

Psychosocial Stages Of Symbolic Action In Social Media

Completed Research Paper

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Abstract

This paper applies theories of developmental psychology, specifically Erikson's (1959) stages of psychosocial development, as a lens for understanding how people will use social media in considerably different ways at different stages of life. We conclude that people of different ages and developmental stages will use social media in very different ways and to meet very different psychosocial needs. This research suggests that studies that focus only on the use of social media by university students may be limited and not generalizable to other groups of users. Conversely, it opens opportunity for new empirical research for understanding how different groups of users employ social media differently and what types of features may be missing in current platforms that could help meet those needs. Implications for theory and practice are discussed.

Keywords: Social media, social networks, developmental psychology, theory development, breakthrough ideas.

Introduction

Recent years have witnessed the rapid proliferation and adoption of social media platforms and tools such as Twitter, Facebook, LinkedIn, and Wikipedia. Social media is notoriously difficult to define clearly, because it involves both technological and behavioral attributes and has precursors in previous generations of information technology (Kane et al, forthcoming). Rather than dealing with social media as an all-encompassing category of technology, we instead focus on a series of discrete features identified by Kane et al. (forthcoming) that are unique to social media for enabling social relationships. These features are 1) digital profile, 2) a list of relational connections, 3) the ability to visualize and navigate those connections, and 4) the ability to search content on the platform and also protect it from search.

Niche communities of young adults were often the first to adopt social media platforms, but people of all ages use them today. How people use social media may vary considerably depending on their developmental maturity. Over the past century, developmental psychology has found that people mature through distinct developmental stages that evoke fundamentally different needs, capabilities, and behaviors (Newman and Newman 2006).

For this study, we draw on a foundational theory of developmental psychology – Erikson’s (1959) theory of *psychosocial development* – to theorize that people will use social differently at various developmental stages. Although social media enables instrumental action by allowing people to share information more efficiently, it also enables symbolic action by providing new mechanisms for self-expression that may be infused with meaning and used to persuade others. If people exhibit different social capabilities and needs at different stages, their actions using social media and the meaning of those actions will therefore differ considerably. Furthermore, the very psychosocial challenges at each stage can be understood as symbolic action. In this paper, we consider social media’s role in facilitating or inhibiting the healthy resolution of these challenges. Social media provide expanded forms of language through which users can engage in symbolic action: user-friendly capabilities for sharing multiple digital content and novel relational features that allow network structure also to be used as a language for symbolic action.

Taking seriously these findings of developmental psychology in IS research may have important theoretical and empirical implications for social media research. It suggests that young adult use of social media may not be the dominant, ideal, or even represent the majority of uses of social media. Research involving college students’ use of social media is, therefore, not likely to be generalizable to organizational and other applications of social media use. It also suggests that researchers may need to control for user age in ways that extend beyond simple linear measures.

On the other hand, taking developmental psychology seriously may also create opportunities for IS researchers. It generates a wide-open area of behavioral research for discovering the different ways and reasons why people use social media at different stages of life and for different purposes, providing the opportunity for understanding how the different psychosocial needs play out differently in online vs. offline setting. It also introduces opportunities for design science research, providing a template for identifying social needs that are not currently met in the current generation of social media tools. This research could focus on what features are needed by particular demographic groups in order to meet their psychosocial needs. It also has implications for practitioner-oriented research, because this more nuanced understanding can help marketers and determine which platforms and approaches would be most suitable for addressing their target demographic.

The key contribution of this paper is not necessarily in identifying specific symbolic actions that users will engage using network content and structure at each stage of psychosocial development. Indeed, only empirical research that address the research questions and propositions implied by this research can tell us precisely how peoples’ social media use differs at different developmental stages. More important is the core thesis forwarded by this paper - that people will use social media in very different yet predicable ways at different psychosocial stages. If taken seriously by researchers, this paper would suggest radically different approaches to studying social media through a developmental psychology lens, rather than as a “one size fits all.” Just as Erikson’s original theory inspired later research that investigated, expanded, and updated its precepts, the author hopes this paper will encourage more nuanced thinking about symbolic action in social media and inspire future research regarding psychosocial maturity in social media use.

Symbolic Action and Social Media

Symbolic action is a system of communication that is based in language, relies on symbols for meaning, and is transmitted through culture (Burke 1966). Symbolic action is often contrasted with instrumental, rational action taken to accomplish concrete outcomes or goals (Habermas 1984; Weber 1921). Although people can engage in symbolic action on social media platforms using traditional language, social media platforms also provide new forms of language and symbols that enable a wider variety of symbolic action.

To explore how social media's novel communicative mechanisms influence symbolic action, we look to social network research that provides some guidance for classifying these new mechanisms. Social networks provide benefits through both content and structure (Kane et al. forthcoming; Borgatti and Foster 2003). *Content* identifies the information resources that users contribute and retrieve through the network. *Structure* describes users' types and patterns of relationships established on social media platforms. Over time, social media platforms often preserve network content and structure (Kane and Fichman 2009), so the *digital trace* of symbolic actions engaged through these mechanisms may also have implications for future symbolic action.

Content remains closest to Burke's original notion of language as symbolic action, as people communicate with others through digital content on social media platforms. Indeed, content includes the written language people use to express themselves through blogposts, comments, status updates, and similar text-based formats. Social media platforms, however, also support multimedia and hypermedia content for interpersonal communications. *Multimedia* refers to pictures, sound, animation, and video. *Hypermedia* refers to links, tags, or rating systems for relating to or evaluating content.

