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The Interplay between the One and the Others: Multiple Cultural Identifications and Social Networks

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This article proposes a social network approach to the study of multiple cultural identifications. We argue that social network theory and social network methodology are essential for a truly dynamic examination of how multiple cultural identifications develop and how they are negotiated. This article starts by defining some relevant concepts (i.e., cultural identification, Bicultural Identity Integration, social networks), and then goes on to integrate these concepts into a micro—meso-level framework by discussing the bidirectional links between cultural identifications and social networks (i.e., their content and their structure). We, then, explicate how social and cultural psychology can gain theoretically and methodologically from social network analysis. Finally, we conclude with some recommendations for researchers who seek to include social networks in their approach, and also discuss general and specific policy implications.

People do not live alone in a social vacuum but in relation to one another. This becomes particularly apparent whenever people change their social environment and start living in a new context, such as immigrants moving to a new country (Ryan, 2011). Many leave friends and even loved ones behind at home, and are faced with cultural and linguistic challenges in the country of settlement, while also meeting new people. Immigrants do not only experience changes in their social networks but also exposure to new cultural value systems and identifications, which sometimes might clash with their heritage culture values and practices.

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Multiple Cultural Identifications and Networks

The way immigrants and their descendants negotiate their ethnic and host cultural identifications may vary from individual to individual, based on the sociopolitical context they inhabit and their individual proclivities and abilities (Benet-Martínez, 2018). The strength and structure of their cultural identifications may also differ as a result of the social interactions these individuals cultivate and have access to. In this sense, the development of multiple cultural identifications is dynamic and closely related to changes in the social network (Repke & Benet-Martínez, 2017).

Traditionally, social—cultural psychological methods (e.g., surveys, interviews) examine individuals as separate, independent entities and, thereby, tend to mask the social relations people are embedded in as well as the dynamics that occur between interacting individuals (Postmes, Akkus, & Stroebe, 2015; Robins, 2009; Robins & Kashima, 2008). In contrast, the social network perspective focuses on social structures, that is, the way social relationships and interactions are organized (Borgatti & Halgin, 2011; Borgatti, Mehra, Brass, & Labianca, 2009). This view accounts for relational interdependencies well, and yet it usually does not consider individual characteristics (e.g., personality, values) that may shape the structure of the network (Mehra, Kilduff, & Brass, 2001).¹ We argue that combining both fields of research (social psychological research and social networks) is a promising and maybe even necessary approach in advancing our understanding of the management and negotiation process of multiple cultural identifications.

Acculturation, Cultural Identification, and Social Networks

When people encounter a new culture, they often undergo acculturation processes. At the individual level, acculturation is defined as the cognitive, affective, and behavioral changes that occur in people who are in contact with more than one culture (Berry, 2003). These processes often involve managing different, and sometimes even conflictual, cultural value systems and identifications. Acculturation processes may result in the development of multiple cultural identifications, that is, the attachment or sense of belonging to more than one cultural group (Nguyen & Benet-Martínez, 2007). People who have been exposed to and who have internalized at least two sets of cultural meaning systems (e.g., beliefs, values, behaviors, languages) may be described as bicultural or multicultural individuals (Benet-Martínez, 2018; Fleischmann & Verkuyten, 2016; Hong, Morris, Chiu, & Benet-Martínez, 2000; Schwartz, Birman, Benet-Martínez, & Unger, 2016). In this regard, acculturation and cultural identification are inextricably intertwined.

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¹This is not to say that studies that integrate individual-level variables and networks do not exist. For notable examples of studies that do, see work on networks and personality (Clifton, 2014; Selfhout et al., 2010), networks and depression (Schaefer, Kornienko, & Fox, 2011), and networks and attitudes (Stark, Flache, & Veenstra, 2013).

Changes that result from acculturation processes can be seen as changes in cultural identification (Schwartz, Montgomery, & Briones, 2006).

Although most acculturating individuals, such as immigrants and their descendants, tend to identify with both the heritage (e.g., ethnic) and host cultures, they may vary in how much they view these two cultures as conflictual or compatible. A conceptualization that captures this idea is the Bicultural Identity Integration (BII) model proposed by Benet-Martínez and her colleagues (Benet-Martínez & Haritatos, 2005; Benet-Martínez, Leu, Lee, & Morris, 2002; Chen, Benet-Martínez, & Harris Bond, 2008; for a review on the construct of BII, see Benet-Martínez, Lee, & Cheng, in press) (for a more general review on multiple identities among immigrants, see Verkuyten, Wiley, Deaux, & Fleischmann, 2019). Bicultural individuals low in BII experience their cultures as conflictual and dissociated from one another, whereas biculturals high in BII internalize their cultural identities as compatible and feel part of a combined (sometimes third) culture. This may also be reflected in whom they choose to interact with in the first place but also in the way they structure their social relationships—e.g., which friends they introduce to each other and which ones they keep separate (Repke & Benet-Martínez, 2018).

