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RESEARCH ARTICLE

Centrality and social domains: The role of support, conflict, and ambivalence in the perception of linguistic similarity

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Abstract

This study explores the relationship between alter centrality in various social domains and the perception of linguistic similarity within personal networks. Linguistic similarity perception is defined as the extent to which individuals perceive others to speak similarly to themselves. A survey of 126 college students and their social connections ($n = 1035$) from the French-speaking region of Switzerland was conducted. We applied logistic multilevel regressions to account for the hierarchical structure of dyadic ties. The results show that alters holding central positions in supportive networks are positively associated with perceived linguistic similarity, while those who are central in conflict networks show a negative association. The role of ambivalence yielded mixed results, with a positive and significant association emerging when ambivalence was linked to family members.

Keywords: centrality; language identification; personal networks; ambivalence; social domains

1. Introduction

The perception of similarity is a marker of social identification (Jetten et al., 2001). Accordingly, expressions of similarity provide information on social identification. Similarity can manifest itself across various dimensions, including gender, ethnicity, appearance, social class, culture, behavior and attitude (McCroskey et al., 1975; Lee et al., 2022). By expressing similarity, individuals define their social identity and place within a particular social environment. Sociolinguistic research has expanded this concept to include language, which is defined here as linguistic similarity, or the perception that others speak similarly to oneself (Lee et al., 2022). Language plays a dual role in identity formation, serving as both a marker of belonging and a vehicle for reinforcing identity (Kiesling, 2018; Joseph, 2012; Bell, 1984).

Although it is acknowledged that similarity is a marker of identification, there is limited evidence on why people identify with others. This study builds on the concept of homophily. Homophily, or the fact that similar individuals are more likely to connect with one another (McPherson et al., 2001), operates through two intertwined processes: social influence and social selection (Bidart et al., 2020). Social selection suggests that individuals will interact with others they perceive as similar to themselves, while repeated interactions tend to reinforce this similarity. These two joint processes are cyclical and self-reinforcing.

Homophily also fosters group belonging, encouraging individuals to adopt positive attitudes toward fellow group members (Mok et al., 2007; Leszczensky, 2013; Repke and Benet-Martinez, 2017). These positive attitudes are reflected in feelings of similarity (Gallois et al., 2016). However, the broad concept of ‘interaction’ needs further refinement to identify the underlying dimensions

that influence social identification (Stryker, 2008; Kiesling, 2018). Adopting an Eliassian approach, this study considers interactions anchored in chains of interdependent exchanges that enable the functioning of the broader social network. These functional exchanges refer, for instance, to chains of support, conflict, and a mixture of both, i.e. ambivalence (Widmer, 2010). The distribution of such functional exchanges creates tensions and opportunities for the network's members, making the network unpredictable and dynamic. It is therefore the interplay between such chains of interdependence that fosters social identification (Stryker, 2008).

Our theoretical framework emphasizes the roles of social support, conflict and ambivalence in the process of social identification, expressed through linguistic similarity. Furthermore, we explore how these dynamics differ across social domains, such as family and friends, and their role in either reinforcing or reducing social identification. Empirically, our hypotheses are tested using data from a sample of college 126 students and their personal relations ($n = 1035$) in the French-speaking region of Switzerland. The analysis employs logistic multilevel regression models to account for the hierarchical structure of dyadic ties.

2. The social identification process

Social Identity Theory or SIT (Tajfel, 1981) elucidates how individuals internalize their membership of social groups and categories by incorporating them into their self-conceptions. This process generates a sense of self that is shaped by both enduring and transient group affiliations, facilitated through identification with these groups (Haslam et al., 2016; Postmes and Jetten, 2006). From this perspective, any social category has the potential to assume a defining role in an individual's identity within a given context or life stage. As a result, social identity reflects and prescribes group norms, conventions and sanctions, which in turn shape individual behavior, decisions and choices.

