodWork paper "Developing Minds and Digital Media: Habits of Mind in the YouTube Era" explores youth and development, as they relate to cognitive traits such as memory, literacy, judgment and multitasking . Together, these three papers provide a comprehensive perspective on cognition and social behaviors in relation to new digital media.

New digital media pervade all aspects of youth's social lives. Young people create personal profiles on social network sites like MySpace and Facebook, use their cell phones to talk and text at a dizzying pace throughout the day, and upload homemade videos to sites like YouTube. These activities have caught the attention of many adults, including parents, educators, and researchers, who wonder if today's young people are developing differently than "pre-digital" generations. In this paper, we consider the relationship between youth's new media activities and their developing conceptions of selfhood, family, and peer relationships. We are primarily concerned with identifying the ways in which youth use new media to express and understand themselves and fulfill their roles as family members, friends, and romantic partners. In so doing, we argue that youth's new media activities satisfy typical developmental and social needs. At the same time, we suggest that these activities may be shaping new conceptions of selfhood, family, and peer relationships. With respect to selfhood, we contemplate the extent to which childhood creativity and self-exploration may be influenced by the scaffolds and constraints built into many online games. Similarly, we speculate about the impact that new digital media activities have on adolescents' experiences of self-fragmentation and ego-centrism. In the realm of family life, we explore the ways in which the Internet, cell phones, and other new media technologies are altering family rituals and power dynamics. Finally, we examine youth's use of new digital media to form, maintain, and terminate friendships, romantic relationships, and peer groups. We claim that these peer interactions are complicated by the instantaneous, constant, and public nature of youth's new media communications.

INTRODUCTION

New digital media pervade the lives of young people in a way they did not just ten years ago. In 1997, 51% of U.S. households with children ages 6-17 years owned a computer (Newburger, 1999). By 2008, 93% of households with children owned at least one desktop or laptop computer, while 58% owned two or more (Kennedy, Smith, Wells, & Wellman, 2008). In addition, 94% of households now have at least one member who goes online regularly, and 66% have a home broadband connection. Young people also enjoy using smaller gadgets like cell phones and iPods. In 2006, 63% of youth ages 12-17 years personally owned a cell phone and 51% owned an iPod or MP3 player (Rankin Macgill, 2007).

Parents, educators, and researchers are scrambling to keep up with this rapid pace of new digital media adoption. We watch young people create personal profiles on social network sites like MySpace and Facebook, use their cell phones to talk and text at a dizzying pace throughout the day, and upload homemade videos to sites like YouTube. Although adults engage in many of the same activities, we nevertheless marvel at the way youth seem to take for granted the presence of new digital media in their lives. We recall our own Facebook-less, cell phone-less childhoods and wonder if youth today are fundamentally different from the youth of earlier generations. Indeed, we have even created terms like "digital natives" and "the Net Generation" to signal our belief that today's young people are a new breed. However, while we sense that something is different about today's youth, we do not know precisely where the difference lies or whether it is good, bad, or mixed.

Though the pervasiveness of cell phones and social network sites is a relatively new phenomenon in the United States, researchers have already begun to investigate the role that these and other new media play in youth's lives. In this paper, we draw on a broad range of this work to consider the relationship between youth's new media activities and their developing conceptions of selfhood, family, and peer relationships. We examine these spheres of social life in three separate sections. We are primarily concerned with identifying the ways in which youth use new media to express and understand themselves and fulfill their roles as family members, friends, and romantic partners. In so doing, we contemplate how youth's new media activities may be shaping new conceptions of selfhood, family, and peer relationships.

Our analysis is situated in a particular disciplinary framework. We are interested in exploring youth's new media use from a social cognitive perspective and in the context of human development. The field of social cognition is concerned with the ways in which individuals construct their social reality (Markus & Zajonc, 1985). This disciplinary lens recognizes that external social situations and internal cognitive processes interact with each other to create individuals' experience of social reality. With respect to young people, this interaction takes place in the context of human development. Thus, a typical eight year-old, eighteen year-old, and twenty-eight year-old are likely to interpret a given social situation in different ways due to their varying levels of experience and cognitive maturity.

This paper contributes to the broader discussion of young people's new media use in two important ways. First, we use our social cognitive and developmental lenses to consider the motivations behind certain new digital media activities across different ages and social contexts.

For instance, we explore the impetus behind children's engagement in virtual worlds like Neopets and adolescents' enjoyment of social network sites like Facebook and MySpace. We see that many of these new digital media activities satisfy certain developmental imperatives, such as identity exploration and friendship formation through reciprocal self-disclosure. Second, our theoretical perspective allows us to identify what is new, particularly when we consider the distinct features of new digital media and compare them to their "old media" equivalents. In many cases, we find instances of magnification. That is, new media allow for greater self-disclosure, increased intimacy in friendships, and heightened parental monitoring. We also see entirely new behaviors, such as individuals who express themselves through diverse digital persona simultaneously, and family members who use cell phones and the Internet to stay connected throughout the day. We speculate about the extent to which these magnified and new behaviors may be changing young people's experience of self, family, and friendship.

Our analysis takes place within a particular historical and cultural context. Thus, when we discuss changes to self-conceptions, peer interactions, and the parent-child relationship during adolescence, we do so with the understanding that adolescence was not widely recognized as a distinct developmental stage in the social sciences until the writings of G. Stanley Hall (1904) at the turn of the twentieth century (Modell & Goodman, 1990). Indeed, the term "teenager" was introduced specifically in the United States as a result of market research in the 1950s, and in many parts of the world today, "youth" is not regarded as a discrete category of individuals (Buckingham, 2007). Similarly, when we discuss adolescents' search for autonomy and the centrality of peer relationships in this process, it is important to note that these are relatively recent phenomena and distinctly American.

Several additional distinctions are warranted. First, the claims we make about youth and new digital media may not apply to cultural contexts beyond the United States, where social structures and patterns of media use may be quite different. Secondly, potential cohort effects should also be acknowledged. Individuals born in the twenty-first century may use the new digital media in ways that differ markedly from today's adolescents, who certainly engage with new digital media differently than adolescents of ten years ago. A third distinction relates to the differing levels of expertise among individuals who engage with new digital media. Someone who possesses the knowledge to design and program a personal website may approach online self-expression and peer interactions in a different way than someone whose new digital media expertise is more limited.

Lastly, we explore in this paper the interaction between individuals' developmental level and their new digital media activities. While age serves as a useful proxy for developmental level, it is important to note that age and developmental level are not synonymous. Development proceeds at different paces for different individuals. Thus, despite their different ages, it is quite possible for a sixteen year-old and a twenty-three year-old to construct similar self-conceptions. We acknowledge that our claims are likely complicated by these and other factors. However, detailed analysis of the interactions between developmental level, on the one hand, and age, expertise, cultural context, and cohort effects on the other, is beyond the scope of this paper. Our primary purpose is to explore more broadly the relationships among social cognition, development, and new digital media use.

PART ONE: SELF

The self is constructed and expressed in multiple ways during the course of human development. In this section, we apply a social cognitive lens to examine how individuals at different ages and stages of development use the Internet for self-expression and exploration. We draw on traditional accounts of self-development to show how the impetus behind certain online self-expressions can be illuminated by placing them in a developmental context. Making comparisons between old and new media, we also consider the extent to which distinct features of the latter may be reshaping the way individuals develop a sense of self.

I. Childhood

During the course of human development, from infancy through adulthood, the self exists as a dynamic construct that alters with changing cognitive capacities and social relationships. Before children learn to communicate through language, their sense of self is largely limited to their physical movements and sensations (Harter, 1999). As their language skills develop, children begin to think about themselves as individuals who exist across time and in relation to others. Young children describe themselves using concrete, observable characteristics, such as physical attributes (hair color), possessions (toys), emotions (happy), and specific skills (counting to 100).