Although Internet users previously used text, multimedia, and hypermedia to communicate, social media has expanded capabilities for symbolic action. First, social media makes it easier to contribute content. Until relatively recently, users needed to understand computer code and file transfer protocols to upload all but the most basic content to the Internet. Social media now allows people to contribute multiple forms of content through simple Web-browser interfaces. This shift means that more people of various types can contribute digital content, increasing its social implications and its potential role as a language for symbolic action (Shirky 2008). Second, increases in bandwidth and storage capacity allow people to contribute more content for less cost (Anderson 2009), which increases the frequency of and reliance on digital content as a language for symbolic action. Third, designers determine the types and features of digital content that social media platforms support, which may vary considerably between platforms. For instance, since Facebook allows users to "like" but not "dislike" certain digital content, it provides a language for certain symbolic actions but not others. Other platforms, like Digg, allow users to vote up or down content, enabling different action. Thus different social media platforms distinctly enable and constrain symbolic action.

Social media platforms provide novel relational capabilities that allow *network structure* to become a language for symbolic action. People are typically poor at describing the structure of their social networks (Kilduff and Krackhardt 1994), but social media platforms provide new capabilities for visualizing and analyzing social network structure. For example, platforms often *quantify* the structure of the network on the platform by providing relevant statistics about networks, listing the number of connections (e.g., Twitter followers), shared connections (i.e., mutual friends on Facebook), or geodesic distance to other users (e.g., LinkedIn's degrees of separation). Social media platforms also often provide *automated updates* of changes in the network structure, notifying users if someone has established (i.e., is "now friends with") or discontinued (i.e., is "no longer friends with") a connection.

These new capabilities also allow network structure to become a language for symbolic action, because people may make networking decisions based not on the underlying relationship with the other user but on the meaning it conveys on the platform. For example, users may establish many digital friendships to cultivate perceptions of popularity or influence, or they may intentionally restrict the number of contacts to cultivate perceptions of exclusivity or intimacy. Users may also choose whether to establish or discontinue connections as a form of symbolic action, because they know that other network members will learn this information. For instance, a teenager may choose not to "friend" his mother on a social media platform, primarily because of the meaning this action might convey to his other connections, or may "defriend" someone following a fight to signal the importance of the fracture to others.

Symbolic Action And Psychosocial Development

Although all users may access the content and structure of social media platforms, they vary widely in their use of those features. We argue that the use of symbolic action on social media platforms and the potential meaning derived from that action depends on a critical factor: the user's stage of psychosocial development. Psychosocial theory is rooted in the work of Erikson (1959; 1963), who regarded "human development as the product of the ongoing interaction between individual (psycho) biological and psychological needs and abilities on the one hand and societal (social) expectations and demands on the other hand" (Newman and Newman 2006, p. 39). Psychosocial theory recognizes that conscious action also shapes an individual's engagement with the social environment; that human development is a recursive relationship between the mutual influence of the individual and the social.

Distinct developmental stages are the hallmark of psychosocial theory (see Newman and Newman 2006 for a review). Each stage involves a series of age-appropriate developmental tasks that individuals learn and follow to successfully adapt to society and its expectations (Havighurst 1972). Each stage is characterized by a psychosocial "crisis": individuals must consciously navigate the stresses and strains particular to each developmental stage in their efforts to transition successfully to the next (Erikson 1963). They resolve these psychosocial crises through central processes associated with each stage of adapting to new social demands (Newman and Newman 2006).

How do stages of psychosocial development influence symbolic action in the social media context? First, as cognitive theory indicates, the ability to comprehend and derive meaning from symbolic language is a critical defining factor of the developmental stages (Inhelder and Piaget 1958; Newman and Newman 2006). Psychosocial theory recognizes that individuals will use and understand symbolic language differently at different developmental stages (Bruner et al. 1966). Second, the psychosocial crises and resolutions associated with each developmental stage are in themselves symbolic action. Individuals do not progress to the next developmental stage simply through physical maturation or by attaining some quantifiable goal. Rather, they develop successfully by symbolically shifting their identity through appropriately internalizing, engaging in, and deriving meaning from the social expectations associated with each stage (Newman and Newman 2006). Thus, at each developmental stage, individuals will use social media to fulfill different social needs for symbolic action.

We note that we do not attempt to validate or extend developmental psychology in this paper, but we simply consider how a straightforward application of this theory might affect IS research in social media. Thus, whether and how these stages differ in their online and offline applications or whether the age ranges are accurate for all people and cultures are outside the scope of our work. We regard these as empirical questions that future research can explore if the premise of this paper inspires future work.

Next, we explore those psychosocial stages, users' symbolic actions in using social media at each stage, and social media's potential effects on identity formation by supporting or challenging users' resolutions of psychosocial crises. For each stage, we introduce IS literature that may be relevant for researchers investigating symbolic action at each developmental stage. Table 1 summarizes the following section.

Psychosocial Stages <i>(see Newman and Newman 2006 for a comprehensive treatment)</i>				Implications for Symbolic Action Using Social Media		
Stage	Age	Psycho-social Crisis	Central Process	Content	Structure	Identity Formation Implications
Early Childhood	0-6	Various	Various	Projection	Inheritance	Imprinting
Later Childhood	6-12	Industry vs. Inferiority	Education	Developmental	Limited Extension	Platform Relevance
Early Adolescent	12-18	Group Identity vs. Alienation	Peer Pressure	Affirmation	Affiliation	Cascading Alienation
Later Adolescent	18-24	Individual Identity vs. Identity Confusion	Role Experimentation	Vocalizing	Exploring	Digital Record of Experimentation
Early Adulthood	24-34	Intimacy vs. Isolation	Mutuality	Targeting	Prioritizing	Platform-Crisis Conflict
Middle Adulthood	34-60	Generativity vs. Stagnation	Person-Environment Interaction	Vocational Expression	Multiplexity	Multiphrenia
Late Adulthood	60+	Integrity vs. Despair	Introspection	Reflection	Closure	(In)appropriate Involvement
Death	Var.	Stages of Grief	Acceptance	Memorializing	Leave-taking	Persistent Profiles

Psychosocial Stages Of Symbolic Action In Social Media

Ages 0 – 6+: Early Childhood

Erikson theorizes several distinct stages that characterize early childhood (e.g., infancy, toddlerhood, early school age), when children are somewhat limited cognitively. They tend to be less able to think in abstract terms, and they are typically less sophisticated in their ability to read or use computers as users of later developmental stages. Thus, early childhood users are significantly more limited in their ability to use social media for symbolic action than users of later developmental stages. We should not assume, however, that social media has no unique symbolic action at this stage. Early childhood is associated with psychosocial challenges – learning to trust and develop autonomy – in relationships to parents or primary caregivers. Parents do for children what they cannot do for themselves, the parent-child relationship that defines early psychosocial development.