Traditionally, studying the link between language and social identification from a quantitative perspective falls within this approach (Kiesling, 2018). Linguistic forms serve as social markers that express social identities and can be used to infer them (Hernández-Campoy, 2016). Social categories, such as gender, class and ethnicity, are central to the process of linguistic identification (Ash, 2018; Queen, 2018; Fought, 2018). These categories, while not always explicitly salient, are critical in shaping how communities define themselves and compel individuals to position themselves in relation to them (Kiesling, 2018).

In this regard, language serves as a means to convey a sense of belonging and signals social proximity (Bell, 1984). People use the language of the group they identify with (Kiesling, 2018). Furthermore, when an individual shows linguistic similarity toward another individual, it is a marker of a positive attitude (Gallois et al., 2016; Welkowitz and Feldstein, 1969) and an acknowledgment of the other as belonging to the same group (Giles, 2016). Labov (1976), in his seminal New York City project, showed that the social categories of class, gender, ethnicity and age were all crucial categories of identification and drivers of linguistic choices and attitudes. Similarly, Sharma (2017) showed that individuals adapt their language when they identify with the ethnicity of their interlocutors.

While the variationist and sociolinguistic traditions have focused on social categories, there are challenges to this approach (Kiesling, 2018). It remains unclear whether the use of a linguistic variant and the perception of similarity arise from identification with a category, or if they are driven by opportunities for interaction, which, in accordance with the social influence of homophily, lead individuals to become more similar.

A complementary view of social identification arises from symbolic interactionism within structuralist approaches (Stets and Serpe, 2016; Stryker, 2008; Brenner et al., 2021; Burke and Stets, 2023). This structuralist view of identification is aligned with the framework proposed by Bucholtz and Hall (2005), which states that identity is the product of interactions. Their fourth principle suggests that the linguistic expression of identity is a relational process. In her seminal

work, Milroy (1987) demonstrated that individuals with multiplex relationships in their networks were more likely to adopt linguistic variants that were characteristic of their community. At the dyadic level, Kovács and Kleinbaum (2020) showed that friends within a network tend to use similar pronouns over time.

2.1 Social support, conflict and ambivalence

Interactions and social relationships are crucial in the link between language and identification. It is well established that social relationships and interactions enable similarity, but not all social ties have the same influence. Failing to account for the content and strength of these relationships risks overlooking important effects. For example, Fernandez (2023) showed that only reciprocal ties and the most frequent primary source of discussions were related to the emergence of shared linguistic practices. Therefore, as has been argued (Fernandez, 2023; Kiesling, 2018), a nuanced understanding of social ties is necessary to fully grasp the connection between social relations and linguistic identification.

From an Eliassian perspective, interactions are embedded in chains of interdependence within social networks. These interdependencies—whether supportive, conflictual, or ambivalent—are crucial to the network's functioning (Widmer, 2010). The distribution of these exchanges generates both opportunities and tensions, contributing to the dynamic and sometimes unpredictable nature of the network. Functional exchanges are essential for fostering social identification (Stryker, 2008; Burke and Stets, 2023). Normative behavior provides information about group membership (Häusser et al., 2023). Thus, social identification with a specific group should be reinforced by the perceived social support provided by its members. A cohesive, supportive group fosters a sense of community, increasing the likelihood of social identification (McKimmie et al., 2019; Doucerain et al., 2022).

The position within the network of support is also a driver of identification. In the tradition of social network analysis, central individuals are considered to be prestigious (Wasserman and Faust, 2018). Alters are more influential when they hold a central position (Aral and Walker, 2014). Moreover, the act of providing support signals to recipients that they are valued members of the group, thereby reinforcing shared goals and values (Häusser et al., 2023). When individuals receive support, they are more likely to evaluate their alters positively and develop a sense of shared attitudes (Stets and Serpe, 2016). Therefore, central actors—those who provide support to many others—are perceived as key contributors to group cohesion and well-being (Cruwys et al., 2014). As a result, they are often seen as representative of the group, promoting identification with them. For instance, Rodrigues et al. (2019) demonstrated that persons with a higher degree of centrality were more likely to identify with their sports-team peers. Similarly, Graupensperger et al. (2021) provided evidence that out-degree centrality in friendship predicted stronger ingroup affects. Degree centrality has also been linked to identification stability over time (McFarland and Pals, 2005). In line with this insight, alters may be more influential when they hold a central position (Aral and Walker, 2014).