In the social sciences, these social relationships are described as social networks—the patterns of social relations among actors. A social network consists of a group of individuals referred to as actors or nodes, and their relationships may be called connections, ties, or edges. Depending on the research question, connections may represent different types of relationships (e.g., emotionally close vs. not so close actors; coworkers vs. family members). For analytical purposes, researchers commonly summarize networks with measures grasping the *composition* (who is in the network; aggregated characteristics of the nodes and ties such as percentage of females and percentage of strong ties) and the *structure* (how are the network members connected to each other; properties such as density and interconnectedness between certain groups).

In social network analysis, there are two different, but interrelated traditions for how to look at networks (Marsden, 2005; McCarty, 2002): the sociocentric network approach and the personal or egocentric network approach. The distinction between the two and the choice for one or the other has fundamental implications for data collection, data analysis, and the interpretation of the data. *Sociocentric* network studies focus on complete or whole networks (Hanneman & Riddle, 2005). Those networks are composed of socially defined, bounded groups such as a classroom of students or the executive board of a big company (Marsden, 2005; Wasserman & Faust, 1994; Wellman, 1983). Typically, scholars measure the existence (and sometimes also the strength) of relations between all the members of the network. With this full network data, they can approximate the actual pattern of relations within a given group.

In contrast, an *egocentric* (or personal) network assesses the relationships of one focal individual (i.e., ego) and the relationships among the "others" (i.e.,

the alters) within this individual's personal network (Borgatti & Foster, 2003). The set of social relationships that surround that focal individual usually stem from different social contexts (e.g., family, work, neighborhood). In an egocentric network study, the network members are elicited by the ego (i.e., the respondent) him or herself, who also evaluates the relationships between the alters (i.e., the people each respondent has elicited) and may give information on the characteristics of these alters (e.g., gender, relationship type). The resulting networks depict the perceived interpersonal environment of each ego since the relationships are described from the point of view of the respondents (McPherson, Smith-Lovin, & Brashears, 2008).

Bringing It Together

Levels of Analysis

Traditionally, the different social science approaches to the study of cultural diversity have either focused on distinct phenomena (e.g., understanding of immigrant flows for sociology and demography vs. prevalence of different acculturation modes in psychology) or on the same phenomena while relying on very different perspectives and levels of analysis (in particular, but not exclusively, macro in political science and economics, meso in sociology, and micro in psychology). The smallest unit of analysis is the micro level and refers to the individual (e.g., an immigrant). Next is the meso level, which often deals with social communities or organizations (e.g., cultural groups), followed by the macro level which covers an overall population (e.g., a state). Social networks can be understood as the result of both "macrostructural forces" and "microindividual processes" and, hence, are situated at the meso level (Lubbers, Molina, & McCarty, 2007 p. 722). While all three levels of analysis interact with each other (de Federico de la Rúa, 2007), we will mainly discuss the bidirectional link between the micro and meso levels, that is, between the individual-level psychological perspective and the meso-level social network approach, with a particular focus on how the latter may feed into the first (i.e., how the network may influence the individual).

Two fundamental processes underlie this bidirectional relationship: selection and influence. *Selection* is the idea that individuals, based on their characteristics and preferences, choose, keep, or deselect their network members through processes such as assortation driven by social attraction and affiliation needs. In contrast, *influence* concerns the notion that network members shape or affect the individual's behaviors, attitudes, or opinions through processes such as social learning and norm transmission. Empirically, both processes may result in the same outcome, namely, similarity of network members (Veenstra, Dijkstra, Steglich, & Van Zalk, 2013). This similarity has been addressed in the literature as homophily of connected individuals. More specifically, race and ethnicity

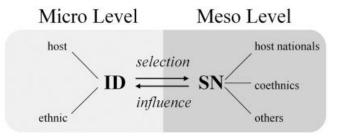


Fig. 1. Selection and influence effects between cultural identifications and social networks. *Note*. ID = cultural identification; SN = social network.

were shown to create the strongest bonds in structuring people's personal environments, followed by age, religion, education, occupation, and gender (McPherson, Smith-Lovin, & Cook, 2001). Given the role played by ethnicity in cultural identification, it comes as no surprise that immigrants' cultural identifications, and the way these identifications are managed, are both related to immigrants' social networks (i.e., to what degree different ethnic groups are present and how much they are interconnected) as shown in a few studies combining individual- and meso-level perspectives (Mok, Morris, Benet-Martínez, & Karakitapoğlu-Aygün, 2007; Repke & Benet-Martínez, 2017, 2018). Figure 1 provides a pictorial representation of basic selection and influence processes pertaining to cultural identifications and acculturation, where ethnic and host cultural identifications may determine the type of individuals (e.g., host nationals, coethnics, others) one selects for one's network and, in return, where the members of the network influence one's identification with the respective cultural groups.