The symbolic action reflected in content at this stage, therefore, primarily involves how the parents use social media to create a digital presence on the child's behalf. The symbolic action enacted through content at this stage is called *projection*. Projection may simply involve the parent sharing pictures and stories as the child matures or deliberately molding a robust identity for the child. Nevertheless, many parents often use social media on behalf of their children. An estimated 92% of children under the age of 2 already have a digital shadow – some information about them on a social media platform.

Parents' perceptions will shape their choice of content to share: for example, pride in accomplishments, aspirations for the future, or frustrations associated with child rearing. The symbolic action enacted in network structure at this stage will be *inheritance*, in that the network structure will be transferred from the parent to the child and will consist primarily of the parent's connections. Social media allows more and wider social contacts, which means that children will be exposed to the parent's entire social network, not just those in relational proximity. The symbolic nature of this structure may be particularly important if parents or caregivers exhibit considerably different network structures (e.g., divorced parents).

Social media may play a role in identity formation by shaping the child's digital presence. An implication for identity formation is how extensively early content and structure on social media platforms shape the identity at later stages can be called *imprinting*. Neuropsychology defines imprinting as the process by which newborns of certain species adopt characteristics they observe in their environment (Horn 1985). Digital presence widely available to friends and relatives may affect how others perceive and relate to the child.

Platforms will preserve the identity and may influence how those in the future relate to the child. It is not clear how this digital legacy will affect the development of children in the digital world, and it is an important empirical question for further research. Whether the child later embraces or rebels against this identity, it may be difficult to escape or ignore the digital imprint created by parents that is widely available to current and future contacts. As it stands, we simply posit that this digital activity by parents will influence the development of children. Precisely how and to what degree is yet to be seen, and it may be many years before we have definitive answers to these questions. Regardless, both platform designers and business users of social media might incorporate this use of social media into the plans for design and use of social media platforms.

H1: Digital information shared by parents about children on social media platforms will affect the future identity formation of those children.

Ages 6-12: Middle Childhood

At this stage the child becomes capable of acting independently on social media platforms. The psychosocial crisis associated with this stage – *industry vs. inferiority* – involves learning to engage in independent and productive behavior in the social environment. Children are beginning to learn to do things for themselves, often in very structured and supervised environments such as school and team sports. Accordingly, the central process associated with this stage is *education*. It is likely that these structured and supervised environments will extend to social media platforms as well, particularly because of legal provisions that restrict the type of information online sites can collect from children under particular ages without parental consent (i.e., COPPA in the United States).

Children at this stage are still learning to use and master independent tasks, so they interact with content on social media platforms. The user is seeking to learn new skills and accomplish tasks, so call this symbolic action enacted through content *development*. Content might not be educational in the traditional sense of teaching reading or math skills, but it teaches popular cultural memes (e.g., Pokémon). Children's very desire to interact with a social media platform (i.e., clicking links, providing passwords) also likely represents their desire to master the digital environment as well. The symbolic action engaged through network structure at this stage is that of *limited extension*. The cognitive functions of this stage largely involve concrete, (not abstract) operations (Newman and Newman 2006), so social relationships established on the platform will simply extend real-world friendships. Furthermore, given the child's inability to interact with symbolic content and the platform's desire to restrict inappropriate or abusive relationships, the modes of structural interaction will be limited by the platform.

It is unclear whether and how social media will influence identity formation at this stage. These platforms may cultivate extremely valuable lessons that can support the child's development and education. On the other hand, cognitive limitations at this stage may prevent children from conceptualizing the platform's social elements, resulting in few differences from nonsocial applications. Thus, symbolic action using social media during middle childhood may be simply an extension of the early childhood phase. And yet children are first learning how to relate independently with others at this stage, so social media could have significant and long-lasting implications for identity formation. For instance, friendships formed at this

stage often have lifelong significance (Newman and Newman 2006), and so may the relational lessons provided through social media content and structure. Without further research, it is difficult to know precisely when individuals are capable of engaging in symbolic action using social media.

H2: Social media will support relationships for children in middle childhood primarily by reinforcing real-world relationships.

Ages 12-18: Early Adolescence

In early adolescence, children are physically maturing into adults, and they are beginning to establish identities independent from their parents and families. The psychosocial crisis associated with this stage is *group identity vs. alienation*. Early adolescents begin to establish and associate with particular social groups that fit their emerging individual values, characteristics, and goals. Adolescents at this stage associate both with cliques (a relatively small group of friends) and crowds (a larger archetype of personal characteristics). The central process is *peer pressure*, learning to conform to group norms and interpersonal loyalty, and should not be equated with only negative peer influence (Newman and Newman 2006).

The symbolic action enacted through content at this stage is *affirmation*. Users at this stage are more likely to transfer or repeat content that others contribute and less likely to contribute original content. By sharing content, they affirm the idea and its originator. They are likely to use content to reinforce membership in a particular social group, such as by posting photos of a particular event to show they were invited, repeating content or comments made by friends to reinforce their connections, or sharing contributions of celebrities to declare tastes in music or fashion. The user may also affirm one social group by sharing negative content about others outside that group. Content may also serve the converse symbolic role of *disaffirmation*, asserting an identity break from parents by establishing a new profile deviating from those established on their behalf at earlier stages. The adolescent may even invent new names for these profiles to hide their social media actions from their parents, a symbolic action of identity separation in its own right.