Sociolinguistics also emphasizes central actors as drivers of linguistic identification. Central individuals, who are highly connected and have prestige among their peers, exert both direct and indirect influence over others (Fagyal et al., 2010; Dodsworth and Benton, 2020). Labov (2001) argued that individuals who occupy a central position within the network were those who were able to spread a linguistic practice within the network because they were seen as more prestigious and therefore more influential.

Negative exchanges, such as conflicts, are perceived as threats to group cohesion and identity formation (Bochatay et al., 2019). Conflict serves as a marker of group boundaries, signaling divergence from group norms and values. At the linguistic level, evidence suggests that individuals who distance themselves and have negative attitudes toward others will be likely to diverge in their language (Giles, 2016). This manifests itself in individuals deliberately adopting different ways

of speaking to distance themselves from others. Therefore, when an alter is central to a conflict dynamic, they are less likely to be linguistically aligned with others in the network. For example, Felder (2020) analyzed WhatsApp conversations and found that some participants intentionally diverged in their use of emojis compared to their alters over time. Two distinct patterns of divergence emerged: participants either maintained their original usage patterns or adjusted their emoji use in the opposite direction, increasing or decreasing their usage counter to their alters.

However, social relations are rarely purely positive or negative. More often, they consist in a complex interplay of both, leading to ambivalence (Lüscher, 2011). Ambivalence arises from the emotional dynamics of close relationships, where support and frequent interaction can give rise to conflict (Connidis, 2015). Interpersonal ambivalence exists when both positive and negative feelings toward an alter coexist or when there is a contradiction between the behavior and the sentiments (Connidis, 2015; Lüscher, 2011). Ambivalence is not confined to dyadic processes but can extend to meso-level networks. The distribution of ambivalence within the network exerts a negative influence on the individual (Girardin et al., 2018), and alter's well-being (de Bel and Widmer, 2024, Connidis, 2015). A systematic review of the effect of ambivalence in interpersonal relations indicates that ambivalent ties have a stronger detrimental impact on the well-being of individuals than exclusively negative social relations (Zoppolat et al., 2024). Consequently, ambivalence toward the ingroup mitigates the achievement of social identification (Costarelli and Palmonari, 2003).

2.2 Social domains

Social identification is domain-specific, meaning that individuals' sense of belonging and identity is shaped not only by their perception of group membership, but also by the roles they occupy within their social networks (Stets and Serpe, 2016; Stryker, 2008; Brenner et al., 2021; Burke and Stets, 2023). This perspective emphasizes the immediate social context, or personal network, as critical for validating identity (Markowski, 2021). More precisely, personal networks are composed of individuals who are assigned to different roles (mother, colleague, friend, etc.). Identification with a specific role depends on its prominence within the social network (Stryker, 2008). For example, if an individual is a manager in an organization, and most of the significant social relationships are entertained with colleagues, then there is a high probability that that person identifies with the role of 'boss'.

Kiesling (2018) emphasizes the importance of social domains and roles in linguistic identification, showing that individuals adjust their stance and communication patterns depending on the role they perform. For example, Penelope (2000) demonstrated that individuals tend to adjust their language to align with the speech patterns of members within their social networks and communities of practice.

