Social Isolation in America

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Keywords

Abstract

We offer a new measure for social isolation for contemporary society,
where opportunities for making connections with others have become
ubiquitous. We develop this measure after reviewing previous research
on social isolation that we segment into two perspectives. On the one
side, isolation has been studied as a negative outcome of processes re-
lated to modernization; on the other side, isolation has been studied as
a structural position potentially capable of delivering positive returns.
Although academic interest in isolation is long-standing, recent years
have seen an explosion of research on the topic. We explore the con-
nection between this explosion and new social media and highlight a
division within the literature between researchers who see new social
media as creating more feelings of isolation and others who think that
the jury is still out. In the final section of the article, we offer our novel
conceptual framework for studying isolation.

A QUESTION FOR OUR TIME

Are contemporary Americans more isolated than ever before? American sociologists have turned to this question repeatedly over the past century. At the heart of the enduring interest in isolation lie two interrelated approaches: (*a*) the connection that many social scientists have drawn between modernity and the American experience and (*b*) the role of technology as a disruptive social force. Social isolation is a topic where the creed of American exceptionalism (Bellah 2007, Lipset 1997, Riesman et al. 2001) and theoretical considerations about modernity (Eisenstadt 2003, Giddens 1990, Schmidt 2012) have historically met to produce a successful research niche. An example of such a marriage comes from Sennett's (1992) argument that time dedicated to private life in America has in large part replaced what in eighteenth-century Europe used to be called public life, i.e., time dedicated to interactions with people outside the immediate circles of one's family and friends. This has made Americans potentially more isolated compared with Europeans (Olds 2010, Pappano 2001). As the next sections will make clear, Sennett's argument is one in a long line of theories and research linking modernity to isolation that have also focused on the American experience.

Notwithstanding this abiding interest in isolation, recent years have seen an explosion of research on the topic. Indeed, social scientists (Conley 2010, Klinenberg 2012) and other writers have published several popular books on isolation with a particular focus on loneliness (e.g., Joiner 2011, Slade 2012, White 2010) (see sidebar). To some degree, technological innovation is at the heart of the latest surge of studies on isolation and loneliness. One of the most influential scholars of social isolation, Claude Fischer, writes, "The most visible development of the last forty years has been technological innovation. Modern cars and planes, email, cell phones, text messaging, video links, and social networking sites have vastly expanded, sped up, and lowered the cost of social interaction" (Fischer 2011, p. 4). Technology and new social media (NSM) in particular have profoundly reshaped the ways in which Americans relate to each other and the meaning they derive from such relationships. As we shall see, competing views about the effects of technological innovation and its resulting impact on Americans provide the basis for a rich debate on the relationship between social isolation and the fragmentation of society along the fault lines of race, politics, and immigration. A more fragmented society does not necessarily imply the creation of more social isolation (Fischer & Mattson 2009).

The view that technology is a disruptive social process is long-standing, predating the Internet (Segal 1994). This was recognized early in the history of the United States as demonstrated by Thomas Jefferson's role in the development of the patent office (see, for example, Bedini 1990, Martin 1952). This embrace of disruptive technologies is part and parcel of American exceptionalism (Pursell 1981). The scope of this argument extended into politics during the period of Jacksonian democracy, when technology was seen as a way to reduce inequality and ameliorate living conditions (Ashworth 1983, Barber 1990). Today, many see NSM as powerful tools profoundly reshaping the ways we conduct our lives and establish relationships (Marche 2012, Wellman et al. 2002). Technology, some argue, is making us feel more isolated. By

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LONELINESS

The concept of loneliness plays a large role in the debate concerning whether Americans are more or less isolated than individuals in other societies. Research on loneliness creates some problems for the sociological study of isolation because of its focus on individual emotions. Nevertheless, it is an important issue for isolation researchers because purely structural approaches to isolation may find a person well connected while that person feels isolated and thus lonely. The subjective experience of isolation is critical for understanding a myriad of issues that sociologists consider relevant at more aggregate levels, such as suicide and, more recently, depression.

using a historical approach, we can explain not only the persistent interest in isolation among American social scientists but also the role that technology plays in the recent appeal of the topic to wider audiences (Marvin 2009).

Placing the current interest in social isolation within a larger historical context linked to technological innovation allows us to reformulate the initial question of our article: Are NSM making Americans more isolated? Or as Turkle (2011, p. 17) puts it, "Technology reshapes the landscape of our emotional lives, but is it offering us the lives we want to lead?" As Foucault pointed out in response to the discussion of human nature, the questions we ask and the answers we provide depend heavily on the intellectual climate we live in (Chomsky & Foucault 2006; see also Wilkin 2011). Part of the goal of this review is to provide a novel answer to such a question that reflects a contemporary social world where the opportunities to make connections with others have become ubiquitous. We have moved from living in a world where social connections required considerable investment of time to a world where connections are widely available and inexpensive to establish. We think that the notion of an individual's networks made by few strong ties and several weak ties does not fully capture the multiple social contexts we live in, and therefore a new concept and measure of isolation are needed. As we elaborate below, our approach is based on combining two perspectives on isolation—one that considers structural characteristics of individual networks and another that considers subjective feelings [see, for example, Wilkening (1951) for the effects of social isolation on policy adoption]. The underlying assumptions are (*a*) that social ties are important because they generate meaning for the two people who share a connection (White 1995a,b) and (*b*) that keeping disparate meanings together—i.e., ties from diverse social contexts—can create a dissonance (Bearman & Moody 2004) that produces feelings of loneliness.