The period of middle and late childhood corresponds to Erikson's (1968) Industry versus Inferiority stage of psychosocial development. According to Erikson, school-age children begin to focus on what they can do and create, and they describe themselves in terms of their competencies. By late childhood, these competencies become more interpersonal in nature, since friendships assume a growing importance in children's lives. As children spend increasing amounts of time with their peers, they begin to evaluate themselves in relation to others (Harter, 1999). Social comparison requires specific cognitive capacities that do not usually emerge before middle to late childhood. Children's progression to such higher order thinking typically occurs through a process of scaffolding, whereby individuals receive social or technical support that matches their skill level (Vygotsky, 1978).

Children Online
Today, children's developing sense of self takes place in online as well as offline contexts. Children engage with new digital media in many different ways, including participation in multiplayer virtual worlds such as Neopets. Founded in 1999 by two college students in Britain and bought by Viacom in 2005, Neopets is a multiplayer virtual world where children create (or adopt) and care for their own virtual pet (Ito & Horst, 2006). The vast majority of Neopets users are under the age of 18, and there is now a Neopets Jr. geared to children under the age of 8. As of this writing, the Neopets website showed over 160 million individual owners of Neopets and over 235 million Neopets living on the planet Neopia.

The types of self-expression that the Neopets website supports and encourages are aligned with children's social interests and cognitive capacities. The first task facing new users is the selection of a Neopet from a variety of creature templates. Next, users name their Neopet and decide what color it should be, where it should live, and its likes and dislikes. They can then begin to play games and perform certain tasks on planet Neopia to earn Neopoints, which they use to buy food,

toys, and books for their Neopet and furniture for their Neohome. These concrete activities are well-suited to children's concrete ways of thinking. They also satisfy children's need to demonstrate, measure, and monitor their competencies. By visiting their user and pet profiles, children can easily see a summary of their Neopet's health, Neopoints earned, trophies won, and items accumulated. Moreover, since other users can view this information as well, the Neopets platform makes it possible for children to compare their progress with other users. They can also choose to create galleries for the purpose of displaying their possessions to the wider Neopets community. Neopets encourages such social comparison in other ways, as well. The site hosts competitions for the best gallery, duels between players in the Battledome, and art and poetry competitions.

Many of the features that children take advantage of in virtual worlds like Neopets are available to them offline as well. For instance, they can display their skills during a game of kickball or freeze tag on the playground; compare sticker and baseball card collections with each other during recess; and compete against each other in swimming, basketball, and dance competitions. Yet, certain features distinguish sites like Neopets from these offline pursuits. First, the competencies required to participate in Neopets are distinct from the skills required to play a game of kickball on the playground. A child may succeed in the latter by displaying effective eye-to-foot coordination, whereas success in Neopets may draw on the ability to make savvy economic investments in Neopian stocks (Ito & Horst, 2006). Second, in contrast to the messiness of the offline world, Neopets provides users with clear and quantifiable feedback. Whereas disputes may arise on the playground over who can run the fastest or jump the farthest, no such ambiguity exists on the planet Neopia. Competencies are easily measured and comparisons readily made. We do not yet know how the focus on alternate competencies or the ease of quantification and comparison may impact children's social development. Whether the impact is good, bad, or mixed, it seems likely that a new social context for self-evaluation arises when new competencies are introduced and when ambiguity is traded for precision.

Finally, Neopets also provides children with a customized experience that they control. They choose destinations to visit, contests to enter, and games to play. With each game, players advance at their own pace through incrementally higher levels of difficulty. This individualized support ensures that their skill level matches the task at hand. While scaffolding contributes positively to cognitive growth (Vygotsky, 1978), we do not yet know how such well-calibrated scaffolds contribute to children's developing sense of self. Importantly, customization and control do not amount to complete freedom. Children are necessarily bound by the rules of each game and the constraints of movement around the virtual world that the designers have built into the software. It is germane to consider whether childhood creativity and self-exploration are supported, compromised, or unaffected by the scaffolds and constraints of online games.

II. Adolescence

Adolescence marks an important stage in the development of one's sense of self. Erikson (1968) described adolescence as a period of identity development, where individuals reexamine their childhood identifications and begin actively to contemplate such questions as "Who am I? How do I fit into society?" Erikson claimed that adolescents require a psychosocial moratorium, or a "time out," during which they are free to contemplate and try on a variety of different roles.

According to Erikson, individuals use this process of self-reflection and experimentation to construct a personal identity of beliefs, values, and goals that makes sense to them and is recognized by others. Feedback, particularly from peers, plays a central role in identity development. Indeed, Erikson argued that one's identity does not coalesce until it is acknowledged by other people.

Adolescents Online

Online spaces such as Facebook, *World of Warcraft*, and YouTube provide adolescents with new contexts to explore their identities and evaluate others' responses. Originally created by a Harvard student as a means to foster online social interaction among college students, Facebook has become one of the most popular social network sites among high school students, college students, and young adults. On Facebook, individuals create a user profile and link to people they know. The act of creating and customizing a public profile gives individuals the opportunity to test out aspects of themselves and receive feedback on their self-expressions. By posting lists of favorite music, books, television shows, and movies, as well as personality quizzes, poems, relationship status, and political leanings, adolescents construct a specific identity to which others may respond (boyd, 2007; Stern, 2004). Moreover, they can choose to create and maintain multiple profiles at once, either on the same social network site or across a variety of different sites. These profiles might be slightly different shades of the same self, or, alternatively, they could reflect selves that share few common traits.

Many social network sites like Facebook now give individuals the option to maintain a blog on their profile page. Indeed, sites like LiveJournal and Xanga position blogging as their primary raison d'être. Often compared to handwritten diaries, blogs are "frequently modified web pages in which dated entries are listed in reverse chronological sequence" (Herring, Scheidt, Bonus, & Wright, 2004, p.1). Although many well-known blogs provide political commentary, most people use their blogs for personal expression to record and reflect on their daily experiences (Bell, 2007; Lenhart & Fox, 2006). Blogs give adolescents a space online to write about and reflect on their emerging beliefs, values, goals, and desired role in society (Buckingham, 2007; Stern, 2007). In this way, they may serve as the psychosocial moratorium, or "time out," that Erikson (1968) argued adolescents need to engage fully in the process of identity exploration.

Participating in massively multiplayer online role-playing games (MMORGs) and other virtual worlds offers adolescents another avenue for self-expression online. With MMORGs like *World of Warcraft* and virtual worlds like *Second Life,* players inhabit and explore virtual spaces and engage in various forms of social interaction with fellow participants. In *World of Warcraft*, players advance through the game by working with the members of their guild to defeat increasingly formidable monsters. *Second Life* more closely resembles "real life" as "residents" buy real estate, build homes, and participate in daily activities such as visiting a museum, attending a music concert, or shopping for a new wardrobe. Despite their differences, both *World of Warcraft* and *Second Life* require participants to create avatars, or graphical representations of their online persona. The flexibility of the software allows individuals to create online persona that bear little resemblance to their offline appearance. Thus, adolescents can experiment with their gender, race, age, and physical skills.

It is also possible to experiment with one's self-presentation on video-sharing sites like YouTube. Bought in 2006 by Google, YouTube is a popular website that allows users to upload and share video content easily and with no financial expense. In addition to uploading their own content to the site, users can view, rate, and comment on other users' videos. While physical characteristics like race and age may not be as easy to manipulate with video, individuals can nevertheless create an array of selves with the use of creative camera work, costumes, and editing. By uploading their personal videos to YouTube, they can share these selves with a potentially large audience. Some adolescents might receive comments from viewers and use this feedback to shape future self-representations.