Most important at this stage may be the symbolic action enacted through network structure, which represents *affiliation* with a particular social group. The social challenge associated with this stage is not simply developing more relationships but associating or disassociating with certain referent peer groups, so the process of adding and deleting ties may be most turbulent at this stage. Social media platforms provide relational transparency; peers can view changes in social structure, which heightens the symbolic significance of that structure. As a result, the social media network structure may actually be more important than the underlying relationships because they represent peers' perceptions of group affiliation. As early adolescents struggle to decipher where and how they fit into the social structure as independent individuals, social media becomes the public record and front line of that identity search.

Social media is likely to profoundly impact identity formation at this stage. Social network content and structure are transparent, revealing to all the struggles of early adolescence. The capabilities for interacting with network structure and content provided by social media can also lead to rapid and cascading alienation processes. For instance, an adolescent user may transfer negative content such as unflattering pictures or gossip about peers to gain social advantage. Negative content can spread rapidly through the digital social network and in full view of peers, causing the social group to rapidly ostracize targets. Other adolescents may then react quickly to this information by "defriending" the target to protect their own social standing. The significance of social media during early adolescence is reflected in the development of new terms such as *cyber bullying* (Kowalski et al. 2008) and *sexting* (Lenhart 2009) that describe similar negative uses of social media.

This hypersensitivity of adolescents to social media has profound business implications. Marketers, for instance, may want to think twice about efforts geared at getting teenagers to "like" a product or brand. Such a public expression of preferences is far riskier for them than for other users. These psychosocial characteristics of teenagers may also explain the success of new platforms like Snapchat, a photo sharing service that deletes messages seconds after they are viewed. The lack of digital trace may be a key feature for early adolescent users. While adults think teenagers use these platforms primarily for "sexting," the truth is more likely that teenagers simply favor a platform that does not broadcast their thoughts, preferences, and experiences to the world and preserve them forever.

H3: The identity formation of early adolescents will be most sensitive to social media tools, and the tools most effective for identity development will be those with limited content and structural transparency.

Ages 18-24: Later Adolescence

Later adolescents are leaving home, choosing and starting careers, and becoming self-sufficient. The psychosocial crisis associated with the stage is *individual identity vs. identity confusion*, as individuals seek to establish their distinctive character. The central process is *role experimentation*, in which they sample possible career and relationship possibilities. Many developers of early social media platforms targeted people at this stage of development (i.e., Facebook initially targeted college students), so perceptions about typical social media use are often based on observations of users at this stage.

At this stage, symbolic action enacted through content is that of *vocalizing* or making independent or distinct contributions. Users at this stage will contribute novel content that seeks to demonstrate their unique identity. Novelty may involve creating new content or being the first to find and share content that social contacts have failed to identify previously. Individuals may not yet know their identity, however, so the content will be experimental and eclectic, which will extend to the types of multimedia and hypermedia content. The symbolic action enacted through network structure is *exploration*. Network exploration may involve increasing the number of relationships, the types of people contacted, or the types of relationships developed and maintained on the platform. Individuals are more likely to establish relationships indiscriminately at this stage, providing options for social activity later. Thus, social media platforms may also play an important informing (Zuboff 1988) role for social relationships at this stage, allowing users to maintain and manage various experimental social relationships.

Social media may pose a challenge for identity formation at this stage because the platform preserves digital records. Individuals at this stage often experiment with roles, alcohol, sexuality, self-expression, and relationships (Newman and Newman 2006), so they may contribute content that pushes the boundaries of social norms. Depending on how extensively they share these experimentations on social media platforms, they may suffer negative consequences when future employers or social contacts view the records. Whether these records will harm future development or whether new societal norms will develop in response to widely available histories is as yet unclear. Conversely, the fear that others may post digital records of experimental behaviors may also inhibit normal experimentations associated with this developmental stage.

This psychosocial stage has a number of theoretical, empirical, and managerial implications. Perhaps most significant about the psychosocial needs of later adolescents is the relative uniqueness of these needs compared to other stages of development. Psychosocial theory suggests that the social needs of late adolescents are quite distinctive, yet considerable research attempts to generalize studies using university students to general social media use. Such research that attempts to generalize about social media use from studies of college students may be limited at best or highly flawed at worst.

It also has implications for the design of social media platforms. It suggests that features that enable greater discover of people, events, or content that are common across many social media platforms may actually be best suited for a relatively narrow range of early adopters. Platform designers should be equally wary in assuming that the needs of young adults extend to all or even a majority of users. Furthermore, it suggests that there is value to platforms that are limited exclusively to college students, as it provides them with a safe environment for experimentation that may be left behind as they move on to other stages of development. As a result, it is somewhat surprising that another social media platform has not moved into the space that Facebook left when it began to admit non-college students.

H4: Late adolescents will primarily use social media to experiment with new roles, relationships, and identities. It will also serve as a digital tool to help aid in that exploration by identifying new connections, experiences, and opportunities.

Ages 24-34: Early Adulthood

At this stage, the experimentation of late adolescence recedes, and individuals begin to make life decisions that will define their identity throughout adulthood, such as marriage and careers. The psychosocial crisis associated with early adulthood is *intimacy vs. isolation*, in which individuals select the few relationships

they will retain as lifelong friends or mates. The central process associated with this stage is *mutuality* among peers, involving sensitivity to others' needs and desires and a willingness to assimilate others' needs.