Before presenting our thoughts on isolation in contemporary society, we review in detail what others have written on the topic. We organize our review in the following fashion: We divide researchers who see isolation as a (negative) by-product of modernity from researchers who have interpreted isolation from a structural approach. Here, we amplify the distinctions that separate the two approaches to make our analytical argument more straightforward. In practice, many researchers in the two camps have crossed lines and have interpreted the structural position of the isolate through the lenses of history.[1] Yet a key difference remains: Whereas researchers in one camp conceptualize isolation as a historical phenomenon linked to the bundle of processes that compose modernity—secularization, democratization, capitalism, mass society, urbanism, etc.—the researchers with the other perspective see isolation as a position within many societies, including premodern ones (Simmel 1955), capable of producing positive as well as negative effects.

We use the above analytical distinction as the theoretical basis for studying the impact of NSM. Among researchers who study NSM, a split similar to the one outlined above emerges: between those who see online interactions as a historical process that is creating fewer bonding interactions, i.e., more isolation, and those who argue that NSM are restructuring the social space, opening the doors to new and more numerous forms of interactions, as other technologies have done in the past. In the concluding sections of this review, we reconcile the two approaches on NSM and, to a certain degree, the two broader approaches on social isolation by proposing that a more appropriate image of the social isolate is no longer (exclusively) a person with no friends but rather includes a person with so many friends that her resulting cognitive cost of navigating the social space generates the feeling of loneliness.

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[1]We thank the anonymous reviewer for helping us see this point more clearly.

ISOLATION AS A BY-PRODUCT OF MODERNITY

Modernity has been characterized as the weakening of the traditional bonds that used to connect people to their communities and extended kinship groups (Tönnies 1887 [1988]). As Homans (1941) noted, villagers of all statuses in thirteenth-century England had obligations to the overall community that reduced their freedom in how to pray, what to plant, when and what to eat, and even whom to marry (Luhmann 1998). Before the modern period, society had peasants, lords, kings, queens, priests, popes, etc., but not single individuals. Communities came before persons and defined them. Without the concept of the individual—which implies a certain degree of freedom in the private sphere—the malaise of social isolation could not take hold. Social isolation is seen from this perspective as an undesirable and (almost) inevitable by-product of modernity (Useem 1980).

Several social scientists linked social isolation with the notion that modern life was anomic and alienating (see Seeman 1975 for a review). Known as the lost community hypothesis (Wellman 1979), it has been a theme in American sociology since its early days. Writing in the 1930s, Luis Wirth (1938), for instance, argued that the population density, specialization, and cultural heterogeneity of modern urban life undermined community and family bonds, thereby producing isolation. Theoretical constructs about modernity have served as the main vehicle for the steady interest in community and its opposite, i.e., social isolation (Martinson 1976, Mirande 1973). For instance, at the height of Talcott Parson's influence on American sociology, Pitts (1964, p. 88) wrote, "A crucial aspect of functional analysis is the diagnosis of the American family as having reached the maximum level of isolation, just as American society has reached the maximum level of industrialization and general role differentiation" (see also Yamane & Nonoyama 1967). As McAdam & Paulsen (1993) noticed, social isolation was an essential part of the theory of mobilization in the sense that isolated members of society were theorized to be more likely to protest (see also Leighley 1990, Snow et al. 1980).

In this vein, scholars also made the connection between modernity and societies outside of the United States (Saith 2001). Writing about the industrial development of Japan, for example, Yamane & Nonoyama (1967) argued that modernity facilitated the weakening of the Japanese traditional extended kinship group, the *dozoko*, which resulted in an increase in anomie. Larkin (1974) made a similar argument for the case of the Netherlands but focused on the link between modernity and secularization. Bauman (1999) compared the modern individual to a pilgrim. Building on Weber's [1905 (2001)] work on the Protestant ethic, Bauman suggested that the motivation behind the pilgrimage of the modern human lies in choices that delay gratification. The walk toward the magnificent future, Bauman argued, is what uniquely identifies the modern human and is what separates him from others. The modern human walks alone. The ideas that dislocation from one's community produced isolation and that social mobility severed social ties both resulted from seeing modernity as a threat to community and bonds (Gillmore 1936, Muhlin 1979, Qualls et al. 1980).

In more recent years, the lost community hypothesis was reinvigorated by the work of Putnam (2000) and the research of McPherson et al. (2006) on the shrinking discussion networks of Americans. In *Bowling Alone*, Putnam (2000) argues that contemporary Americans are participating less frequently in associational life, thereby undermining their connections with their neighbors and communities. By-products of less participation are a decrease in the social capital circulating in the community and a weakening of trust relations among citizens. Individuals are becoming more isolated and inward looking, Putnam argued (Kavanaugh & Patterson 2001). Consistent with this line of research, McPherson et al. (2006) published a paper in the *American Sociological Review* analyzing 20 years of social

network data collected using the General Social Survey (GSS). Their most intriguing findings, which gained traction in the popular media, were that from the mid-1980s to the mid-2000s, the average size of Americans' immediate conversational network shrunk by a third and the number of people who reported having nobody to talk to tripled. A healthy scientific debate has since developed between two camps, roughly defined as those who think that the findings of the GSS are a methodological artifact and those who, on the contrary, see the contraction in the size of core conversational networks as real (Fischer 2009; see McPherson et al. 2009 for a response to Fischer).