The identity experiments open to adolescents on the Internet have several offline parallels. Uploading pictures and poems on one's Facebook profile is similar to decorating a school locker or binder. Inserting a playlist of favorite songs might be considered the online equivalent of making a mix tape. Indeed, offline role-playing games like *Dungeons and Dragons* directly inspired many of the MMORGs, such as *World of Warcraft* and *Ultima Online*. Despite these commonalities, several features of the new digital media distinguish individuals' online self-expressions from their offline expressions. For instance, the flexibility of the new digital media software appears to give individuals greater latitude in the way they carry out their identity experiments. While one's physical appearance is difficult to alter offline, the deliberate act of constructing a self online means that individuals can easily manipulate their physical characteristics in myriad ways. Such manipulation may seem particularly appealing in a context of spatial and temporal distance from one's audience, the absence of visual and auditory cues, and the perception of anonymity. Moreover, Turkle (1999) points out that the selves one constructs online can be expressed simultaneously. A person might sit down at her computer and enter *World of Warcraft* as a warrior, *Second Life* as a housing developer, and Facebook as an 18 year-old high school student, all at the same time. Despite the ease of self-manipulation online, Willett (2007) points out that the identities young people create online are shaped in large part by their participation in consumer culture.

These distinguishing characteristics of the new digital media may interact in important ways with adolescents' developing sense of self. As individuals make the transition from childhood to adolescence, they develop the capacity for abstract thought. While abstract thought represents a cognitive advance, it nevertheless introduces certain challenges to individuals' emerging sense of self (Harter, 1999). For instance, as young adolescents start to experience an increasing number of social contexts, it is common for them to construct a variety of self-concepts. However, due to the cognitive constraints that characterize early adolescence, the multiple selves they construct tend to remain compartmentalized, or fragmented. Thus, a boy who views himself as easygoing, friendly, and popular with friends, may perceive himself to be stubborn, sullen, and quiet when in the company of his parents. Given the flexibility of new digital media, opportunities for self-fragmentation seem to be magnified online. This state of affairs may have particular implications for young adolescents who have not yet developed the cognitive capacity to integrate their different self-concepts. Whereas an older adolescent or adult might be able to draw connections among their multiple selves on- and offline, a younger adolescent may find it difficult to achieve the same degree of coherence. Social network sites like Facebook emerge as a possible antidote to this sense of fragmentation. By serving as a type of online repository for youth's various digital presences, these sites may actually help adolescents achieve a sense of coherence online.

The typically underdeveloped quality of adolescents' abstract thought processes also accounts for the two forms of adolescent ego-centrism described by Elkind (1967). The "imaginary audience" they construct in their minds gives them the impression that everyone is watching and judging their every move, because they assume that their preoccupations are shared by others. The "personal fable" results from the same improper differentiation between self and other, but it involves adolescents' belief in their personal uniqueness. They construct a narrative, or "fable," about themselves in which their thoughts and experiences are special and distinct from others' thoughts and experiences. Some scholars of adolescent development suggest that peer interaction can help adolescents to overcome their ego-centrism (Pugh & Hart, 1999; Youniss & Smollar, 1985). By sharing their thoughts, feelings, and experiences with their peers, adolescents may come to realize that they are neither as unique as they had imagined, nor are they the focus of everyone's attention. An interesting question to consider is whether online activities help or hinder adolescents from overcoming their ego-centrism. It may be that the self-focus involved in constructing and managing one's identity online promotes ego-centrism. On the other hand, the ability to read about the thoughts and feelings of others through participation in online journaling communities like LiveJournal and Xanga may help adolescents overcome egocentric thinking by showing them that their own thoughts and feelings are shared by others.

Typically, adolescent ego-centrism starts to recede towards the end of this developmental period (Harter, 1999). During late adolescence, individuals begin to imagine their "possible selves" as they consider the roles they might adopt in the broader society (Markus & Nurius, 1986). Instead of focusing on who they are at this moment, older adolescents begin to think of who they might become in the future. The construction of possible selves is shaped by an individual's social context and the possibilities for being she perceives therein. Online contexts provide individuals with the opportunity to interact with more people of varying ages, expertise, and life experiences (Ito et al., 2008). In this way, they may provide adolescents with a richer palette with which to formulate their possible selves.

III. Adulthood

Erikson's (1968) psychoanalytic approach to identity development is an essentialist one that assumes that individuals construct identities that last, with some amount of tinkering, for long periods of time. In contrast, Goffman (1959) and symbolic interactionists such as Cooley (1902) and Mead (1934) describe the self as more malleable. They argue that the self, as a product of social interactions, changes with changing contexts. According to Goffman's dramaturgic analysis of social life, the self is the product, not the cause, of a scene that a performer creates for the benefit of an audience. As a "collaborative manufacture" between performer and audience, the self is reconstructed with each new audience. In a similar manner, Cooley's description of the "looking-glass self" and Mead's account of the "generalized other" underscore the contingent nature of the self and its perpetual reliance on social feedback and interpretation.

Adults Online
In a world where one's identity is forever being constructed and revised in the context of changing social relationships, it is perhaps not surprising that many adults engage in the same kinds of online self-expressions as adolescents. Adults started to join Facebook when it opened

its site in 2006 to people not yet or no longer in college. It is unlikely that a 31 year-old computer programmer uses Facebook in quite the same way as a 13 year-old middle school student. The former may be more concerned with creating a professional-looking profile suitable for maintaining business contacts, while the latter may be more interested in creating a profile that conveys an image of rebelliousness to impress her friends. Still, both profiles will likely include lists of favorite music, books, television shows, and movies. In a similar manner, adults as well as adolescents maintain personal blogs, and, while most well-known political blogs are written by adults, most adults blog primarily about their daily experiences (Lenhart & Fox, 2006). Thus, contrary to what some people may believe, online introspection is not limited to angst-filled adolescents. Finally, virtual worlds like Second Life make it possible for adults to create online persona that have little or no foundation in their offline experience. Indeed, some people maintain completely different homes, professions, and marriages in Second Life than they do in their "real life" (Kugel, 2007). While adults and young people engage in many of the same types of self-expressions online, it is likely that differences in cognitive abilities and social interactions lead each group to experience their online selves in distinct ways. It may be that children, adolescents, and adults experience distinct benefits and drawbacks from their online self-expressions. This possibility strikes us as a fruitful area for future research.

Summary

By placing individuals' new digital media activities in a developmental context, we can gain insight into their motivations for engaging in certain forms of online self-expression. For instance, the concrete forms of self-representation and evaluation available on Neopets are well-suited to children's concrete ways of thinking. Similarly, the flexibility of new digital media software provides adolescents with myriad opportunities to experiment with their identities. At the same time, the distinct features of the new digital media raise questions about their influence on individuals' developing sense of self. In this section, we have raised questions about the degree to which certain online activities may be shaping development in new ways.

PART TWO: FAMILY

The new digital media are increasingly embedded in American homes, from Internet-enabled computers and personal digital assistants (PDAs), to cell phones, Web cams, and video game consoles. In this section, we consider the influence of new digital media with respect to three aspects of family life: interactions among family members, parents' role in their children's lives, and the nature of parental authority in adolescence. We preface each of these discussions with a broad survey of family life considered from a social cognitive and developmental perspective. As in the previous section, our purpose is to use this disciplinary perspective to inform our understanding of the interaction between family life and the new digital media. In the process, we contemplate ways in which the new digital media may be contributing to shifts in family relationships.