The Evolution of Social Networks and the Role of Cultural Groups

Cultural identifications can change over time (Schwartz et al., 2015). So can immigrants' social networks. For a dynamic examination of how multiple cultural identifications develop and how they are negotiated, the inclusion of the people immigrants interact with (i.e., the social network) is indispensable. Several studies have examined the link between personal networks and cultural identities and identifications. Some of this research places particular emphasis on how specific network properties (e.g., relations and positions) influence an individual's identities and identifications (influence effect; e.g., Aguilar, 2005; McFarland & Pals, 2005; Walker & Lynn, 2013; for an agent-based model simulation study, see Repke & Benet-Martínez, 2017). In contrast, other scholars focus on how creating new relations depends on one's identification or the communities (e.g., majority vs. minority culture) one belongs to (selection effect; e.g., Baerveldt, Zijlstra, de Wolf, Van Rossem, & Van Duijn, 2007; McPherson et al., 2001). Most of these studies,

however, are correlational and, consequently, cannot be classified as investigating either of the two causal directions. In fact, selection and influence processes may occur together, as has been shown for the similarity of behaviors and attitudes among friends (e.g., Kandel, 1978). Statistical models, such as stochastic actor-based models, have been developed to disentangle both effects using longitudinal network data (e.g., Snijders, 2005; Snijders, van de Bunt, & Steglich, 2010). Note that these models are designed for sociocentric networks and cannot yet be applied fully to egocentric networks.² Some sociocentric studies that try to disentangle the reciprocal relationship between identification and social networks have used this type of models (e.g., see work examining the friendship networks of immigrant adolescents by Jugert, Leszczensky, & Pink, 2018; Leszczensky, 2013, 2018; Rivas-Drake, Umaña-Taylor, Schaefer, & Medina, 2017).

Jugert et al. (2018) find that, for adolescents' friendship selection, ethnic boundaries may be overridden by ethnic self-identification. That is, it is not ethnicity that determines who befriends whom. Instead, it is ethnic identification. In particular, they show that host country and dual identifications are beneficial for developing friendships with ethnic majority and minority peers, but that heritage country identification is harmful for these relationships. Leszczensky (2018) challenges this finding by looking at relative group sizes. He argues that host country identification only affects immigrant adolescents' friendship selection in school contexts with high proportions of immigrants, as solely in these cases the immigrant youth has the opportunity to befriend other immigrants as well and can choose to not have ethnic majority friends. In contrast, Rivas-Drake et al. (2017) demonstrate that having more diverse friendships is related to having greater ethnic-racial identity (ERI) exploration later on, and that male sixth and seventh graders with higher ERI resolution develop more diverse friendships over time.

As stated above, it is likely that influence and selection processes take place simultaneously, but each may depend on different factors and vary by time. Upon arrival, immigrants usually identify stronger with their ethnic culture than with the host culture. Especially in the initial phase, immigrants tend to rely more on family members and close friends (Knight, Thompson, & Lever, 2017). Furthermore, coethnic network members residing in the country of origin may facilitate migration by giving social support, but also by safeguarding the immigrant's identity, while coethnics in the country of settlement may be able to provide short-term accommodation and assist in finding the first job (Lebon, 1983; Massey et al., 1993; Schultz, 2001; Smith, 1999). In this vein, initial selection effects (ethnic identification leading to choosing ethnic alters) might involve a motivation to find and sustain relationships with other coethnic individuals, while also, in turn, these

²For an illustration of various statistical approaches on how to deal with longitudinal analysis of egocentric networks, see Lubbers et al. (2010).

relationships produce a strengthening of the ethnic identity (ethnic alters leading to a change in ethnic identification), that is, influence effects.

Immigrant networks are dynamic and keep evolving over time, in that, host nationals and immigrants from other cultural groups often get incorporated at later stages of the migration experience (Knight et al., 2017). These types of contacts may be particularly helpful as these individuals usually have better access to the local job market and can help the immigrant adjust to the norms and values of the host society (Knight et al., 2017; Martínez García, García Ramírez, & Maya Jariego, 2002). While immigrants may initially have an interest in holding contact to coethnics to create a sense of cultural familiarity and continuity, they might outgrow this need due to their development in human capital (e.g., skills and competencies) as well as their personal and professional advancement goals, and thus look for new people as time passes (Ryan, 2011).