Among the researchers who have linked isolation to modernity, the theme of urban life emerged as a powerful subtopic. In the late 1960s and 1970s, social isolation was a theme in studies of alienation (Neal & Seeman 1964, Seeman 1967). In keeping with the underlying Marxist framework of much of this literature (see, for example, Martinson 1976, which focuses on Marxian production processes), sociologists tied isolation to the capitalistic mass society, epitomized by the concept of the city, with its atomization of relationships, instrumental use of others, and detachment. A review of alienation by Seeman (1975) reiterated the theoretical and empirical importance of alienation while emphasizing the diffuse definitions and approaches this concept elicited. He noted that empirical research on social isolation up to that time had shown little evidence for the contention that with respect to "the absence of membership or friendship (i.e., organizational involvement, integration in an occupational community, or a network of other friends), the evidence is not at all persuasive that these types of social engagements are either (*a*) in short supply, or (*b*) of very great significance in producing the alienative consequences attributed to them" (Seeman 1975, p. 110).

If social isolation is thus a malaise of modernity and of urban life, it has often received another qualifier—that of being a typically American problem (Joiner 2011). Whereas a considerable amount of popular literature is now connecting isolation to contemporary America and to Americans' use of NSM in particular (see the section below on Technology and Social Isolation), the idea that life in the United States leads to more loneliness dates back to Alexis de Tocqueville. In his masterpiece, the French aristocrat wrote, "Thus not only does democracy make every man forget his ancestors, but it hides his descendants and separates his contemporaries from him; it throws him back forever upon himself alone and threatens in the end to confine him entirely within the solitude of his own heart" (Tocqueville 1889 [2003], p. 467).

Notably, the connection between America and isolation rests, according to Tocqueville, not directly on modernity but on democracy, that is, on the dissolution of all the intermediate bodies (corporations and guilds) that previously characterized European regimes and that constrained individuals' choices and freedom. Democracy made Americans more free than their European counterparts, Tocqueville (1889 [2003]) noticed, but also more lonely.

The link between modernity and the negative effects of social isolation on life chances has also been extensively investigated (Cohen 2004, House et al. 1988). The pioneer of this approach was Durkheim (1897 [1951]). In his work on suicide in nineteenth-century France, he famously identified social integration as the main "pathogen current" running through society and effecting suicides. Other classic studies on the impact of relationships on life chances include Hammer's (1983) research on the social networks of the mentally ill and Berkman & Syme's (1979) study on mortality rates of almost 7,000 adults living in Alameda County, California. This latter study consisted of two waves, conducted in 1965 and 1974, and it revealed a strong association between isolation and higher mortality rate. The authors suggested two mechanisms to explain such an association, one based on the development of poor practices and the other based on the psychological consequences of isolation (Berkman &

Conversational network: the interrelated set of topics and relationships

Alienation: refers to the divorce of a social entity from its inherent qualities, e.g., the proletariat and the fruits of its labor

Syme 1979). These classic studies established social network analysis as an important tool for studying the impact of isolation on life chances (for other examples, see Wahler 1980, Witvliet et al. 2010).

Recent studies on isolation and health have, however, applied the tools and metaphors of network analysis (Donati 2011) in a manner different from the one highlighted above (Warburton & Lui 2007). Several studies separate the feeling of loneliness from the structural position of isolation. That is, feeling lonely is to some degree independent of the number of connections one has (Åkerlind & Hörnquist 1992) and of the type of support these connections are able to generate (Cacioppo & Hawkley 2009). The indirect nature of the relationship between isolation and loneliness is exemplified in the idea that loneliness can diffuse. Cacioppo et al. (2009), for instance, traced the topography of loneliness in people's social networks and the path through which feelings of loneliness spread through these networks. Using network linkage data from the population-based Framingham Heart Study, they showed that loneliness occurs in clusters, extends up to three degrees of separation, is disproportionately represented at the periphery of social networks (people with fewer connections), and spreads through a contagious process. The spread of loneliness was found to be wider than the spread of perceived social connections, wider for friends than for family members, and wider for women than for men.

In sum, recent researchers on loneliness have developed an approach for relating subjective feelings about isolation to structural positions. As we argue in greater detail below, this is the foundation on which we build our new theoretical argument that isolation has acquired a new form in contemporary America. We think that by making social relationships easy to establish and maintain, NSM have transformed isolation from a pure structural position such as having no friends to a process in which relationships are created that carry little or conflicting meaning (see Emirbayer 1997).