I. Family Interactions

Family relationships shape children's social development in important ways. The family stories that parents tell in informal settings communicate certain values and beliefs to children (Parke & Buriel, 2006). Family rituals, such as celebrations, vacations, and rites of passage, convey values as well, in addition to shaping family interactions and creating group cohesion. Ling and Yttri (2006) describe family rituals as "the bond that holds the family together" (pg.222). In fact, family rituals may act as a protective factor in adolescence, helping individuals to preserve their self-esteem and avoid risky behaviors such as binge drinking (Collins & Steinberg, 2006). Ling and Yttri also note that rituals like keeping "father's chair" off-limits to children and honoring mothers on Mother's Day serve to establish and maintain the power structure within a family. Family rituals are often shared with aunts, uncles, grandparents, and cousins. These extended family members may also play an important role in children's lives, particularly among ethnic minority groups (Collins & Steinberg, 2006).

A particular family relationship, the sibling relationship, figures prominently in children's social development. In fact, children spend more time, on average, with their siblings than they do with their parents (Parke & Buriel, 2006). Sibling relationships give children the opportunity to practice the social behaviors they learn from their parents before trying them out with their peers. Conflict with siblings can also prove useful, as it allows children to hone their conflict resolution skills. Older siblings in particular serve important roles by managing social experiences with other children and transmitting cultural knowledge and practical skills. This latter function is likely more important in African, Polynesian, and Mexican cultures than it is in European or American cultures (Parke & Buriel, 2006).

Family Interactions & NDM
Before the introduction of television into American homes in the middle of last century, shared family time might have consisted of listening to the radio, playing a card game, or exchanging stories about the day's events. Once television had found its way into the home, a favorite program may have brought family members together for an evening in the living room. Talk might have been limited to topics relating to the show and squeezed into commercial breaks, but all family members would be sharing the same experience. The site where family interactions

take place looks quite different now than it did just one generation ago. American households today are wired and full of gadgets. A 2008 survey of American households conducted by the PEW Internet and American Life Project found that 93% of married-with-children households own at least one desktop or laptop computer, while 58% own two or more; 94% of households have at least one member who goes online regularly; 66% have a home broadband connection; and 89% of households own multiple cell phones (Kennedy et al., 2008).

Given these statistics, it is possible to envision a hypothetical evening in which mother, father, 12 year-old daughter, and 15 year-old son are physically together in the family living room but not actually interacting with one another. Perhaps the only audible sound comes from the television, yet the silence does not mean that everyone is watching the show. Instead, the mother is using her Blackberry to catch up on the email that piled up during her busy day at work. The father is using his laptop to read online newspaper articles and write a speech for his boss. The 12 year-old daughter is listening to music on her iPod while conducting five or six simultaneous IM conversations and writing a book report for school on the family computer. The 15 year-old son also listens to music on his iPod while using his laptop to update his Facebook profile, watch YouTube video clips, and search Wikipedia for information about the Cuban Missile Crisis in preparation for his history term paper. These past and present scenes are painted with broad strokes and likely fail to capture the particular experiences of most American families. They are intended merely to suggest shifts in the way that families interact with each other when different media are introduced into the home.

Some scholars suggest that the presence of new digital media in the home undermines family relationships and rituals by diminishing the amount and quality of time family members spend together (Comstock & Sharrer, 2007; Ling & Ytrri, 2006). Ling and Yttri (2006) argue that the introduction of mobile phones into the home has had the effect of taking attention away from shared family activities such as family meals. As a result, these family rituals are less effective at bonding the family and maintaining its power structure. Lee and Chae (2007) investigated this claim by surveying 222 Korean students in 4th through 6th grades. The survey asked students to report on their levels of Internet use, family time, and family communication. The researchers found a positive association between students' total reported time on the Internet and their perceived reduction in family time. However, there was no association between students' Internet use and their perceived reduction in family communication. In light of these findings, Lee and Chae suggest that Internet use may impact families by reducing "passive" family time while leaving "active" time like family communication unaffected. Notably, Lee and Chae did find significant effects when they examined the association between perceived family communication and *type* of Internet use. Specifically, they found that children who reported using the Internet for communication (e.g. email, online chat, social networking) were more likely, on average, to report a perceived reduction in time spent communicating with family members than children who used the Internet primarily to play games or complete homework. The researchers use this finding to suggest that communicating with friends online may have the effect of reducing communication among family members.

The PEW survey of American households found some evidence to support the claim that new digital media technologies negatively impact family life (Kennedy et al., 2008). The results from the survey show that families with many new digital media gadgets are less likely to have dinner

together, more likely to work longer hours, and more likely to report lower satisfaction levels with family and leisure time. On the other hand, the same study also found that networked families are discovering new ways to connect with each other. New media technologies like email, IM, and mobile phones allow family members to interact with each other when they are physically separated. These technologies allow couples and their children to stay connected during the day by sharing links to interesting websites, coordinating activities, or simply saying hello. Lee Rainie, director of the PEW Internet project, uses the term "love taps" to describe the electronic communications that couples exchange periodically throughout the day (St. George, 2008). When the family comes together at the end of the day, they may gather around the computer screen for a Web cam "visit" with extended family members living in a different state, or they might watch a selection of entertaining videos on YouTube. According to Rainie, such practices create a kind of "virtual hearth" (St. George, 2008).

The PEW survey suggests that new digital media are altering the *way* in which family members interact with each other. Consider the family that used to pay weekly visits to the local bowling alley but now stays home to play Wii Bowling. Or, the father who recognizes the rock songs that his daughter is practicing on Guitar Hero and tells her about his stint as bass guitarist in a band at college. Similarly, where siblings might once have engaged in physical rough-housing on the basement floor, they might now duke it out virtually by playing Super Smash Bros. Melee. Perhaps an older brother sees his younger sister updating her Facebook profile and shows her how to organize her pictures into albums and set the privacy settings so that only her friends can see them. These examples raise the possibility that Internet connectivity and digital gadgets may be influencing more than simply the amount of interaction that takes place among family members.

Belch, Krentler, and Willis-Flurry (2005) suggest one particular way in which family members' patterns of interaction may be changing as a result of the Internet's presence in the home. The authors use the term "teen Internet mavens" to characterize adolescents who spend considerable amounts of time on the Internet, enjoy their online activities, and are skilled at searching for and retrieving information. Belch et al. explain that these teen Internet mavens alter traditional family dynamics by virtue of their prominent role in certain family decisions, such as the purchase of a family vacation. Where the research and purchase of a family vacation may once have been the sole domain of parents, their Internet-savvy children are now contributing in important ways to such decisions. With their online search skills, teen Internet mavens are able to use the Internet to identify a range of vacation packages and compare their relative values. Parents can then use this information to purchase a vacation for the family. In this way, adolescents contribute to a traditionally parent-centered family decision.

According to Belch et al., the teen Internet maven is a "virtual version" of Feick and Price's (1987) market maven. Feick and Price characterize market mavens as individuals who possess considerable knowledge about the marketplace and the products therein and whose expertise has broad influence on consumer decisions. Internet mavens' expertise lies in their ability to search for and find information on the Internet that is useful to others. With respect to the purchase of a family vacation, the ability to identify a range of vacation packages is useful for parents who may lack the online search skills of their children. It is likely that this group of adolescents would have had little input in the family decision-making process prior to the introduction of Internet

access in the home. The emergence of teen Internet mavens suggests that the power structure in some families is being renegotiated in light of children's facility with the new digital media.