Again, one may speculate that, in the very beginning of the migration period, it is the ethnic cultural identification that determines the composition of the social network. Individuals with high ethnic identification are probably more likely to engage with coethnics primarily, whereas people with low ethnic identification might try to avoid that exactly. The availability of network members that fulfill the immigrants' needs is obviously influenced by the constraints the social and cultural context puts on their choices. The probability for intergroup contact, for example, depends on the ethnic composition of the population, the immigration policies the state has, the public opinion that might have grown historically, as well as on the objective and perceived cultural fit between the immigrant and the host community (Blau, 1993; Deaux & Verkuyten, 2014; Liebkind, 2003; Phinney, Horenczyk, Liebkind, & Vedder, 2001). Furthermore, one might conjecture that it is the host contacts in the network (e.g., neighbors, colleagues) that drive immigrants' identification with the host culture. So someone's multiple cultural identifications may develop along the interactions that this person has with others (Repke & Benet-Martínez, 2018). In fact, there is empirical experimental evidence supporting the idea that identification with a cultural group, as well as the behaviors and mindsets associated to the group's cultures, can shift depending on the cultural frames that become salient due to specific contextual cues (Hong et al., 2000; Hong, Benet-Martinez, Chiu, & Morris, 2003; Verkuyten & Pouliasi, 2006; Verkuyten & Yildiz, 2007). This finding suggests that cultural identification is quite dynamic and that the social network (e.g., its composition) is possibly such a contextual cue.

Figure 2 illustrates the bidirectional relationship between the individual at the micro level and the social network at the meso level. One can imagine the relationship as a loop in which the inclusion of people of certain ethnic backgrounds may, at least partly, depend on the strength of one's cultural identifications (along with one's language skills, personality traits, values, etc.). In this case, it is one's individual attributes that influence the types of relationships one develops. In return,

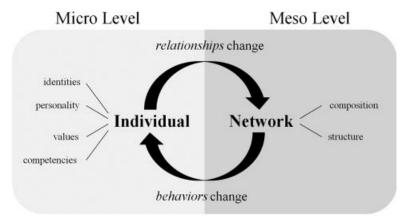


Fig. 2. Bidirectional relationship between the individual and the social network.

being in contact with others and receiving culture-specific and attitude relevant information (e.g., concerning gender roles, communication style, lifestyle) may influence one's behavior—consciously or unconsciously—which might also be reflected in changes of one's cultural identifications (Repke & Benet-Martínez, 2017).

Social Influence and Social Structure

Type of Interactions and Multiple Contacts

Depending on the social context and the type of interactions an individual has with others, distinct effects might be at place (see Figure 3). Having a positive interaction with an individual of a given culture could lead to at least three different scenarios: (a) an increase in identification with the culture of that individual (an intensifying positive effect), (b) a decrease in identification with another culture (a contrasting negative effect), or (c) an increase in identification with the culture of that individual and a decrease in identification with another culture (a mixed effect). Likewise, a negative interaction with an individual could lead to the following three outcomes: (a) a reduction of the level of identification with the same culture (an intensifying negative effect), (b) an increase in identification with another culture (a positive contrasting effect), or (c) an increase in identification with another culture and a decrease in identification with the culture of that individual (a mixed effect). Which one of these different scenarios could follow from positive or negative interactions with people of different cultural groups might depend on whether the social—political context allows immigrants to have multiple cultural identities (macro level), on how much these social contacts themselves

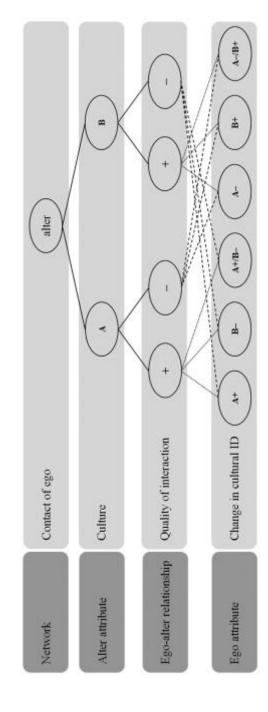


Fig. 3. Possible scenarios explaining change in ego's cultural identification(s). *Note.* Cultural ID = cultural identification.

The dotted lines show either intensifying positive effects, negative contrasting effects, or mixed effects. The dashed lines symbolize either contrasting positive effects, intensifying negative effects, or mixed effects. explicitly or implicitly support the idea of (multiple) cultural belonging in their values and behaviors (meso level), and on how much the individual actors perceive the different cultural identities as conflictual versus harmonious (micro level) (Repke & Benet-Martínez, 2017).