ISOLATION AS A STRUCTURAL POSITION

In contrast to the interpretation of isolation as a negative by-product of modernity, other social scientists have seen isolation largely as a structural position (Burt 1987, Wellman & Wortley 1990) capable of producing positive as well as negative outcomes. Simmel (1908 [1971]) describes a historical example of the benefits and costs that can result from isolation in a famous essay in which he defines the position of the stranger in structural terms. According to Simmel, the stranger is someone who is embedded in a social environment but is not completely attached to it. The stranger is in a position of enjoying greater freedom but is also precluded from truly intimate relationships with others. It was from a structural position of isolation that the podesta, the chief magistrate of medieval Italian city-states, ruled over the different factions, for example (Simmel 1955). The larger theoretical point that Simmel makes is that isolation is sociologically relevant to the extent that it is a relation: "The whole joy and the whole bitterness of isolation are only different reactions to socially experienced influences" (Simmel 1955, p. 119).

Simmel's argument that isolation is a relation directly implies that isolation is a structural position present in several roles within society. The position of modern judges, as isolated from the contending parties, is institutionally constructed to create objectivity and impartiality in a way quite similar to what Simmel argued was the role of the podesta. Indeed, structural approaches to social isolation have given rise to several areas of inquiry not exclusively within the domain of sociology (Lesch 1975). Further, as a structural position, isolation is no longer the exclusive negative by-product of modernity. The patrician women of ancient Rome, often used as pawns in the political games of their husbands and fathers, were isolated (Pomeroy 2007). Social isolation was an important factor in the religious ferment of the thirteenth century that produced several new monastic orders and in the rediscovery of classic texts that

occurred within the solitary confinements of monasteries (Stark 1966).

The independence that the position of isolation affords has been related to the production of innovative ideas. Phillips (2011) argues that in markets that value innovation, being disconnected can become a resource. Jazz players are identified by their lack of connections; their outputs are interpreted as more authentic and original the less they seem to be connected to contemporaries and predecessors. Uzzi & Spiro (2005) used artist participation in musicals on Broadway between 1945 and 1985 to show that being part of a small-world network provides benefits but only up to a certain threshold. The authors noticed an inverted-U relationship between success and artistic innovation based on the level of network embeddedness—too much of the latter stifles creativity. Here, again, a structural position of isolation generates positive returns.

Others have attached a cost to connectivity, implicitly arguing for the structural benefits that come from isolation—or at least from a separation from certain networks. For example, Flache & Macy (1996) argue that dyadic exchanges in cohesive groups can generate a second-order free-rider problem, in which the actors use sanctions to build their relationship at the expense of the overall group. Friendship networks can then grow against the interests of the larger group. Ruef et al. (2003) have shown how, beyond the impact of friendship networks on individuals, homophily among entrepreneurs produces closed networks that reduce access, particularly for entrepreneurs who are racial minorities, women, or both. In this case, strong connectivity within the group limited access to individuals who were not in the group.

Focusing on the positive returns that can accrue from isolation highlights the contrast between structural approaches to social isolation and those of researchers who have conceptualized isolation almost exclusively as a negative by-product of modernity. For instance, reacting to the literature that characterized urban living as an alienating experience because of the severing of bonds and the weakening of social relationships (see previous section, Isolation as a By-Product of Modernity), Granovetter (1973) argued that having weak ties could generate positive returns when searching for jobs or looking for a spouse (regarding the benefits of weak ties, see also Centola & Macy 2007, Levin & Cross 2004). If reference to Granovetter's work shows how the two camps differ on how to interpret urban life, it also shows that they differ with respect to the lost community hypothesis mentioned above (Paik & Sanchagrin 2012). Contrasting Putnam's argument about the decline of social capital in America, for instance, Skocpol has observed that less community participation has gone hand in hand with an increase in the joining of causes and campaigns, particularly online; this observation further highlights the multidimensionality of participation (Smajda 2012; see also Campbell & Kwak 2011, Gil de Zúñiga et al. 2010 on the impact of technology on political participation).

In time, Fischer's research agenda has articulated the most sophisticated response to the lost community hypothesis by contributing decisively to a structural interpretation of isolation (Fischer 2009, Fischer & Mattson 2009). In *To Dwell Among Friends*, Fischer (1982) rejected the view of modern cities as places that manufactured social isolation. Fischer presented evidence that the emergence of homogeneous pockets within cities created rich social networks that were less inwardly centered on kinship ties and more tolerant compared with rural life (Bott 1964). Furthermore, in response to McPherson et al.'s (2006) findings about the shrinking social networks of Americans, Fischer and collaborators argued that (*a*) changes in the ordering of questions in different waves of the GSS were driving the findings, i.e., the detected change in core networks in America was partially a methodological artifact, and (*b*) other social processes were deeply restructuring individual social networks and that, at this point in time, it was too early to understand their impact on individuals' networks. These processes were (*a*) demographic

changes: contemporary Americans marry later in life compared with Americans in previous periods, the overall population is older than the population in 1970, and most people live in urban areas; (*b*) economic changes: a great number of women have entered the workforce and there is greater wage inequality between chief executive officers and wage earners; and (*c*) cultural changes: greater gender equality and greater identification with distant people, such as AIDS victims in South Africa. The fourth process that Fischer highlighted is the lowering of the costs of social relations that technological innovation has produced in the last 40 or so years.