Two of the most fundamental domains of socialization and social identification are friends and family. Empirical evidence demonstrates that the relationship between social ties and identification is domain-specific, with relationships in a given domain fostering identification with that particular group (Richardson et al., 2022; Häusser et al., 2023). That phenomenon is nevertheless not expected to be consistent across all domains of socialization. For instance, as adolescents transition into adulthood, they become less dependent on their parents and begin to derive socialization and reference points from other relationships, such as friends, colleagues, and peers (Chow et al., 2012; Umaña-Taylor et al., 2020; Repke and Benet-Martinez, 2017). Dense friendship networks in particular are proved to foster strong social identification (Markowski, 2021), and friendships have been identified as predictors of linguistic similarity (Kovacs and Kleinbaum, 2020). Similarly, support received from family members often leads to stronger identification with the family compared to support from neighbors or others in the community (Richardson et al., 2022).

Although it is logical to assume that supportive ties are likely to be maintained, it is equally plausible to argue that negative or ambivalent ties should lead to the dissolution of relationships. However, this is not always the case, especially in relationships that are not fully voluntary, such as those with family, neighbors, colleagues, or friends (Offer and Fischer, 2018), where interdependencies make dissolution of the relationship difficult. Moreover, negative valences are sometimes essential in intimate relationships, suggesting that negative and positive feelings often coexist. Ambivalence is inherent in many family relationships, for example (Connidis, 2015). Some negative and ambivalent ties are considered ‘natural and accepted’ (de Bel and Widmer, 2024, p. 185), meaning that, while these relationships may be undesirable, they are not necessarily dysfunctional.

Importantly, ambivalent ties in family relationships do not yield the same outcomes as in non-family relationships. Ambivalence with friends, for example, tends to affect well-being negatively, whereas ambivalence in family ties does not have the same detrimental effect (Sherman et al., 2006; de Bel and Widmer, 2024). Ambivalent ties along with positive ones are also involved in the process of both autonomy and social identity development (Arnett, 2000). Mixed-feeling relationships with family members are more socially accepted among young adults, as ambivalence may be perceived as part of the process of developing autonomy, while friendships often demand clearer valence for group belonging (de Bel and Widmer, 2024). In friendships, ambivalence or negative ties are viewed as threats to the formation of a shared identity (Postmes and Jetten, 2006).

In the context of linguistic identification, it is important to recognize that functional exchanges—whether supportive, conflictual, or ambivalent—may not be played out similarly across different social domains. For instance, ambivalence may negatively affect friendships but could have a positive association with family interactions. The domain-specific nature of these functional exchanges must therefore be taken into account when examining the role of social identification through language.

2.3 Hypotheses

Based on the literature reviewed above, we propose several hypotheses regarding the relationship between social identification and function-based exchanges, particularly as they relate to linguistic identification. These exchanges—whether supportive, conflictual, or ambivalent—are expected to influence social identification in distinct ways. Moreover, the role of social identification is influenced by an alter’s position within the relational dynamic. We therefore expect that (H1a) the more the alter entertains supportive ties with other members of the personal network, the more ego will perceive a link of linguistic similarity; conversely (H1b), the more alter entertains conflictual ties with other members of the personal network, the less ego will perceive a link of linguistic similarity. Less clear valence, or mixed-feeling, is also expected to have a specific association due to its inherent nature. Unlikely what has been hypothesized for the negative dynamic, alters involved at the core of ambivalence dynamics would presumably be seen as undesirable, thus favoring divergence. Thus, one may expect that the more active and central the alter in terms of ambivalent ties, the less ego will perceive a link of linguistic similarity. To that end, we assume that (H2) the more the alter entertains ambivalent ties with other members of the personal network, the less ego will perceive a link of linguistic similarity.

In addition to the functional dynamics of relationships, we also expect that the influence of these exchanges will vary by social domain. Different social contexts, such as family or friendship, come with unique norms and expectations that influence the effects of supportive, conflictual and ambivalent ties on identification. As these expectations are domain-dependent, we expect that (H3) the associations of functional-based exchanges on the perception of linguistic similarity will vary from one domain to another. In particular, we expect that ambivalence will be negatively associated with friendship, whereas we could expect a positive association for the interaction with family members.