Of course, one simple interaction might not be sufficient to initiate a change in behavior or cultural identification (as could be concluded from Figure 2). Instead, a series of interactions might be necessary. For example, a Georgian immigrant in Germany might be irritated at first when his German colleagues want to go for lunch at 11:53 a.m. and will probably not arrive on time according to German work ethics. He might arrive a few minutes late as it is not a serious meeting. His sense of time might be a little bit less restrictive than the German one. and he will probably also not change it after one single lunch. However, after having gone to lunch repeatedly with different coworkers who support this view about time, he might slowly adapt his sense of time to theirs, and even start to feel that he is becoming more German (and perhaps less Georgian) because of this new habit. This type of influence is reflected in the idea of complex social contagion rooted in social network theory. The underlying assumption is that behaviors spread through repeated social contact (Centola, 2010; Centola & Macy, 2007). Specifically, the hypothesis refers to behaviors that do not change easily (i.e., costly, risky, or controversial behaviors) and as such will only be influenced after one has had multiple contact with a variety of sources that transmit the same "concept" (e.g., as this may give credibility to the received information; Centola & Macy, 2007).

One could argue that culture-specific behaviors are not necessarily risky or controversial (although they can be), but they might be difficult or costly to change (e.g., as they are not always conscious or as they involve deeply rooted habits of doing things a certain way). In our example, the repeated contact with a variety of sources might be reflected in the fact that the Georgian immigrant does not always go for lunch with the same coworkers but always at 11:53 a.m. sharp.

Type of Connections

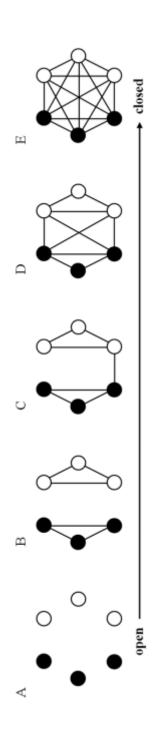
So far, we have discussed the type of interactions an individual may have with others belonging to the same or different cultural groups (e.g., coethnic vs. host group) and the number of interactions that may lead to behavioral and identity changes. The social network perspective, however, adds another valuable component to the equation: the structure of the network. The way in which the network members are connected has important implications for theory and, in particular, for different types of influence effects. The reason for this is that the kind of connections an individual or the individual's "others" have among each other determines the possible flow of influential information and spread of behavior. Not every person one interacts with throughout life will have the same impact on

our behavior. In fact, there are two competing hypotheses on how different kinds of behavior and information get diffused depending on one's network structure.

In the first hypothesis, the spread of behaviors is conceptualized as a simple social contagion. That is one single contact with a certain behavior is enough for the individual to adopt that behavior. This is analogous to the idea that receiving information (e.g., the score of a volleyball match) once, or getting in contact with a highly contagious disease, is enough to be informed or infected, respectively (Centola & Macy, 2007; Rogers, 1995). The network structure that enables this type of information flow or spread of behaviors is characterized by weak ties (e.g., acquaintances, in contrast to close friends and close kin who would be considered strong ties) and structural holes (i.e., the absence of ties between groups), that is sparsely connected networks (see network A of Figure 4 as an extreme case). The reason for that is that information and behaviors within a group are generally more homogenous than between two unconnected groups, as these unconnected groups probably also represent different social domains and have access to other types of information and show different behaviors (e.g., colleagues at a bank vs. friends in a tango course; Burt, 2004). In network B of Figure 4, for instance, two groups (i.e., black and white nodes each representing distinct cultural groups) are depicted. There, only in-group members are connected to each other and no cross-cutting ties between groups exist. It is, hence, likely that each group has different types of information and behaviors that are possibly transferred to ego. In this sense, they are not redundant.

In contrast, complex contagion (the change of costly, risky, or controversial behaviors) is more likely in highly clustered (i.e., dense) networks as they have a lot of redundant ties, which make repeated contact with the same type of information more likely (Centola & Macy, 2007). An example of an extremely dense network is Figure 4E, in which every alter is connected to everybody else in the network. In this case, the likelihood that the ego receives the same type of information from any of the alters is higher than in a less connected network, due to the fact that the different alters also exchange information and influence each other, leading to higher similarity among the alters (i.e., more redundance in the network). Evidently, the alters will not become more similar in terms of ethnicity, but they could with respect to their opinions, values, and behaviors.

The hypothesis of complex contagion is based on the idea that there are more redundant ties in highly clustered networks than in sparsely connected networks, and yet it does not make any predictions about the composition of the clusters (i.e., between what individuals the redundant ties exist). A further development of the complex contagion hypothesis is the idea that some redundant ties might be more influential than others. Repke and Benet-Martínez (2017) made a distinction between intra- and intergroup ties based on relationship domains (i.e., friendship vs. work context). Their study provides first evidence that there could be a qualitative difference. In particular, their study shows that it is the ties between same-ethnicity



Note. Colors represent different attributes (e.g., ∞-ethnic and host cultures or cultures A and B).

The composition and the size of the network are held constant whereas the structure varies from completely unconnected (open) to completely connected. (closed). Ego is not part of the network representation as ego would be connected to every alter and, therefore, would only add redundant ties in the illustration.