A tension then arises between the structural advantages of having connections—in terms of resources that flow to a connected individual (e.g., Lin et al. 1981, Podolny & Baron 1997), access to social support (DiMaggio & Louch 1998, Granovetter 1995, Hurlbert et al. 2000, Lin & Dumin 1986, Plickert et al. 2007, Portes & Sensenbrenner 1993, Wellman & Wortley 1990), socialization to norms and values (e.g., Heckathorn 1988, Lyon 2000, Warren 1975), topics of conversation (Bearman & Parigi 2004, Marsden 1987), and reciprocity of social support—and the costs of maintaining these connections, for instance in terms of impartiality (see discussion of Simmel 1955 above), creativity (see Phillips 2011), freedom (see Tocqueville 1889 [2003]), or access to information. We take this tension to be characteristic of contemporary societies, where opportunities to join social circles have multiplied exponentially (Mollenhorst 2008). A novel concept of isolation for the contemporary social world must therefore take into account the fact that one of the advantages of having fewer connections is a decrease in the cognitive dissonance of constructing social identities across multiple social circles.

Bearman (1991) illustrated this point in a structural rendering of Durkheim's *Suicide*. Bearman considered the position of the teenager as inherently fragile because of the teenager's multiplex role as a member of nonoverlapping circles. The multiplex position

of teenagers makes them highly regulated but rather poorly integrated in each circle. Multiplexity of ties, in such a case, produces a dissonance that can become difficult to navigate and could lead to suicide. In his analysis, Bearman exploits the discrepancy between the two projections of a bipartite graph to structurally differentiate between the four cases of suicide that Durkheim's study identified.

If the idea of isolation denotes a lack of social interaction with others, does social fragmentation play a role in increasing social isolation (e.g., Bishop 2009)? If the answer were yes, that would likely mean a fragmented society decreases the potential for social interaction across relevant boundaries. However, if the answer were no, then that would suggest that fragmentation could lead to an increase in interaction under a homophilous process in which people would feel more comfortable around—and thus more likely to interact with—smaller and more isolated groups of people who are more similar to themselves (Brashears 2010). This is, of course, not a novel idea. In his study of the Louisiana Cajun population of the early 1930s, Gilmore (1933, p. 82) wrote that social isolation "produced in the Acadians a provincial outlook, a resistance to social change, and a devotion to time honored customs." Cohesion and isolation were two sides of the same coin.

These divergent interpretations of fragmentation, and their contrasting implications, are nonetheless reconcilable in our approach, which considers isolation as having both structural and interpretive qualities. Under certain specifications, structural isolation may increase because of fragmentation, depending on the number of fragmentary groups, social contexts under consideration, and types of network structures. The Internet and the exponential diffusion of NSM have significantly increased the number of contexts and groups an individual can join, thus possibly contributing to the overall fragmentation of society. On the other hand, NSM may have created more finely tuned, self-selecting homophilous groups than ever before (Vela-McConnell 2010).

TECHNOLOGY AND SOCIAL ISOLATION

Technological changes have been among the most significant social processes to take place in the industrialized world in the last 20 years. The development of the Internet and, more recently, of NSM has greatly increased the means by which people communicate with each other (Ling 2008). In many respects, NSM appear closer to traditional media than to mass media in the sense that they are used as personal communication platforms. Whereas people seem to use mass media, like television, primarily for the sake of personal gratification, engagement in NSM is often driven by the desire for interpersonal relationships. For example, Haridakis & Hanson (2009) demonstrate how the exponential growth of YouTube videos is in part driven by the social needs of people wanting to share content for the sake of communicating with their friends (see also Hanson 2008, Hollenbaugh 2011).

Whereas few doubt that technology has greatly expanded our capacity to connect with others (Casilli 2011, Hampton et al. 2009), the impact of technology on the perception of being connected is more controversial. Turkle (2011) coined the expression "alone together" to indicate how technology has enhanced connectivity at the price of "depth." She writes,

> Online, we easily find company but are exhausted by the pressures of performance. We enjoy continual connection but rarely have each other's full attention. We can have instant audiences but flatten out what we say to each other. The ties we form through the Internet are not, in the end, the ties that bind (Turkle 2011, p. 280).

Turkle's analysis suggests a trade-off between the capacity to connect with others and the potential decrease in meaning that each connection carries (Shklovski et al. 2006). A similar trade-off between number of ties and depth is also uncovered in Mesch & Talmud's (2006) analysis of Israeli adolescents. They found that friendships originating online are perceived as less supportive than those originating offline because they involve fewer joint activities and fewer topics of discussion.

What is apparent from the debate sketched above is that technology either promotes connectivity, according to some, or promotes feelings of isolation, according to others. Nevertheless, the common assumption of both positions is that the Internet and NSM have had a disruptive effect on social life. So, for example, Wellman and colleagues have argued that the Internet liberated people from neighborhood and kinship solidarities, thus making networks the correct analytical approach for understanding social life rather than group memberships (Wellman 1996, Wellman et al. 2002). Proximity and kinship remained relevant, in the sense that individuals' ego networks consisted primarily of ties of this type, but intimacy with others stretched further geographically.