3. Methods

We consider language perception at the dyadic level. Dyads can be considered as the most fundamental and basic social unit and form the smallest social element that can be defined as a ‘group’ (Wasserman and Faust, 2018). However, dyads are nested in larger social networks. Given this hierarchical structure, we employed a multilevel modeling approach. To constitute the personal network of ego, we used the name generator inspired by the Family Network Method (Widmer, 1999): ego is asked to name the persons who have been important in the past six months, whether positively or negatively.

For the name-interpreter phase, basic sociodemographic information about each alter was asked. For the edge interpreter, ego was asked to tell to what extent each alter would give (i) emotional support or (ii) would be a source of annoyance and conflict. We also asked who, within the list of contacts previously identified, would give emotional support to other members of the network. In using this procedure, therefore, we are not trying to reconstitute the objective social network within which the individual is embedded but rather the subjective one. As has been argued (de Bel and Widmer, 2024), these self-reported interdependencies probably mirror recurrent past engagements with individuals who have exerted various (positive, negative, or ambivalent) influences on individuals’ lives.

The focus is therefore not on the ‘actual’ structure of the network of interdependencies, but rather on the perceived structure. Individuals tend to imagine relationships that, in reality, do not exist, either by creating non-existent connections or by not perceiving existing ones, which even prompts some researchers to reconsider the relevance of relying on self-reported data when conducting relational research (Bernard et al., 1980). Nevertheless, the perception of reality motivates actions (Poupart, 2011) and can have real consequences on cognitive and emotional states (Holt-Lunstad et al., 2015; Krackhardt and Kilduff, 1999).

3.1 Measurements

3.1.1 *The dependent variable is the perception of similarity*

To measure it, the respondents were asked to assess to what extent they perceive themselves to speak similarly to each alter, including aspects such as word choice, expressions and general speaking style. For each alter, respondents answered either ‘1’ if they perceived linguistic similarity or ‘0’ if they did not. This measure is adapted from Lee et al. (2022) but differs from it as here it denotes a binary scale instead of a 7-point Likert Scale ranging from 1 (‘Does not speak like me’) to 7 (‘Does speak like me’). The binary scale was chosen to limit respondent fatigue and to maintain consistency with other network measures. A binary measure of the perception of similarity has been used elsewhere (Remez et al., 2007), and no incidence was reported for the reliability and validity of the construct. This procedure allows the straightforward and accurate capture of linguistic similarity perception at the dyadic level without complex and composite measures, which could lead to response bias due to fatigue.

3.1.2 *The centrality of the alter in the respondent’s network*

To capture to what extent the alters are embedded in ego’s network, we used in-degree centrality. For supportive relationships, in-degree centrality indicates the extent to which an alter provides emotional support to others in the network. In conflict networks, in-degree centrality reflects the extent to which an alter is a source of conflict for other network members. For the ambivalence of centrality, we use the in-degree of the ambivalent network, or the support and the conflict networks multiplied together.

For *social domains*, alters were categorized into three main social domains: family members (including parents, grandparents, siblings, uncles, aunts, cousins and children), friends, and non-family relations (e.g., colleagues or neighbors).

Several *control variables* were included in the analysis to account for potential confounding factors. Because homophily suggests that the frequency and duration of interactions are functions of linguistic convergence (Fernandez, 2023), we added a control variable that measures the frequency of contact: ‘How often are you in contact with [alter’s name], whether face-to-face, by phone, internet, or another communication device (5 = every day; 4 = almost every day; 3 = several times a week; 2 = several times per month; 1 = several times per year; 0 = less than several times per year)?’ Another quantitative control variable measured how long ego and alter have known each other.