II. Parents' Role in Their Children's Lives

The parent-child relationship plays a central role in an individual's social and cognitive development. According to Erikson (1968), separation of "self" from "other" commences early in life in the context of the infant-caregiver relationship. As children grow older, they actively construct their identities in relation to their parents by identifying with their parents' occupations, ideological leanings, and moral beliefs (Marcia, 1988). Parents also affect their children's relationships with other people. From birth, parents act as managers of their children's social environments and the relationships therein (Parke & Buriel, 2006). For instance, parents have traditionally monitored their children by watching them directly, or by enlisting others to watch in their place. Parents of young children accompany them to the neighborhood playground and intervene when a disagreement arises with other children. For slightly older children, parents choose their extra-curricular clubs and sports activities, and many parents shuttle their children to and from these activities. Some parents play a more active role in their children's activities by serving as Girl Scout leaders or soccer coaches.

Parents' Use of NDM
The proliferation of new digital media seems to have amplified parents' monitoring capabilities, even when they are geographically separated from their children. Many children now have cell phones, giving their parents the ability to communicate with them throughout the day via voice, text, or email message. Turkle (2007) describes the cell phone as a "tether" that keeps parents and children connected at all times. Even at summer camp, where cell phone service may be unavailable or phones may not be allowed, parents can often send their children daily email messages. Many camps now have websites to which they upload pictures of campers so that parents can see what their children are doing each day. This scene contrasts markedly with the more intermittent handwritten letters that parents formerly sent to and (if they were lucky!) received from their children in the mail. In addition to this constant connectivity with their children's daily movements, parents can maintain constant connectivity with their progress in school. Where they might once have waited for an end of semester report card, parents can now log on to the school intranet throughout the year to review their children's grades. Turkle questions whether such "tethered" children can develop a proper sense of autonomy, knowing that they are never wholly on their own.

The introduction of Internet-connected computers in many homes has added a new environment for children to explore and parents to monitor. Parents of small children can control how much time they spend online and what sites they visit simply by sitting with them in front of the computer screen. It becomes harder for parents of older children to monitor their computer use directly, particularly if both parents hold full-time jobs. Some interactive sites, such as Club Penguin, try to facilitate parental oversight of children's online activities by allowing parents to create an account that they can use to monitor their children's activities and limit their time on the site. Parents can also install filter software, such as Net Nanny Parental, CYBERsitter, and Safe Eyes, that limits what children can do online. Many filter software programs give parents the ability to manage their children's computer use remotely. They can block specific websites or

content on websites, as well as instant messaging (IM) programs and email accounts. In addition, monitoring software allows parents to receive daily reports of their children's online activities, including websites visited and transcripts of IM conversations. Some computers, like the Disney Dream Desk PC, build such parental-control software directly into the system.

It appears that many parents make use of the monitoring capabilities available to them. A 2006 Kaiser Family Foundation survey of parents with children ages 2-17 showed that 65% of parents closely monitor their children's media use, including TV, Internet, and video game playing (Rideout, 2007). In addition, 41 % of those parents with Internet-connected children use filter software or other parental controls, and 70% check the websites their children visit with some frequency. There is evidence to suggest that children do not enjoy having their online activities so closely monitored. In a UK survey of parents and their 9-17 year-old children, 69% of the children surveyed said they mind their parents restricting or monitoring their Internet use (Livingstone & Bober, 2006). In addition, two-thirds of the children said they had tried to protect their privacy from known and unknown others by using such strategies as deleting webpage histories, minimizing windows, and mislabeling files. Livingstone and Bober (2006) suggest that these actions and reactions may negatively impact levels of trust between parents and children.

III. Parental Authority in Adolescence

The way that family members interact with each other typically changes when children enter adolescence (Collins & Steinberg, 2006; Kroger, 2007; Youniss & Smollar, 1985). The transition from childhood to adolescence brings with it the realization that one's parents are imperfect people rather than all-knowing figures (Youniss & Smollar, 1985). This realization coincides with the beginning of adolescents' identity exploration and search for autonomy. Consequently, families may find they need to reorganize the way they relate to one another. Often, this reorganization involves changes to the quality and scope of parental authority. In childhood, parents' authority tends to span all contexts and is unilaterally prescribed. In adolescence, this authority becomes limited to specific areas and adolescents are often permitted to take part in certain decisions. In some cases, the adjustment in parental authority leads to considerable conflict (Collins & Steinberg, 2006).

Parental Authority & NDM
Adolescents' search for autonomy may be particularly difficult in today's society. boyd (2007) notes that young people have little unstructured time and few public spaces open to them that are not supervised by adults. Within this context, many adolescents turn to the Internet as a space to communicate with their friends (boyd, 2007; Ling & Ytrri, 2006). Moreover, since the quest for autonomy often coincides with the realization that one's parents are imperfect individuals whose authority should be limited, it is unsurprising that many adolescents deem the Internet outside the bounds of legitimate parental authority (Livingstone & Bober, 2006). This feeling may be particularly strong among individuals who believe they are more technologically savvy than their parents. With this perspective in mind, it is understandable that adolescents seek to keep their Internet activities from their parents, either by deleting the search history on their computers, refusing to "friend" their parents on Facebook, or by creating "mirror" profiles known only to their friends (boyd, 2007; Livingstone & Bober, 2006).

American adolescents have tested the limits and legitimacy of parental authority long before the introduction of social software tools like Facebook, MySpace, and Instant Messaging. We think perhaps of a young girl sneaking out of her bedroom window at night after arranging pillows under her bedspread in the shape of a sleeping body; or, a young boy changing his outfit and manner of speaking when away from home and parents. Examples such as these remind us that adolescent rebellion is not itself a new phenomenon. The way it is carried out with new digital media, however, is new. A distinctive feature of the new digital media is their ability to render time and space irrelevant. This feature makes it possible for adolescents to change their identities and engage in forbidden activities while sharing the same physical space as their parents. For example, adolescents often use their mobile phones at home to send surreptitious text messages to their friends and romantic partners (Ito, 2005). They might type a quick message from under the dining room table during dinner, or engage in an extended text conversation late at night in their bedroom. The ease of circumventing parental monitoring in this way complicates the way that parents establish and exert their authority, particularly for parents who feel like "digital paleoliths" alongside their "digital native" offspring.

Summary

The new digital media permeate American households. Their presence is felt in many aspects of family life, including interactions among family members, parents' role in their children's lives, and the changing nature of parental authority in adolescence. From the changing landscape of the family room to the changing patterns of family member communication, it seems that new digital media are contributing to shifts in family relationships. It remains to be seen how parents and children will respond to this challenge and what new family systems may emerge as a result.

PART THREE: PEERS

Peer relationships serve an important function throughout the lifecycle. Through their interactions with peers, individuals learn about who they are in relation to others (Youniss & Smollar, 1985). Increasingly, peer relationships are taking place in online contexts. Young people rely on mobile phones, Instant Messaging, and social network sites like Facebook and MySpace to stay connected with each other during the course of the day. In this section, we consider three facets of peer life: close friendships, romantic relationships, and peer groups. Once again, we employ our social cognitive lens to explore how distinct features of new media technologies may be altering each facet of peer life in important ways.

I. Friendships

Peer interactions begin early in life and grow steadily in importance during the course of development (Rubin, Bukowski, & Parker, 2006). Friendships become increasingly stable during childhood, as the emphasis moves from shared activities and physical attributes to shared values. Close friendships, or "chumships," become the most important peer relationship in early adolescence (Sullivan, 1953). As perspective-taking skills improve during this period, friendships are defined increasingly by mutuality and reciprocity (Selman, 1981; Youniss & Smollar, 1985). Through mutual self-disclosure in the context of lengthy conversations, friends support, encourage, and give each other advice (Rubin et al., 2006; Youniss & Smollar, 1985). Girls' friendships tend to be particularly intimate and supportive (Berndt, 1996; Collins & Steinberg, 2006). Aside from providing a source of enjoyment and self-validation, close friendships play an important role in adolescents' cognitive development. By sharing their thoughts and feelings with each other, adolescents begin to overcome their ego-centrism as they realize that they are neither unique nor the center of everyone's attention (Pugh & Hart, 1999; Youniss & Smollar, 1985).