The symbolic action enacted through network structure at this stage is *prioritizing*: selecting a small group of relationships from one's wider network for special attention. Users may avoid "defriending" previous relationships, but they must find new ways to prioritize and engage in intimate relationships in light of the features of social media platforms. New engagements may take various forms, such as turning to new social media platforms designed to support more intimate relationships (e.g., Path, a social media platform geared to close friends) or using features of social media platforms to group networks into relationships of various types (e.g., Google+ circles). If the existing network fails to provide the desired intimate relationship, users may try dedicated dating sites like Match.com or eHarmony that are designed to connect intimate partners. Symbolic action enacted through content is *targeting* different content to relationships of different strength. For instance, users may share some information more broadly with all their social media "friends," but reserve other information for channels dedicated to their most intimate circle. Targeting may also involve choosing content topics or sources to follow more closely, including content shared by others with stronger ties.

Social media poses interesting questions with respect to the psychosocial crisis associated with this stage. Many platforms are explicitly geared to expanding social networks by providing features to identify "people you may know" and making it easier to find them on the platform. Yet, expanding social networks are directly at odds with the psychosocial crisis of creating intimate relationships. Social media may work against the developmental needs of individuals at this stage. Although users may develop new ways of interacting and more intimate relationships, platform designers may continue to develop features that run counter to these needs in efforts to expand the platform's influence. Users may attempt to counterbalance these attempts by platforms to extend by strengthening privacy settings in order to limit the amount of information available to those outside of one's intimate network of users.

H5: Use of general social media platforms (i.e. Facebook, Twitter) or lower privacy settings will be negatively related with effective identity development in early adulthood. Use of specialized social media platforms (i.e. Path, company networks) or stronger privacy settings will be positively related identity development.

Ages 34-60: Middle Adulthood

At this stage, individuals have moved into the productive stage of their personal and professional lives, and their identity is greatly associated with success and fulfillment in their growing accomplishments. The psychosocial crisis associated with middle adulthood is *generativity vs. stagnation*, which describes whether one's personal and career choices provide sufficient meaning. The central process is *person-environment interaction*, defined as the ability to shape one's environment and respond appropriately to it.

The symbolic action enacted through content at this stage is *vocational expression*. The term *vocation* may refer to professional employment, but it also may refer to other activities closely associated with meaning and identity (Palmer 1999). For example, working individuals may derive greater meaning from other activities – such as parenthood, volunteer involvement, or hobbies. They are likely to engage in social media content primarily in connection with this vocational identity. Although at this stage the content may appear instrumental in that it is targeted toward vocational tasks, the chosen content symbolizes the vocational identity that generates the greatest meaning. The symbolic action enacted through network structure at this stage is *mutiplexity*, a network term that refers to the simultaneous existence of multiple networks. Individuals at this stage are likely to generate meaning from multiple sources – job, family, and hobbies. They will gravitate toward social media platforms that best support each vocational identity. Whereas in the previous stage individuals segregated ties based on strength, now they do so based on type. People who are experiencing stagnation during this stage may also turn to social networking platforms to provide "cover" for new job searches (Piskorski 2010) or for sites explicitly dedicated to undesirable social behaviors (e.g., Ashley Madison, a social network for cultivating extramarital affairs).

Social media often brings these distinct environments together in uncomfortable ways (i.e. should I friend my co-workers on Facebook?). Multiple sources of vocational identity may lead to difficulties in using social media to support these multiple generative roles, a characteristic called *multiphrenia* (Gergen 1991). It may become difficult to maintain an active presence on multiple platforms, so the user may be forced to emphasize activity on one platform above others, and thus overemphasize the value of this role. Conversely, a common platform may support separate vocations, leading to uncomfortable connections between vocational identities. Although platforms increasingly provide features that allow people to maintain multiple networks (i.e., Google+ circles), it is not clear whether and how these users employ these features to maintain multiple identities.

Many middle adults adopt a “divide and conquer” strategy, using different social media platforms for different purposes, such as using Facebook for personal connections and LinkedIn for professional ones. Yet, such a strict division between personal and professional lives is hardly ideal. Companies may miss out on valuable information that could be gleaned from an employee’s personal connections. The data captured by these discrete platforms are of more limited use to marketers than they might otherwise, since they only provide information about one aspect of the user. Finding ways to productively bridge these gaps between different environments is likely an important feature for adult social media users. Some companies allow employees to invite trusted partners to join their internal social networking platform. The circles feature on Google+ has helped address this need, but more is clearly possible. For instance, secured circles may allow companies to limit what information can be transferred out of the circle, allowing employees to effectively use the same platform for personal and professional networking.

H6: Middle adults use social media to manage multiple different, often times conflicting networks of people. They will value platforms that will support the ability interact with these multiple networks, yet provide robust tools to keep the content between them separate.

Ages 60+: Late Adulthood

At the late adult stage, the productive stage wanes, and individuals reflect on their past and evaluate their accomplishments. The psychosocial crisis associated with late adulthood is *integrity vs. despair*, influenced by whether they are satisfied with the results of their productive lives. The central process is *introspection*, deliberate self-evaluation and private thought.

The symbolic action enacted through content at this stage is *reflection*. People are less concerned with creating and dispersing new content and more concerned with reviewing their accomplishments. Reflection may involve keeping up with friends and family through social media platforms, particularly members of successive generations. Reflection may also involve browsing content contributed at earlier stages of life, particularly for those who have been active users of social media for many years. It also may involve converting analog media (e.g., pictures, videos, writing) from earlier times into digital form to create a record of their accomplishments, retroactively creating a digital persisting legacy. The symbolic action enacted through structure at this stage will be *closure*. Closure is a form of network structure that describes a closely-knit group of relationships that are strong and redundant (i.e., people with whom one has ties also have ties with one another, see Coleman 1988). Individuals are not seeking to establish new relationships on social media, but they are seeking to reinforce and strengthen existing ones. They also may be concerned that their close connections also remain connected to one another, actively encouraging members of their network to engage with one another.