NSM are considered disruptive for two reasons that are relevant for a study of isolation. First, they reduce or counteract the impact of geography on structuring opportunities for social interactions, and second, they take time away from other face-to-face activities (e.g., Stern 2008). Mok & Wellman (2007) investigated the declining importance of geographical proximity in contemporary life by way of a comparison with the 1970s. Their research showed how distance affected the frequency of contact and the provision of support in strong, socially close ties before the rise of the Internet. They found that face-to-face interactions declined drastically at about 5 miles and that telephone contact dropped at about 100 miles. Conversely, the Internet increased the volume of communication with every member of the network and, in particular, with people living far away.

The other mechanism through which NSM create disruption is through the allocation of time. Not surprisingly—considering the importance of technology in the American public discourse—a similar argument was once used in studying the effects of television [on this point and others, see DiMaggio et al. (2001) for an

excellent review of the Internet's impact on society]. Thus, before the advent of the Internet, it was television that was identified as promoting isolation because the time dedicated to watching it was taking away from other social activities (however, see Perloff 1983). Time is indeed a finite resource, and so the contemporary version of this thesis is that the Internet and NSM in particular are taking time away from socializing with others. Nie (2001) found that being online reduced the time dedicated to interpersonal interaction and communication. Kraut et al. (1998) found that greater Internet use was associated with decreased communication among family members in the household, declines in the size of the respondent's social circle, and increased feelings of loneliness and depression.

However, it is important to note that not all research has considered the impact of these disruptions negative. DiMaggio et al. (2001), for instance, argued that social and cultural contexts need to be taken into account to evaluate the ultimate implications of the Internet. Feezell and colleagues (2009) studied whether or not online groups can foster political engagement among citizens. They employed a multimethod design incorporating content analysis of political group web pages and original survey research of 455 university undergraduates to assess the quality of online political group discussion and the effects of online group membership on political engagement, which they measured by assessing political knowledge and political participation surrounding the 2008 US presidential election. They found that participation in online political groups strongly predicted offline political participation. Yet online participation did not have a positive effect on political knowledge, likely because of the low quality of online group discussion [see also Kirk & Schill (2011) for the effects of NSM on political media and Boulianne (2009) for a meta-analysis of studies linking civic engagement to Internet use].

Other researchers have disconnected isolation from the axis of negative/positive effects of NSM by adopting a network perspective. Constant et al. (1996) show that emails allow for the maintenance of contact with people who are different from us and with whom the ego has very few overlapping friends. Emails become the vehicle for the creation (and maintenance) of weak ties. Haythornthwaite (2002) followed up on this finding by arguing that NSM may have beneficial effects on weak ties by increasing chances for communication. However, NSM may have negative effects on weak ties if they replace a preexisting medium. From this perspective, NSM create isolation in the sense that they embed individuals in networks largely consisting of weak ties.

ISOLATION IN THE CONTEMPORARY WORLD

Attempts to measure social isolation have been difficult. Part of the difficulty stems from defining isolation in a purely structural manner. Is isolation the lack of social connection or the lack of meaningful relationships? Reeder & Reeder (1969) articulated this duality as objective and subjective isolation, respectively, and tested the hypothesis that unwed women were more isolated (both objectively and subjectively) than wedded women. Their findings showed no differences between the two groups when isolation was defined objectively as a lack of contacts, but they found some inconsistent results when isolation was defined subjectively as a lack of meaning. Although somewhat dated, this study suggests that meaning-based measures of structural isolation are potentially more useful than measures based on a simple count of ties between individuals. A structurally isolated individual may certainly be somebody without connections (a node with degree zero, to use network terminology), but she may also be somebody who feels less connected to others. In this section we offer a conceptual framework for studying isolation in a world where relationships have become easy to establish and where the strength of ties has become less relevant to understanding access to certain resources (Gennero & Dutton 2007, Small 2009). Our aim is to provide a basic framework for simultaneously considering both objective

and subjective aspects of isolation. We follow White (1995a,b) and see ties as stories, i.e., the subjective representation of objective relationships. From this perspective, ties provide meanings that reflect the contexts—or the network domains—within which stories originate and ties are maintained. We claim that with the greater ability to create relationships comes a multiplication of contexts and a potential increase in the cost of negotiating conflicting cognitive demands. To further illustrate our theoretical point, we use an example taken from the *New Yorker* a few years ago, when the number of users of Facebook and other NSM was a mere fraction of what it is today. When asked about his experiences living in a college dorm, a New York University (N.Y.U.) freshman who reported having 900 Facebook friends at the school said the following:

> In the elevator, people who I'm friends with will say hi to me and I'll have no idea who they are. Don't get me wrong, I think it [i.e., Facebook] is useful. I met two girls on Facebook who came over to our room once we got to N.Y.U. We hung out with them, we drank with them, we watched a movie. But for every situation where it helped me there's been, like, five or six that have just been really awkward. (Schulman 2007)

Having many ties does not necessarily produce more meaning and can potentially increase the cognitive costs of maintaining relationships to a point of creating a sense of isolation, i.e., of having no friends with whom "talking about important things matters" (Bearman & Parigi 2004). This links directly to the current debate surrounding the issue of whether being connected, say through NSM, makes one more or less isolated. Our approach suggests that an answer to this question is not related simply to the fact that NSM have expanded the number of ties we have to other people, but also to the fact that they have expanded the number of contexts to which we belong. To capture this intuition we introduce an analytical distinction between two funda-

mentally interrelated concepts: (*a*) the increase in ties across many different contexts and (*b*) the effort required to maintain increasingly broad networks, that is, networks with fewer overlapping contexts. While acknowledging that there are many ways to address the impact of NSM on social relationships, we consider the proliferation of friends and the resulting time spent maintaining these relationships as central to understanding how NSM have influenced social isolation.