Friendships Online
The new digital media now play a central role in youth's friendships (Ito et al., 2008). Young people use new media primarily to maintain existing friendships rather than start new ones (Ito et al., 2008; Lenhart & Madden, 2007; Subrahmanyam & Greenfield, 2008). Mobile voice and text communication, Instant Messaging, email, and social networking on websites like MySpace and Facebook provide youth myriad ways to connect with their friends. Some of these communications take place in a public setting, like MySpace and Facebook. Others, like text messaging, email, and Instant Messaging (IM) are more private in nature. Yet, even private communications can become public when email messages intended for one person are forwarded to multiple recipients, or IM conversations are copied and pasted onto a person's Facebook profile.

Social network sites have emerged as hubs of adolescent interpersonal communication (Williams & Merten, 2008). On these sites, users create personal profiles and link them to the profiles of other users through a process of "friending." Fully 55% of online adolescents say they maintain at least one personal profile on a social network site such as Facebook or MySpace (Lenhart & Madden, 2007). A content analysis of 100 adolescent profiles found the average number of friends listed on a user's profile to be 194, with considerable variation across profiles in network

size (Williams & Merten, 2008). Another study conducted with university students in the Midwest found the average number of friends to be as high as 395 (Tong, Van Der Heide, Langwell, & Walther, 2008). The same study also determined that adolescents spend a considerable amount of time on social network sites. The average number of hours per day that students reported spending on sites like Facebook was 4.5. Adolescents communicate with each other in different ways on these sites. They can choose to write a short, public message directly on a friend's profile page, or they can send a longer message through a private messaging system analogous to email. Both types of messages might be used to carry on a conversation with a friend or to make plans for an offline activity (boyd, 2007). Some messages are simply used as "public displays of connection" (Donath & boyd, 2004).

Instant Messaging (IM) is another popular communication tool that youth employ to stay connected. Programs like Google's Gchat, AOL Instant Messenger (AIM), and MSN Web Messenger allow friends to send and receive text-based messages to each other in real-time. Adolescents tend to carry on multiple IM conversations simultaneously, since each conversation is held in a separate window and many windows can be opened at the same time (Lewis & Fabos, 2005). Lewis and Fabos (2005) explain that adolescents use IM to communicate with their friends when they are physically separated. For instance, friends might "chat" online while working on homework in their bedroom or watching TV in the living room. IM conversations are typically used to share inside jokes and gossip. Often, these jokes and gossip originate and continue in offline contexts like school. In this way, IM reinforces adolescents' offline friendships.

Adolescents also use mobile phones to maintain a continuous connection to their friends. Most mobile communication takes place between close friends. Thus, while adolescents may have a long list of names in their phone's address book, they are likely to use just a few of these names on a regular basis (Ito & Okabe, 2005; Ling & Yttri, 2006). The versatility of mobile phones allows youth to communicate either through voice or text messaging. Ito and Okabe (2005) use the phrase "virtual taps on the shoulder" to describe the short, simple text messages that adolescent friends send each other throughout the day. These messages are not intended to initiate a conversation, as a voice call might. Indeed, they typically contain information that does not require a response, such as the texter's physical location, activity status, or mood. Instead, these "virtual taps on the shoulder" are used to assert a sense of connection between sender and recipient. Given that 63% of American youth ages 12-17 own a mobile phone, this sense of connection is easy to maintain (Rankin MacGill, 2007).

Adolescents need not rely solely on new media technologies to stay connected with their friends. While 63% of American youth own a mobile phone, 37% do not (Rankin MacGill, 2007).[1] Thus, it is likely that many adolescents still use their household landline to talk with friends after school. Young people continue to pass notes in class, meet at the mall after school, and visit each other's homes on weekends. Like their digital counterparts, these "pre-digital" interactions facilitate friendship formation and maintenance. Whether they use a landline or mobile phone, write a handwritten note or text message, adolescents cement their friendships through a process of reciprocal self-disclosure.

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[1] This 2006 PEW survey found that household income and level of parental education were positively associated with adolescents' cell phone ownership.

The introduction of new media technologies multiplies opportunities for reciprocal self-disclosure among friends by providing instantaneous, constant, and simultaneous communication. Increased self-disclosure may promote adolescents' perspective-taking abilities. As previously mentioned, adolescents use their friendships to overcome the ego-centrism that characterizes this stage of development. It may be that increased self-disclosure accelerates this process as youth share with each other different dimensions of themselves. However, by using different media to share different aspects of themselves, adolescents run the risk of creating fragmented friendships that look one way offline and quite another way online. In fact, Bradley (2005) observes that it is often the case that conversations held between friends online are not discussed offline.

The empirical evidence to date suggests that self-disclosure through online communication does more to enhance than harm the quality of adolescent friendships. A one-year longitudinal study of 884 adolescents in Canada found that frequent IM communication was positively associated with the quality of best friendships (Blais, Craig, Pepler, & Connolly, 2008). Valkenburg and Peter's (2007) survey of Dutch adolescents also found a positive relationship between frequent IM communication and friendship quality. In both studies, friendships had been initiated offline, and IM was used to supplement offline interactions. Further, Valkenburg and Peter found evidence to support both the "rich-get-richer" hypothesis and the "social compensation" hypothesis. The former states that youth who are socially successful offline use online communications to enhance an already rich social life. The social compensation hypothesis, in contrast, proposes that socially anxious adolescents take advantage of the distance and anonymity of online communication to form friendships they would otherwise lack the courage to initiate. It should be noted, however, that the ease of self-disclosure online may contribute to a false sense of closeness between friends, particularly if they have little offline contact.

While the increased self-disclosure supported by new media may enhance friendship quality for a wide range of adolescents, there is the danger of moving from one extreme to another. Lewis and Fabos (2005) use the word "hyperconnectivity" to describe the way in which adolescents use the new digital media to maintain a constant connection with each other. Indeed, Ito and Okabe (2005) point out that young people often assume they are connected until they receive a specific message notifying them of their friend's unavailability. In this way, Turkle's (2007) depiction of the "tethered" child applies to their friendships as well as their relationships with parents. Turkle notes that one's emotional life can be impacted to such a degree that the simple act of registering an emotion may be difficult to accomplish without it first being recognized by a friend.

II. Romantic Relationships

Another relationship that grows increasingly important in early adulthood is the romantic relationship (Collins & Steinberg, 2006). Romantic relationships first emerge in early and middle adolescence (Savin-Williams & Berndt, 1990). Approximately 25% of young adolescents report having experienced some form of romantic relationship during the previous eighteen months; by late adolescence, over 70% say they have had such an experience (Collins, 2003; Collins &

Steinberg, 2006). By tenth grade, adolescents tend to spend more time with (or thinking about) romantic partners than they do with parents, siblings, or friends (Bouchey & Furman, 2003).

Romantic relationships emerge from and seem to serve many of the same purposes as same-sex friendships (Savin-Williams & Berndt, 1990). For instance, they provide an additional context in which adolescents can experience intimacy, practice empathy, and explore their identities. Nevertheless, romantic relationships undergo considerable changes throughout adolescence and into adulthood. In early and middle adolescence, romantic partners impart a sense of social status and group membership (Collins, 2003; Collins & Steinberg, 2006). For this reason, partners' physical appearance is often afforded more importance than the quality of their interactions (Bouchey & Furman, 2003). The focus of romantic relationships shifts in late adolescence from appearance and social status to personal compatibility (Collins & Steinberg, 2006). Additionally, attachment and caregiving become more important than sexual gratification as individuals enter adulthood (Bouchey & Furman, 2003).