Social media creates unique challenges for identity formation at this stage because the symbolic actions enacted through content and structure may conflict. Presumably the younger generation contributes content for a more general audience, but may be more reluctant to do if they fear that older adults are closely monitoring the content. On the other hand, older adults use the platform precisely to strengthen relationships and interact more closely with younger family members. Finding the right level of engagement to facilitate integrity may be difficult: *appropriate engagement* could reinforce integrity by strengthening connections; *inappropriate engagement* may reinforce despair by creating greater distance.

In many ways, social media is an ideal tool for addressing the social needs of seniors. This may provide one reason that seniors are the most rapidly expanding demographic on social media, according to the Pew Study on Internet and American Life. Social media tools allow seniors to communicate easily with old

friends and observe the lives of their family in unobtrusive ways. They may not be out to “like” brands, but they are observing what happens on social media platforms. Marketers should be wary of overlooking social media as an important channel for reaching reach the senior citizen demographic, as they have often have the available time and income to be very productive people to engage on social media.

H7: Social media shapes the identities of senior adults by allowing them to “lurk” in the lives of family and friends without disrupting those lives.

Social Media after Death

Although death does not mark a stage of psychosocial development, social media platforms preserve digital records, so that, even after death, former users will have an online presence that may continue to influence their connections. Knowing that digital identities may persist after death may influence symbolic actions at earlier stages of development.

The symbolic action enacted through content at this stage is *memorializing*. Social media profiles can serve as virtual memorials for friends and acquaintances to express final thoughts and condolences. As is practice in actual funerals, acquaintances may leave after expressing their initial sympathies. The remaining visitors over time will likely be close friends and family who continue to use the site to commemorate significant events or dates by visiting or posting to the deceased’s profile. The symbolic action associated with network structure is *leave-taking*. As time passes, the deceased user’s network will shrink as people dissolve ties and new relationships are no longer cultivated. The act of dissolving ties with the decedent may in itself be a symbolic action of letting go by members of the network.

These observations raise question about how social media facilitates grief processes. Although the details are beyond the scope of this paper, researchers have developed a model of the normal stages of grief: denial, anger, bargaining, depression, and acceptance (Kübler-Ross 1969). Social media may facilitate these processes by giving individuals an outlet to express their feelings as they proceed through the grief stages. Conversely, the media may inhibit the natural progress toward acceptance by giving the decedent a persistent and realistic presence on the social media platform, trapping grievers in denial stages. Furthermore, the profile may continue in one’s normal “friend” list, fostering unexpected reminders of the loss and facilitating depression.

H8: People will respond to a user’s social media profile after that person’s death in ways that mirror the traditional stages of grief identified in the psychology literature.

Discussion

In this paper, we argue that people will engage in fundamentally different forms of symbolic action through social media content and structure as a result of their psychosocial stage of development. The observations in this paper have a number of implications for theory and practice.

Theoretical Implications

Psychosocial stages of symbolic action may have important implications for IS research. Most significant is the recognition that people at different stages are likely to understand and engage in very different symbolic actions using social media. Future research is needed to explore just how social media influences symbolic action at each developmental stage. Furthermore, all social media researchers should consider psychosocial stages of development in their research, a far more precise assessment than simple linear controls for age. Researchers who overlook fundamental differences in how people use social media may significantly and unexpectedly bias their results. This framework also casts doubt on the generalizability of social media research conducted on limited samples of participants at single stages of psychosocial development (e.g., college students).

Furthermore, although we do not consider how social media influences identity formation in this paper, such an implication is clearly possible. Since psychosocial theory posits a recursive relationship between individual development and the social environment, changes in identity may further influence how people use social media in the future. This suggests that we may have only begun to experience the potential changes social media may have on human development. Social media might exert cumulative and

reinforcing psychosocial implications, particularly for users who begin using social media at early stages of psychosocial development. For example, if social media changes the nature of early adolescent psychosocial development, those changes may have implications for later adolescence, which itself is fundamentally changed by social media, and so on. Social media platforms may also respond to changes in psychosocial development by offering new features to meet users' emerging needs. Thus, it may be many years before we fully understand how social media influences human psychosocial development.

Another theoretical implication of this framework is that it provides some rationale for evaluating symbolic action on social media platforms while recognizing that behavioral standards may differ among users. Behaviors that lead to successfully resolving psychosocial crises may be considered healthy, while those that inhibit developmental resolutions may be considered unhealthy. Similarly, engaging in symbolic action associated with one's stage of development may be considered appropriate, while engaging in symbolic action associated with earlier or later stages of development may be considered inappropriate.

A final implication is the recognition that, in addition to content, network structure can be a language for symbolic action on social media. On many platforms, users' networking decisions are transparent to others, are quantified by the platform, and are stored for later use. As a result, decisions to form, avoid, or dissolve connections with others on the platform may become infused with symbolic meaning and influence users' identity, perhaps even more saliently than content at some stages.

Practical Implications

These psychosocial stages of symbolic action also have important practical implications. Social media has certainly not reached its final state of technological evolution. New and competitive social media platforms will emerge, and the current dominant platforms will change to maintain their advantages. Our framework identifies features that existing platforms may be missing and shows the demographic distributions that may be attracted to certain features. For example, college students may have gained psychosocial value in Facebook's early "walled garden" approach that made their late-adolescent role experimentation difficult for parents or future employers to access. Alternatively, Google+ may have intentionally or unintentionally targeted middle-adult psychosocial needs to segregate different types of networks by introducing their "circles" feature that allows users to segregate networks.