Broadly construed, we see social isolation as a ratio of nonoverlapping contexts to the average time spent per relationship. We argue that as the number of nonoverlapping contexts increases, so does the amount of subjective isolation experienced by an individual. This is different from the rather obvious calculation of social isolation based purely on the number of social ties an individual maintains. Nevertheless, the rationale behind this construction is quite intuitive—people who maintain many friendships across many social activities may leave their computers after a day of connecting and still feel that they have not helped themselves sustain meaningful relationships.

Focusing on the meaningfulness of social relationships makes it possible to understand the seemingly contradictory notion of an individual who is well integrated structurally but still feels lonely. It is in fact the meaningfulness of social relationships that the puzzle of NSM rests upon: Are we more or less isolated as a result of the proliferation of NSM? Meaningful relationships are those that allow individuals to express subjectively determined aspects of their personality, goals, and desires. As a result, we may reasonably assume that social relationships are costly when they are actively maintained yet fail to achieve a requisite amount of salience for the individual.

Our measure of isolation as a ratio of nonoverlapping contexts to the average time spent per friend places the structural insights of Simmel into a contemporary mold. One of the primary arguments that Simmel (1955) makes in "The Web of Group-Affiliations" is that the modern individual belongs to multiple

nonoverlapping circles. This is in contrast to the premodern individual whose social circles were arranged concentrically. Thus, given a social context of kinship in the premodern world, for example, concentric social circles involved memberships in guilds, churches, manors, etc. For the modern individual, it is not necessarily the case that the myriad of social circles he or she inhabits overlap. Instead, each new social context may involve new members completely disconnected from members in other social contexts. NSM have further decreased the chances that social circles overlap not only with respect to premodern times but also with respect to modernity. This type of disconnection or lack of overlap between the many contexts creates tension for the individual (Pescosolido & Rubin 2000).

One way this tension can be expressed is with respect to triadic closure, q. From the insights of balance theory, we know that there is a tendency toward triadic closure when possible (e.g., Heider 1958). This observation leads us to consider a measure of social isolation where the amount of nonoverlapping social contexts is defined by the number of open triads present in the ego's network. In other words, the number of friends who are not friends with friends is used as a basis for the measure of the number of social contexts in which an individual participates. Triads that remain unclosed become costly in terms of time and also because of their potential to increase cognitive dissonance by placing contradictory demands on the individual.

One of the most profound changes wrought by NSM is the ability to form "cheap" social relationships. Whereas previous forms of communication from letter writing to telephone conversation required at least some minimal personal information (e.g., address or telephone number), the introduction of NSM such as YouTube, Facebook, and Twitter allows people to connect with as little as the click of a button in an Internet browser. The sheer simplicity of forming relationships through NSM has led to the inevitable result that people have "friends" whom they do not actually consider friends.

We consider the cost of maintaining social media ties as part of what we term network maintenance. Network maintenance is the average time a person spends dedicated to each social connection, u. As the number of social connections increases, the amount of time one can spend per person decreases, because time is a finite resource. As a result, network maintenance corresponds to the fact that social connections mediated through NSM make it possible to increase the number of friends in a way that reduces the cost of the relationships formed by decreasing the average amount of time that can be spent per connection.

Our measure of isolation (i) is a function of both the number of nonoverlapping contexts and the costs of network maintenance. More formally and considering an individual z with at least one tie,

$$u_z = \frac{\text{degree}_z}{\text{time}},$$

$$q_z = \text{OpenTriads}_z,$$

and

$$i_z = \frac{q_z}{u_z} = q_z \times \frac{\text{time}}{\text{degree}_z}.$$

Time can be measured in hours, for instance over a day, as in the average number of hours in a day that person z dedicates to maintaining relationships, or hours over a week. The measure of isolation comports with our original intention to consider the case of isolation in a world where ties are easy to create. A person can create virtually endless social connections; however, this does not mean that the person does not feel lonely. Each additional tie created adds a cost in terms of maintaining that tie, especially if the tie is to a person who is not friends with the ego's friends. Furthermore, each tie may have the effect of diminishing individuals' quality of life as they find themselves increasingly and virtually surrounded by people who are not their real friends. There is no better way to encapsulate this concept of isolation than to consider the situation in which one is surrounded by strangers.