While being in a romantic relationship during adolescence is positively associated with self-worth, adolescents' romantic experiences sometimes cause them considerable psychological turmoil (Collins, 2003). For instance, adolescents tend to experience more conflict and mood swings when they are involved in a romantic relationship. In addition, it appears that adolescent romantic relationships tend not to fare well in the face of disruptions such as geographical separation (Savin-Williams & Berndt, 1990). This fact is notable given that romantic break ups are one of the strongest predictors of depression and suicide attempts among adolescents (Bouchey & Furman, 2003).

Romantic Relationships Online

Youth use new digital media to communicate with romantic partners. For those adolescents exploring romantic relationships for the first time, new media technologies offer multiple ways to connect with a prospective partner. The adolescents in Lewis and Fabos's (2005) ethnographic study recounted instances of relationships starting through IM conversations. Couples typically know each other first as acquaintances in an offline context. When one of them secures the other's screen name, they begin to communicate through IM. Eventually, these interchanges take a romantic turn. A similar sequence of events is possible on social network sites. On sites like Facebook and MySpace, communication between prospective partners begins when one person adds the other to his or her list of friends. The relationship builds as the eventual couple exchanges online messages. It becomes official when the partners add each other's name to the "relationship status" cell of their profile page. Indeed, adolescents talk now about whether a relationship is "Facebook worthy," suggesting that a couple can be considered official only when the attachment has been registered publicly on Facebook.

Online chat rooms are another popular venue for relationship formation. In these spaces, adolescents actively seek out romantic partners by making public "partner requests" (Smahel & Subrahmanyam, 2007). In their study of online teen chat rooms, Smahel and Subrahmanyam (2007) found that such requests occur at the rate of two per minute. While IM and social network sites typically support relationship formation between offline acquaintances, partner searches in chat rooms tend to occur between adolescents who do not have a prior offline relationship. In

this context, adolescents are able to screen prospective partners before meeting for the first time offline.

For adolescents with ongoing romantic relationships, new media can facilitate their maintenance. Ito and Okabe (2005) describe adolescent couples' use of mobile phones to maintain a sense of co-presence throughout the day, even when physically separated. They describe one teenage couple who used their mobile phones to exchange email messages upon parting after school. These email exchanges, interspersed by the occasional voice call, lasted throughout the afternoon and evening, ending only when they finally went to sleep late at night. They sent messages during their commute home, while working on their homework, during dinner, and as they watched TV. Ito and Okabe use this example to illustrate how adolescents use new media technologies like mobile phones to build intimacy with their romantic partners. In the case of couples that are apart for longer periods of time, the use of Web cams may help to create a sense of intimacy despite geographic separation.

Younger adolescents may not seek out such constant communication with their romantic partners. Since romantic relationships function mostly as a sign of social status during early adolescence, it is likely that young adolescents use new media primarily to signal their attachment to another person. They may be satisfied to enter their relationship status on Facebook and engage in the occasional IM conversation in the evening. They might also use new media as a quick and decisive way to end a relationship. Break ups can be accomplished in a matter of seconds by sending a message to the soon-to-be ex and changing one's relationship status on Facebook.

Despite their attraction to new digital media, adolescents have not entirely abandoned non-digital methods of initiating, sustaining, and ending their romantic relationships. A trusted friend may still be called on to relay messages from one interested party to the other. Handwritten letters may be used from time to time to declare one's love and commitment during periods of physical separation. A face-to-face conversation, no matter how uncomfortable, might sometimes be relied on to end a relationship.

Yet, the distinct features of new media communication introduce new dynamics into romantic relationships that may alter the way adolescents experience them. For instance, the ability to transcend spatial and temporal barriers to communication may help relationships withstand the separations that have traditionally led to their demise. This feature of the new digital media may also alter the way in which relationships begin and end. It might feel less risky for a would-be boyfriend to approach the object of his affection through an IM exchange instead of a face-to-face encounter. Similarly, a would-be heartbreaker can easily end a relationship with a typed message and a mouse click. While it seems likely that the ease of starting relationships online would positively impact feelings of self-worth, it seems equally likely that an impersonal electronic break up would have the opposite effect. Particularly if done publicly, an electronic parting of ways could lead to considerable psychological turmoil on the part of the rejected partner. Finally, the public nature of online relationships may place undue emphasis on using romantic partnerships to assert one's social status. In the process, young people may be slower to appreciate the important role that personal compatibility plays in maintaining a meaningful and satisfying relationship.

III. Peer Groups

Friendships and romantic relationships are often experienced in the context of larger peer groups. Indeed, cliques become the locus of peer interaction starting at age 10 or 11, with most children this age reporting membership in a clique (Rubin et al., 2006). Early cliques are generally composed of children who share the same race and gender. These peer groups provide children with a sense of inclusion, validation, and identification. Also influential at this stage in development is the popularity hierarchy that emerges due to the transition from self-evaluation based on absolute standards to social comparison-based self-appraisals. Children who emerge at the top of this hierarchy tend to be more sociable and display greater social skills than children whose popularity is low (Savin-Williams & Berndt, 1990). Another determinant of one's place in the popularity hierarchy is the possession of status markers, such as a trendy pair of blue jeans or shoes (Ling & Yttri, 2006).

Because adolescents use features of their peer group to define themselves, it is important to them that the group itself be clearly defined (Bukowski & Sippola, 2001). The desire for clear group boundaries explains why members of a clique tend to demand rigid conformity to particular behaviors and values. As children attempt to define the parameters of peer group membership, bullying and victimization become increasingly common (Rubin et al., 2006). Aggression between peers surfaces as early as the second year of life, but its form changes considerably throughout childhood and adolescence. Starting at age 11 and 12, indirect aggression in the form of spreading rumors and group exclusion starts to replace the physical aggression seen among younger children (Craig, Pepler, Connolly, & Henderson, 2001; Rubin et al., 2006). This social form of aggression serves the purpose of defining who is in and out of the group, as well as the group's attitudes and beliefs.

Another type of peer group, the crowd, emerges for the first time during adolescence. Brown (1990) defines crowds as "reputation-based collectives of similarly stereotyped individuals who may or may not spend much time together" (p.177). Examples of crowd types include "jocks," "brains," and "loners" (Brown, 1990). Crowds tend not to appear before adolescence and the emergence of formal operations, because, as "categories of individuals based on intentions and personality dispositions" (Brown, 1990, p.180), they are defined in abstract terms. Like cliques, crowds help adolescents define themselves in relation to their peers (Collins & Steinberg, 2006). Unlike cliques, however, crowd norms are defined from without and imposed on members of the crowd (Brown, 1990). For this reason, it is difficult for adolescents to switch from one crowd to another because their crowd affiliation is typically imposed on them rather than freely chosen. And of course, in those extreme forms of teenage cliques called gangs, the degrees of freedom for changing status are even fewer.

Peer Groups Online
As Shirky (2008) observes, the new digital media have made group formation "ridiculously easy." Adolescents have taken advantage of this ease and brought their peer groups online. The popularity hierarchy that determines one's group membership and status offline is also present online (boyd, 2007). There are a variety of ways that adolescents use new media to assert their position in the popularity hierarchy. For instance, the type of mobile phone one owns and the

manner in which it has been customized with a particular design or color scheme can serve as a signal of popularity (Ling & Yttri, 2006). The number of people in one's address book is another way that mobile phones are used as a status symbol. Similarly, the number of friends listed on a person's social network profile conveys information about that person's popularity (boyd, 2007; Tong et al., 2007). However, it appears that one can have *too* many friends. Tong et al. (2007) detected a curvilinear relationship between number of Facebook friends and perceived social attractiveness. Subjects were presented with a Facebook mock up and asked to rate the person's social attractiveness. The size of the person's friends' list was the only piece of information that the researchers manipulated. Ratings of social attractiveness peaked at approximately 300 friends and fell as the friend count rose. Presumably, when friends number in the thousands, other users begin to question the legitimacy of each connection and the motive behind such indiscriminate "friending."