Fig. 4. Exemplary networks ranging from open to closed.

alters (e.g., only coethnics or only host nationals) who belong to *different* social domains (i.e., friends and coworkers from the same culture who know each other) in ego's life that predict the strength of ego's cultural identifications in contrast to ties between same-ethnicity alters *within* a social domain. We return to this finding in the next section.

Along these structural considerations, we would like to stress also that although the global network structure (e.g., density) might play a key role in the processes described above, the combination of structural and compositional network features might have the highest explanatory power. Figure 4 illustrates five types of networks with same composition (i.e., half of the alters is of ethnicity A and the other half of alters is of ethnicity B). In networks B to E, alters of the same ethnicity are connected to each other (i.e., every black node is connected to all the other black nodes and each white node is connected to the other white nodes). They differ, however, in how much these two completely intraconnected groups (i.e., black and white) are connected to each other. Hence, these networks have very different implications for the degree of intercultural contact within the network and how the ego's cultural identifications may be influenced.

There is also evidence indicating that how much the two cultural worlds (i.e., the coethnic and the host alter groups) are interconnected relates to how much individuals feel conflicted between their cultures (Repke & Benet-Martínez, 2018). Specifically, acculturating individuals low in BII tend to keep their network members pertaining to the ethnic and host cultures separate (e.g., networks B and C in Figure 4), whereas those high in BII are more likely to have culturally interconnected networks (e.g., networks D and E in Figure 4). In summary, as we have shown (although not exhaustively), there is a bidirectional relationship between immigrants' cultural identifications at the micro level and the composition and structure of their social networks at the meso level that cannot be neglected. Furthermore, it is important to note that the underlying processes, such as selection and influence effects, behind this bidirectionalty are possibly constrained and shaped by the immediate and past social and cultural context in which these individuals reside (e.g., Leszczensky, 2018).

Benefits from Incorporating a Network Perspective

Most social psychological studies examine what happens *inside* of people's minds by investigating individual-level characteristics (e.g., self-reported values and behaviors). In doing so, researchers often fail to incorporate the fact that human behavior is also influenced by what takes place *between* people's minds (Brown & Zagefka, 2011; Morris, 2014; Postmes et al., 2015). The study of multiple cultural identifications can benefit conceptually and methodologically from social network theory and social network analysis in at least the following four ways: First, acculturation processes and changes in cultural identification(s)

involve being directly and indirectly in contact with people from more than one culture. As such, an intergroup perspective in which actual intercultural contact is studied is necessary if we aim at understanding why people behave the way they do in social interactions. The social network approach can add to current psychological theories and frameworks because it can account for the complexity and interdependency of social relations in the acculturative context (Smith, 1999). More generally, social network analysis is a valuable tool for investigating the central mechanisms that underlie the types of intra- and intergroup behavior that interest social psychologists (Wölfer, Faber, & Hewstone, 2015). Consequently, social network research may help to improve and complement well established methods currently used to examine social relations.

Second, besides the content of one's social relations, social network methodology also provides useful information regarding the structural aspects of these social relations (information that individuals are often not cognizant of and thus cannot easily provide in traditional self-reports). Exploring network structure may open up new avenues of theorizing in the social psychological and acculturation fields. For example, research has shown that, at least for immigrants, the integration of the newer host cultural identity with the ethnic cultural identity into a multicultural self-concept involves more than just having host culture members (i.e., alters) in the social network. It also relates to the degree of interconnection between ethnic and host alters within the immigrant's network (Repke & Benet-Martínez, 2018). The fact that individuals' bicultural identity structures—often thought of as largely subjective experiences—are mirrored in the structure and composition of their social networks supports the notion that within-person interculturality facilitates, but may also result from, the degree of interculturalism existing within individuals' social communities (Repke & Benet-Martínez, 2018).

Further, as pointed out earlier, there is some evidence that the connectedness of coethnic alters representing different social roles (e.g., friendships between host culture friends and work colleagues) can strengthen or weaken identification with a particular culture through the mechanism of complex contagion (Repke & Benet-Martínez, 2017). Perhaps norms and behaviors from alters belonging to different life domains seem more credible and widely normative, and thus influence ego's cultural identification more. As previously mentioned, the main argument of social contagion is that individuals change their behaviors in reaction to their network (Centola & Macy, 2007; Rogers, 1995). Both the composition and the structure of the network can add to the understanding of how individual differences and changes in cultural identification and other forms of social identities may develop.