The burdens brought on by increases in the number of friends and membership in

nonoverlapping contexts suggest that as the number of friends and nonoverlapping contexts increases, the average time spent per social relationship decreases. We demonstrate an example of this relationship utilizing a decay function,[2]
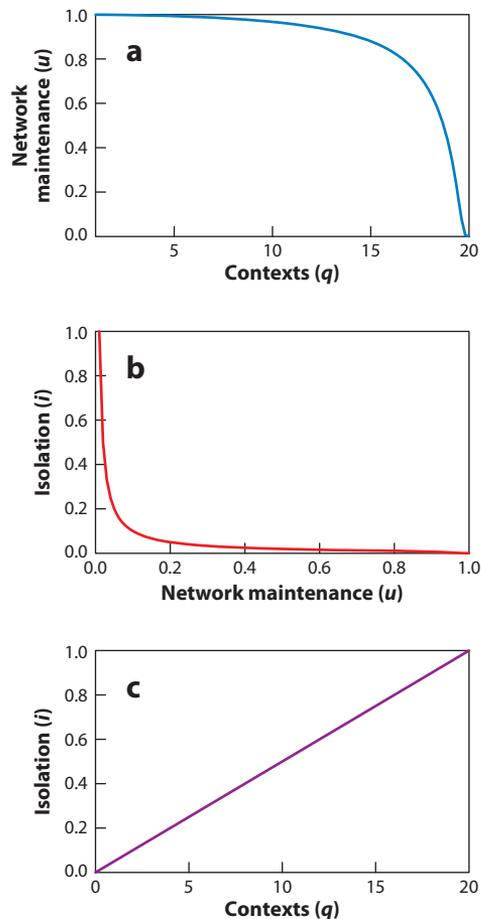
$$u_z = e^{\left(c - \frac{c}{1 + \frac{q_z}{L^2}}\right)},$$

where c and L are shaping constants.

The motivation behind this choice is that as the number of nonoverlapping contexts increases, network maintenance, i.e., average time dedicated to friends, decreases. In the initial stages of friendship acquisition, the cost of maintaining the network is low, but as the number of nonoverlapping contexts increases, the average amount of time spent per social connection decreases dramatically (**Figure 1**). Less time spent with a social connection is an imperfect but useful measure of the meaningfulness of a relationship. If it is the case, as we argue, that decreases in the amount of time spent per person tend to occur as an individual gains more friends, then it is reasonable to conclude that an abundance of nonmeaningful relationships leads to a sense of subjective isolation and thus loneliness. In a recent article in the *Atlantic*, Marche (2012) captured such a tension: "In a world consumed by ever more novel modes of socializing, we have less and less actual society. We live in an accelerating contradiction: the more connected we become, the lonelier we are."

CONCLUSION

The previous sections of this review have dealt with the many and varied treatments of social isolation in both the past and the present. We argue that a historical orientation to social isolation helps elucidate the interests and research

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[2] The use of a decay function is one way of modeling what we would expect to be the empirical relationship between nonoverlapping contexts and network maintenance; however, other functional forms are available, including a strictly linear decreasing function, which imposes the same cost of network maintenance onto each additional context.

Figure 1

Relationships between isolation (i), contexts (q), and network maintenance (u). (*a*) Network maintenance as a function of contexts. The shape parameters of the decay function are $L = 20$ and $c = 0.1$. (*b*) Isolation as a function of network maintenance. We rescaled the function to constrain the measure of isolation between 0 and 1. (*c*) Isolation as a function of contexts.

agendas of scholars across time. To this end, we segmented this constant interest in isolation into two perspectives. On the one side, isolation has been studied as an outcome of processes related to modernization; on the other side, isolation has been studied as a structural position present in several societies. Although the researchers we located in the two traditions have often crossed the above division in their works, the distinction we have introduced

has analytical validity in that it makes possible separating those who conceptualize isolation as a negative by-product of other processes from those who think of isolation as a position potentially capable of delivering positive returns.

Although academic interest in isolation is long-standing, recent years have seen a burst of research on the topic. Part of this explosion is tightly connected to broad concerns about the disruptive role of technology and, in particular, of NSM. We explored this connection further and highlighted a division within the literature between researchers who see NSM as creating more feelings of isolation and others who think that the jury is still out. In the penultimate section of the review, we offered a novel conceptual framework for studying isolation in contemporary society, where opportunities to meet others have been greatly enhanced. In the world where we live, forming relationships has become cheap—so much so that having many friends from disparate corners of the social space is now a common experience. An isolate is no longer (simply) a person without connections but is now also somebody who creates connections that carry little meaning. This is the contemporary face of isolation.

SUMMARY POINTS

1. The question of whether Americans are more or less isolated now than in previous periods has been a constant theme in American sociology. We emphasize that the nature of the question and the research that attempts to answer it are historically situated. The variables used in researching isolation depend to a large extent on the questions society considers relevant at the time.

2. One approach to the study of isolation sees isolation as the by-product of larger processes related to modernity. Isolation is always considered a negative outcome.

3. Structural approaches to isolation focus on the degree to which a person has access to certain kinds of networks. From this perspective, isolation is sometimes connected to positive outcomes.

4. Technology in general and NSM in particular have been driving factors in the recent interest in isolation. A vigorous debate has developed that focuses on whether increasing connection to others mediated by NSM has increased or decreased isolation.

5. We offer a new approach to isolation that combines structural and subjective approaches to isolation in an attempt to redirect and possibly resolve the debate as to whether there is more or less isolation. We employ structural concepts such as ties and subjective concepts such as stories that provide meaning to ties.

DISCLOSURE STATEMENT

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