These findings may also have important implications for companies seeking to employ social media for internal networking. Since employees at different stages may have very different ideas of "appropriate" use of social media platforms, companies would be well served to establish social media policies that clearly establish appropriate standards (Kane et al. 2009). These policies should be crafted to account for employees' different symbolic actions. For instance, policies that permit only instrumental use of company social media platforms may limit the value for younger employees who may use the media to strengthen relationships (Leidner et al. 2010). Policies that prohibit the use of external social media platforms may reduce the vocational meaning older employees derive from outside pursuits, making them less satisfied with the generative value of their paid employment.

Conclusion

We theorize that developmental psychology has implications regarding symbolic action for users of social media and, conversely, that social media affects users, depending on their psychosocial developmental stages. Future empirical research should test whether and how specific symbolic actions are played out in each developmental stage. Future findings may show a need to revise specific theoretical elements of this framework, but much as ongoing research in developmental psychology continues to refine and adapt Erikson's (1959) initial psychosocial theory (cf., Newman and Newman 2006), our purpose is not to close but rather to open new chapters of social media research. Our core contribution is to suggest that users of social media will engage in symbolic actions that influence and are influenced by psychosocial development stages.

References

- Alavi, M., and Leidner, D.E. 2001. "Review: Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues," *MIS Quarterly* (25:1), Mar, pp 107-136.
- Anderson, C. 2009. *Free : The Future of a Radical Price*, (1st ed.). New York: Hyperion.
- Aral, S., and Walker, D. forthcoming. "Creating Social Contagion through Viral Product Design: A Randomized Trial of Peer Influence in Networks," *Management Science*.
- Bampo, M., Ewing, M.T., Mather, D.R., Stewart, D., and Wallace, M. 2008. "The Effects of the Social Structure of Digital Networks on Viral Marketing Performance," *Information Systems Research* (19:3), Sep, pp 273-290.
- Beaudry, A., and Pinsonneault, A. 2005. "Understanding User Responses to Information Technology: A Coping Model of User Adaptation," *MIS Quarterly* (29:3), Sep, pp 493-524.
- Benaroch, M., Lichtenstein, Y., and Robinson, K. 2006. "Real Options in Information Technology Risk Management: An Empirical Validation of Risk-Option Relationships," *MIS Quarterly* (30:4), Dec, pp 827-864.
- Boland, R.J., and Tenkasi, R.V. 1995. "Perspective Making and Perspective-Taking in Communities of Knowing," *Organization Science* (6:4), Jul-Aug, pp 350-372.
- Borgatti, S., and Foster, P.C. 2003. "The Network Paradigm in Organizational Research: A Review and Typology," *Journal of Management* (29:6), Dec pp 991-1013.
- Boyd, D.m., and Ellison, N.B. 2007. "Social Network Sites: Definition, History, and Scholarship," *Journal of Computer-Mediated Communication* (13:1), pp 210-230.
- Brown, S.A., Massey, A.P., Montoya-Weiss, M.M., and Burkman, J.R. 2002. "Do I Really Have To? User Acceptance of Mandated Technology," *European Journal of Information Systems* (11:4), Dec, pp 283-295.
- Bruner, J.S., Olver, R.R., and Greenfield, P.M. 1966. *Studies in Cognitive Growth; a Collaboration at the Center for Cognitive Studies*. New York,: Wiley.
- Burke, K. 1966. *Language as Symbolic Action: Essays on Life, Literature, and Method*. . Berkley, CA: University of California Press.
- Burton-Jones, A., and Gallivan, M.J. 2007. "Toward a Deeper Understanding of System Usage in Organizations: A Multilevel Perspective," *MIS Quarterly* (31:4).
- Carlson, J.R., and Zmud, R.W. 1999. "Channel Expansion Theory and the Experiential Nature of Media Richness Perceptions," *Academy of Management Journal* (42:2), Apr, pp 153-170.
- Carnall, C.A. 1986. "Toward a Theory for the Evaluation of Organizational Change," *Human Relations* (39:8), pp 745-766.
- Coetsee, L.D. 1999. "From Resistance to Commitment," *Public Administration Quarterly* (23:2), pp 204-222.
- Constant, D., Sproull, L., and Kiesler, S. 1996. "The Kindness of Strangers: The Usefulness of Electronic Weak Ties for Technical Advice," *Organization Science* (7:2), Mar-Apr, pp 119-135.
- Daft, R.L., Lengel, R.H., and Trevino, L.K. 1987. "Message Equivocality, Media Selection, and Manager Performance: Implications for Information Systems.," in: *MIS Quarterly*. MIS Quarterly & The Society for Information Mgt., p. 354.
- de Holan, P.M., and Phillips, N. 2004. "Remembrance of Things Past? The Dynamics of Organizational Forgetting," *Management Science* (50:11), Nov, pp 1603-1613.
- Erikson, E.H. 1959. *Identity and the Life Cycle*. New York: International Universities Press.
- Erikson, E.H. 1963. *Youth: Change and Challenge*. New York,: Basic Books.