Third, the data collection mode for social networks has some methodological advantages compared to commonly used attitudinal and behavioral self-reports. These self-reports are highly dependent on the respondent's self-awareness and are influenced by several attitudinal and memory biases (e.g., social desirability, wishful thinking, forgetting, lying). Though network data are not free from

cognitive biases, the network collection mode can reduce some of the biases above and, thus, constitutes a less obtrusive and more implicit approach (Molina, Maya-Jariego, & McCarty, 2014; Wölfer et al., 2015).³ For example, when studying acculturative contexts, the network approach may grasp real-life situations of intercultural contact more adequately by asking the respondents about their general social interactions and, hence, also giving a less distorted picture as participants may not necessarily know what the researcher aims at with the question.

Fourth, particularly relevant in cross-cultural comparisons, measurement equivalence might constitute a problem. Making participants rate survey items such as "How often do you socialize with host culture members?" might not lead to comparable data as one cultural group could associate only close relationships with this phrase, while another cultural group may also think of work interactions (Tsai, Chentsova-Dutton, & Wong, 2002). Network data can provide a more objective or comparable way of measurement by directly assessing an individual's social interactions (e.g., "please, nominate 5 people you know from work").

Conclusions

Research Recommendations

Scientists interested in conducting a social network study should first think carefully about their research question as this determines the entire design, from the data collection mode to the analysis up to the interpretation of the results. Different types of questions can be answered with network data including individual-level, dyad-level, and group-level problems. Important issues to consider before actual data collection takes place are the choice of the network data type (i.e., sociocentric or egocentric), the kind of relationships (e.g., friends, colleagues, neighbors), the measures (e.g., content-related, structure-based), and the analytical strategy.

Moreover, we encourage researchers to not exclusively rely on commonly used network measures (e.g., density), particularly if these indices do not fit the research question, but instead be creative and come up with measures that are

³Of course, a self-reported personal network (i.e., the perceived, subjective network) might diverge from the true (i.e., objective) network as the first is only a cognitive representation of reality. In fact, sometimes researchers might be more interested in cognitive networks than in true networks. In other cases, however, it might be the other way around. In addition, both types of networks might deviate from the respondent's simple perception of the overall network. For example, a respondent might not conceptualize his/her network in terms of cultural diversity, while the researcher may still compute a measure capturing cultural diversity on the basis of either the self-reported or the objective network. All three types of information may have different predictive power depending on the research question and the context. For instance, in contexts that are negative toward multiculturalism the perception of having many friendships with members of other cultures might be more predictive than the actual number of these friends. Ideally, one could combine these distinct kinds of measures and examine what predicts discrepancies between these different types of information.

meaningful for their hypotheses. In the context of acculturation, for instance, one might be interested in using cultural diversity across alters in the network as a proxy for intercultural contact. Cultural diversity defined as the probability that two randomly selected network members are from different cultural groups is a global representation of the network. This way the overall diversity of the network is described with one single value.

One should be mindful, however, about factors that might limit the usefulness of the above index of cultural diversity in the network. First, there could be little variation among respondents in this variable due to low cultural heterogeneity in the general population, restricted contact opportunities, and the specifics of how the network got generated (e.g., number of alters, question to elicit names, chosen boundaries). Second, the same diversity value could mask two very different network constellations. Cultural diversity, as defined above, solely captures network composition but not structure. Two individuals could have the same number of culturally distinct people in their network, and hence the same diversity score, but one might keep these culturally different alters separate (e.g., coethnics as friends and host nationals as coworkers) while the other might combine them. Both network constellations mean very different things for intercultural contact. So depending on the research question and the case under study, relying only on global measures might lead to important loss of information and erroneous conclusions. As can be seen, choosing the right variable is not always easy because networks can be summarized in many different ways. In the case discussed here, it might be more appropriate to focus on specific elements of intercultural contact (e.g., group-based variables such as degree of connectedness between different cultural groups). Nonetheless, in other cases, global network variables might be appropriate, sufficient, and a time-saving way to investigate the topic under study.

Finally, we want to dispel any possible fear psychological researchers unfamiliar with social network analysis may have regarding both the collection and statistical treatment of this kind of data. Egocentric network data, for instance, can be easily collected by holding computer-assisted personal interviews with the software EgoNet (McCarty, 2003). Further, programs for the statistical analysis and visualization of network data such as Visone (Brandes & Wagner, 2004), EgoNet (McCarty, 2003), UCINET (Borgatti, Everett, & Freeman, 2002), or SIENA (Snijders et al., 2010) allow researchers to effectively explore both the simplest and more complex questions regarding social networks and their dynamics (e.g., which individual characteristics affect the network formation the most, how does network formation affect individual characteristics). Moreover, social network data

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⁴We emphasize that social network research offers the potential to enrich traditional methods in social and acculturation psychology, but, as with every method, it also presents some limitations (e.g., data interdependency), which researchers should be aware of (Wölfer, Faber, & Hewstone, 2015).

indices can be straightforwardly used in traditional statistical methods such as regression analysis, different experimental conditions, or longitudinal designs, alone or in combination with questionnaire data (Repke & Benet-Martínez, 2018).