While adolescents' friend counts may number in the hundreds, they are likely to communicate online predominantly with members of their offline clique. Indeed, boyd (2007) explains that MySpace introduced the "Top Friends" list to make it easier for close friends to access each other's profile pages. This ability to delineate one's close friends clearly is well-suited to adolescents' desire to define the boundaries of their peer group. At the same time, boyd notes that the Top Friends list quickly became "pure social drama" when friends who thought they should be on someone's list discovered they had not made the cut. In this way, the information contained on one's social network profile is more than a form of self-expression; according to Livingstone (2008), it is a "place-marker" that signals group membership. As a result, adolescents' behaviors on social network sites are largely dictated by the norms of their peer group.

Just as it does offline, conflict can occur online when the norms of the peer group are threatened. Since adolescents rely on the clear delineation of group boundaries to help them define the boundaries of their personal identities, the fluidity of online spaces may be perceived by them as threatening. In order to restore a sense of group structure, some adolescents may turn to peer victimization. When this victimization is carried out with new media technologies, its negative effects may be magnified. For instance, the copy-and-paste functionality of the new digital media makes it possible to spread rumors to an essentially unknowable number of persons. This new reality contrasts with the pre-digital era, in which a more circumscribed group of people would have been the recipients of rumors. Moreover, whereas rumors previously relied on verbal repetition for their continuance, the ability to save electronic communications indefinitely makes it possible for rumors to last a great deal longer. Further, this persistence may make it harder to right the record.

 A PEW survey of 12-17 year-olds living in the United States found that 32% of them said they had experienced at least one form of bullying online (Lenhart, 2007). The most common form of "cyberbullying" was having private emails or text messages forwarded to unintended and unwanted recipients. A study of UK adolescents also found text messaging to be the most common form of online bullying (Raskauskas & Stoltz, 2007). Other forms identified by the PEW survey included spreading rumors online, posting embarrassing pictures, and sending threatening messages (Lenhart, 2007). The most likely targets were girls ages 15-17, as well as adolescents who shared a lot of information online. Still, 67% of the adolescents surveyed said

they thought bullying was more prevalent in offline contexts. Moreover, when cyberbullying does occur, it typically replicates the same victim/perpetrator roles established offline (Raskauskas & Stoltz, 2007).

Given its basis in offline patterns of behavior, cyberbullying likely occurs more often in the "friendship-driven" networks that Ito et al. (2008) describe. However, not all of adolescents' online interactions occur within such networks. There are many interest-based communities online that resemble the crowds of "jocks," "brains," and "loners" that can be found offline. Just as the football players, science club members, and band players join together in high school, adolescents converge online around favorite TV shows, books, and music groups. Yet, while crowd membership cannot always be chosen offline, adolescents can self-select into online crowds. Interest-based online communities are also distinguished by their breadth. It seems no interest is too obscure to be the basis of an online group. Subrahmanyam and Greenfield (2008) point out that many of these groups, such as cancer support groups, may play a positive role in adolescents' lives and reduce feelings of social alienation. Others, however, like self-mutilation websites, may do more harm than good.

The online manifestations of cliques, crowds, and bullying may have implications for the way in which adolescents experience their peer groups. Our discussion of interest-based online groups illustrates the potential for online spaces to broaden adolescents' spheres of social interaction. As they seek out and interact with a variety of people, their ideas about themselves and their role in the world may be similarly broadened. With respect to friendship-driven networks, Subrahmanyam and Greenfield (2008) suggest that the flexibility of new media tools like IM may make it easier for adolescents to join cliques that were not previously open to them. It may feel less intimidating to approach one or more clique members electronically than in the cafeteria. Similarly, members of a clique may be more willing to entertain the addition of a new member if they are approached outside of the clique. Additionally, adding a person to one's friend list may seem like a smaller risk than inviting that person to sit at the same lunch table. In this way, group membership may take on a more fluid aspect in online contexts.

Summary

Youth employ new media technologies to connect with their close friends, romantic partners, and broader peer groups. While considerably more research is needed to ascertain the precise impact of new media communication on these facets of peer life, the research reviewed in this section suggests that the interaction between new media and peer life is complex. While opportunities for enriched friendships, romantic partnerships, and peer group participation exist, there appear to be as many opportunities for harm. Adults – parents, practitioners, policymakers, and scholars – cannot effectively work to promote adolescents' personal growth and the quality of their peer relationships without an appreciation for both the positive and negative dimensions of youth's new media use. Common Sense Media is one organization that tries to distill the best knowledge about new digital media for adults who are involved in raising today's children.

CONCLUSION

The new digital media pervade all aspects of youth's social lives. Young people use new media to express and explore their identities, communicate with (and evade) their parents, and maintain a constant connection with their friends and romantic partners. We have employed our social cognitive and developmental lenses to shed light on the motivations behind young people's new media activities and to consider the influence that these activities may be having on their developing conceptions of selfhood, family, and peer relationships.

In the realm of selfhood, we see that the affordances of new digital media are well-suited to children's and adolescents' developmental needs. The activities offered in virtual worlds like Neopets allow children to express themselves in concrete ways, while the flexibility of new media technology provides adolescents with unprecedented opportunities to experiment with their identities. We have identified the distinct qualities of youth's digital self-expressions and considered how they may be interacting with youth's developing sense of self. For instance, we wonder how childhood creativity and self-exploration are influenced by the scaffolds and constraints built into games like Neopets. Similarly, we have speculated about the impact that new digital media activities may have on adolescents' experiences of self-fragmentation and ego-centrism.

In the realm of family life, it is apparent that new digital media play an integral role in many American households. We have explored the ways in which the Internet, cell phones, and other new media technologies are altering family rituals and power dynamics. We question the effect (and the effectiveness) of parents' increased monitoring capabilities on their children's developing sense of autonomy, as well as levels of trust within the family. With respect to parental authority in adolescence, we have identified the new ways that adolescent rebellion is carried out with new digital media and considered how they complicate parents' attempts to establish and exert their authority.

Finally, we have examined the ways in which youth use new digital media to form, maintain, and terminate friendships, romantic relationships, and peer groups. The instantaneous, constant, and simultaneous nature of their new media communications increases opportunities for self-disclosure, with potential positive effects on levels of intimacy and perspective-taking in close friendships and romantic relationships. At the same time, the "hyperconnectivity" afforded by the new digital media may negatively affect youth's ability to develop an independent emotional life. Moreover, the public nature of friendships, romantic relationships, and group membership complicates the way these peer interactions are experienced. By declaring publicly one's romantic partnerships and friendships, youth may place undue emphasis on social status and overlook the importance of personal compatibility. In attempting to define clearly and publicly the boundaries of their group affiliations, youth may resort to the new forms of bullying made possible by new media technologies.

As adults, we may watch today's young people engage with the new digital media and wonder if they are a new breed. Our analysis suggests that their motivations are actually quite ordinary and satisfy typical developmental and social needs. Yet, while youth's motivations may be easily explained, the effects on their developing conceptions of selfhood, family, and peer relationships

are less obvious. The questions we have raised in the process are important for researchers, parents, and educators to contemplate. As researchers begin to answer these questions empirically, the knowledge they generate will provide guidance for parents and educators as they continue their efforts to support the healthy development of today's youth.

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