- Fichman, R.G. 2004. "Real Options and It Platform Adoption: Implications for Theory and Practice," *Information Systems Research* (15:2), pp 132-154.
- Gergen, K.J. 1991. *The Saturated Self : Dilemmas of Identity in Contemporary Life*. New York: Basic Books.
- Goodhue, D.L., and Thompson, R.L. 1995. "Task-Technology Fit and Individual-Performance," *MIS Quarterly* (19:2), Jun, pp 213-236.
- Habermas, J. 1984. *The Theory of Communicative Action*. Boston: Beacon Press.
- Havighurst, R.J. 1972. *Developmental Tasks and Education*, (3d ed.). New York: D. McKay Co.
- Hevner, A.R., March, S.T., Park, J., and Ram, S. 2004. "Design Science in Information Systems Research," *MIS Quarterly* (28:1), Mar, pp 75-105.
- Horn, G. 1985. *Memory, Imprinting, and the Brain : An Inquiry into Mechanisms*. Oxford Oxfordshire: Clarendon Press.
- Inhelder, B., and Piaget, J. 1958. *The Growth of Logical Thinking from Childhood to Adolescence; an Essay on the Construction of Formal Operational Structures*. New York: Basic Books.
- Kane, G.C., Alavi, M., Labianca, G. and Borgatti, S.P. forthcoming. "What's Different About Social Media Networks: A Framework and Research Agenda. *MIS Quarterly*.
- Kane, G.C., and Alavi, M. 2008. "Casting the Net: A Multimodal Network Perspective on User-System Interactions," *Information Systems Research* (19:3), pp 253-272.
- Kane, G.C., and Fichman, R.G. 2009. "The Shoemakers Children: Using Wikis for Is Research, Teaching, and Publication.," *MIS Quarterly* (33:1), pp 1-22.
- Kane, G.C., Fichman, R.G., Gallagher, J., and Glaser, J. 2009. "Community Relations 2.0: With the Rise of Real-Time Social Media, the Rules About Community Outreach Have Changed.," *Harvard Business Review* (87:11), November pp 45-50.
- Kilduff, M., and Krackhardt, D. 1994. "Bringing the Individual Back in - a Structural-Analysis of the Internal Market for Reputation in Organizations," *Academy of Management Journal* (37:1), Feb, pp 87-108.
- Kowalski, R.M., Limber, S.P., and Agatston, P.W. 2008. *Cyber Bullying: The New Moral Frontier*. Blackwell Publishing Ltd.
- Kraemer, K.L., Danziger, J.N., Dunkle, D.E., and King, J.L. 1993. "The Usefulness of Computer-Based Information to Public Managers," *MIS Quarterly* (17:2), Jun, pp 129-148.
- Kübler-Ross, E. 1969. *On Death and Dying*. New York: Macmillan.
- Kuk, G. 2006. "Strategic Interaction and Knowledge Sharing in the Kde Developer Mailing List," *Management Science* (52:7), Jul, pp 1031-1042.
- Lapointe, L., and Rivard, S. 2007. "A Triple Take on Information System Implementation," *Organization Science* (18:1), Jan-Feb, pp 89-107.
- Lave, J., and Wenger, E. 1991. *Situated Learning: Legitimate Peripheral Participation*. New York: Cambridge University Press.
- Leidner, D., Koch, H., and Gonzales, E. 2010. "Assimilating Generation Y It New Hires into Usaa's Workforce: The Role of an Enterprise 2.0 System," *MISQ Executive* (9:4), pp 229-242.
- Lenhart, A. 2009. "Teens and Sexting," Pew Reserach Center, Washington, DC.
- Marakas, G.M., and Hornik, S. 1996. "Passive Resistance Misuse: Overt Support and Covert Recalcitrance in Is Implementation," *European Journal of Information Systems* (5:3), Sep, pp 208-219.
- Marwell, G., and Oliver, P.E. 1993. *The Critical Mass in Collective Action: A Micro-Social Theory*. Cambridge University Press.

- Newman, B.M., and Newman, P.R. 2006. *Development through Life: A Psychosocial Approach*. Belmont, CA: Thompson Wadsworth.
- Oliver, P.E., Marwell, G., and Teixeira, R. 1985. "A Theory of the Critical Mass: Interdependence, Group Heterogeneity, and the Production of Collective Action," *American Journal of Sociology* (91), pp 522-556.
- Orlikowski, W.J. 1996. "Improvising Organizational Transformation over Time: A Situated Change Perspective," *Information Systems Research* (7:1), Mar, pp 63-92.
- Orlikowski, W.J. 2002. "Knowing in Practice: Enacting a Collective Capability in Distributed Organizing," *Organization Science* (13:3), May-Jun, pp 249-273.
- Palmer, P.J. 1999. *Let Your Life Speak: Listening for the Voice of Vocation*. San Francisco, CA: Jossey-Bass.
- Pawlowski, S.D., and Robey, D. 2004. "Bridging User Organizations: Knowledge Brokering and the Work of Information Technology Professionals," *MIS Quarterly* (28:4), Dec, pp 645-672.
- Peffer, K., Tuunanen, T., Rothenberger, M.A., and Chatterjee, S. 2007. "A Design Science Research Methodology for Information Systems Research," *Journal of Management Information Systems* (24:3), Win, pp 45-77.
- Pickering, J.M., and King, J.L. 1995. "Hardwiring Weak Ties - Interorganizational Computer-Mediated Communication, Occupational Communities, and Organizational- Change," *Organization Science* (6:4), Jul-Aug, pp 479-486.
- Piskorski, M.J. 2010. "Networks as Covers: Evidence from Business and Social on-Line Networks," in: *Academy of Management Annual Meeting*. Chicago, IL.
- Preece, J., and Schneiderman, B. 2009. "The Reader-to-Leader Framework: Motivating Technology-Mediated Social Participation," *AIS Transactions on Human-Computer Interaction* (1:1), pp 13-32.
- Ren, Y., Kraut, R., and Kiesler, S. 2007. "Applying Common Identity and Bond Theory to Design of Online Communities.," *Organization Studies* (38), p 377+.
- Shirky, C. 2008. *Here Comes Everybody : The Power of Organizing without Organizations*. New York: Penguin Press.
- Stein, E.W., and Zwass, V. 1995. "Actualizing Organizational Memory with Information-Systems," *Information Systems Research* (6:2), Jun, pp 85-117.
- Weber, M. 1921. *Gesammelte Politische Schriften*. M*unchen,: Drei masken verlag.
- Yoo, Y. 2010. "Computing in Everyday Life: A Call for Reserach on Experiential Computing," *MIS Quarterly* (34:2), Jun, pp 213-231.
- Zuboff, S. 1988. *In the Age of the Smart Machine : The Future of Work and Power*. New York: Basic Books.