We believe that investigating the interplay between social networks and cultural identifications (or other types of social identifications) has a great potential in advancing theories and methods used in social psychological research. De facto, social network data has been shown to *not* be redundant with traditional acculturation data and immigration-related demographics (e.g., acculturation attitudes, strength of identification with heritage and dominant cultures, years since immigration), and be able to predict psychological and behavioral adjustment beyond traditional psychological acculturation scales (Repke & Benet-Martínez, 2018; Vacca, Solano, Lubbers, Molina, & McCarty, 2018).

Importantly, we further believe that it can generate new insights about how the individual influences and is influenced by intercultural relations, and, thus, clarify what successful integration entails specifically (e.g., having balanced intercultural relations with heritage and majority cultures while also having networks in which these individuals know each other). These insights can have a significant impact on shaping intercultural policies, and assist in building an environment that enables intercultural relations to develop not only within but also across ethnic, cultural, and linguistic boundaries.

Broad and Specific Policy Implications

Social network research can inform the design of policies and programs relevant to the civic and cultural integration of immigrants, their descendants, and other types of cultural minorities (e.g., international visitors and professionals). Examples of these types of policies are neighborhood and housing planning, design of public spaces and placement of urban furniture (e.g., parks, benches, pedestrian-only areas), intercultural programs at schools, hospitals, and government agencies, and government support for particular cultural and sport-related activities, among many others. A social network perspective validates the idea that all these different types of policies have the potential to ease or difficult spontaneous and habitual intercultural relations, and, importantly, that with time these social relations can become stable social structures with cumulative influence on the cultural and civic integration of citizens.

Social network research can also inform these policies from the bottom-up. But how? First, by educating policy makers, politicians, and educators about the fact that social forces, such as relationships and communities, place a constraint on human action (Smith, 2005). Specifically, policy actors can be encouraged to focus their attention on the types of intercultural relations that individuals and particular groups currently have access to, with an eye toward how these intercultural relations could ideally be expanded and/or re-structured with the

help of specific social policies. Notice that this focus contrasts with the strong emphasis often placed by politicians and the media (and therefore the general population also) on examining instead the qualities that these individuals and groups have or seem to have (e.g., their religion, language proficiencies, attitudes toward host culture, motivations, etc.).

Social network research can hopefully bring awareness about (1) the types of structural constraints and pressures that characterize the habitual social relations of certain cultural groups and communities (e.g., the existence of very dense ethnic enclaves due to housing and urban segregation; presence of dense peer groups and cliques in certain schools that make cross-ethnic interactions difficult), and (2) how lifting these constraints might facilitate the development of new cultural competencies and identifications. Obviously, proximity in social space and contact opportunities among culturally different individuals increase the probability of habitual social relations among these individuals and the formation of diverse communities. But what policy makers often are not aware of is that these diverse social communities and networks are the systems of reference that immigrants need in order to develop the new (and more balanced) cultural identities that they are often blamed for not having.

It is our view, thus, that policy makers need to pay more attention to the ways in which immigrants and other acculturating groups access, maintain, and build different types of social networks, in varied social locations, and with diverse types of people. Policies informed by social network research can improve the relational quality of neighborhood and organizational enclaves, change (if needed) the external factors that constrain these interactions, and leverage from the individual and collective gains that result from having diverse and well-integrated social communities (White, 2018).

Social network research can also help in expanding the mission of traditional immigrant-oriented policies. For example, integration policies often aim at creating opportunities for immigrants to learn the host language and to acquire culturally relevant knowledge (e.g., by offering naturalization courses) with the idea that this could facilitate the interaction with host nationals. Although this is a very important aspect, and having host contacts in the network is a great part of successful integration, immigrants should not have the feeling of having to give up their ethnic culture in return. In fact, ethnic cultural identification is linked to positive acculturation outcomes such as psychological adjustment, while having social networks that are predominantly ethnic is not (Repke & Benet-Martínez, 2018). Policies that promote having regular contact with host culture individuals (in addition to coethnic individuals) are important, but as the results from the study above also attest, developing policies and interventions that facilitate the bridging of these two cultural groups within individuals' networks is important too.

In other words, policy makers and other public actors should be made aware of the psychological damage they might induce by defining immigrants' integration

in terms of single, unidirectional cultural orientations. Instead, they should build social spaces that provide immigrants and majority culture members with plenty of opportunities for habitual interactions so that the development of culturally diverse and interconnected networks is facilitated. Ultimately, these types of networks will not only foster trust and mutual respect between different cultures and, thereby, stimulate a positive public discourse regarding diversity within society but will also contribute to a better psychological and behavioral adaptation of immigrants, and the broadening of cultural competencies among host culture members.

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