We also introduce gender homophily as a control variable, indicating whether ego shares the same gender as alter. This addition stems from literature suggesting that gender homophily is a significant influence, as women are more likely to adapt themselves to their interlocutors (Van Hofwegen, 2015). Age is another potentially influential factor. Within the age cohort, language is often employed to delineate clear social boundaries, particularly during adolescence and early adulthood (Kirkham and Moore, 2018). The sample is nevertheless highly biased towards the 20–29-year-old group because of the nature of our population. This results in age categories that are too small for performing statistical analyses. To account for this limitation, we include a homophily metric, indicating whether ego and alter belong to the same age group, scoring 1 for yes and 0 for no. Additionally, because the perception of linguistic similarity may simply emerge from the fact of sharing the same linguistic background, we add a variable that measures the number of common mother tongues ego shares with the alters. Finally, to control for hierarchical and socioeconomic influences, respondents were asked to rate each alter’s position on the socioeconomic hierarchy using a 10-point Likert scale (Sapin et al., 2020). This control aimed to capture any prestige-based effects on linguistic identification, given that social status can interact with network dynamics to shape identification processes (Labov, 1976).

At the network level, we controlled for network size, as the number of alters in a personal network can influence both the perception of linguistic similarity and social identification (Lev-Ari, 2018; Walker and Lynn, 2013; Leszczensky, 2013). Larger networks may also dilute the strength of identification processes, so network size was included as a confounder in the models.

3.2 Sample

This study investigates linguistic similarity in personal networks using a sample of 126 college students from the French-speaking region of Switzerland. These students provided information about their social ties, resulting in data on 1035 unique social relationships. This research received ethical approval from the ethical committee of the author’s university.¹

Table 1 shows the sample characteristics for both respondents and their alters. The sample consists of 61.9% women, with the majority of respondents falling into the 20–29 age group, which aligns with the characteristics of a college student population. Gender and age homophily were prominent, as 61.7% of the respondents’ ties were with individuals of the same gender, and 58.5% were with individuals from the same age group. The average size of the network is 9.25 individuals (S.D. = 2.63), and the average duration of the relationship is 16.81 years (S.D. = 11.55), suggesting that many of these ties were of longstanding. On average, respondents interacted with their alters several times per week (mean = 2.99, SD = 1.33). Alters’ socioeconomic prestige was rated at a mean score of 5.86 (SD = 1.66). In terms of network dynamics, alters had more central positions in the supportive network (mean = 2.81, SD = 2.21) than in the conflictual network (mean = 0.95, SD = 1.31). Ambivalent centrality was the lowest (mean = 0.62, SD = 1.03). Friends and family members share an even proportion (41.7%), and other types of relationship represent 16.5% of the ties. Overall, 46.1% of alters were perceived as linguistically similar to the respondents.

Table 1. Sample characteristics

	Mean (standard deviation)	Proportion (%)
Ego (N = 126)		
Gender (F)		61.9
<i>Age</i>		
20–29 y.o		92.9
30–39 y.o.		5.6
40–49 y.o.		0.8
Size	9.25 (2.63)	
Alters (n = 1035)		
Linguistic similarity		46.1
Gender homophily		61.7
Age homophily		58.5
Mother tongue homophily	3.03 (1.01)	
Support centrality	2.81 (2.21)	
Conflict centrality	0.95 (1.31)	
Ambivalence centrality	0.62 (1.03)	
Frequency of interactions	2.99 (1.33)	
Duration of the relationship	16.81 (11.55)	
Prestige of alter	5.86 (1.66)	
Friends		41.7
Family members		41.7
Other		16.5

3.3 Analytical strategy

As already stated, the data are hierarchically structured. Multilevel models are regression models that have been developed to take into account the nested nature of the data (Snijders and Bosker, 2012). Because the output variable is binary, we use logistic multilevel regressions. To mitigate bias due to the relatively small number of level-1 units (mean = 9.2, range 1–11) within each level-2 unit, we opted for the Restricted Maximum Likelihood method (Hox and McNeish, 2020). The models were implemented using the pymer4 Python package with the Lmer function.

4. Results

Table 2 presents the correlation matrix for each quantitative variable. We observe a high correlation between conflict centrality and ambivalence centrality, which is expected, since the ambivalence measure is derived from the interaction of the support and conflict networks. Therefore, by definition, interdependence exists between the constructs. This interdependence indicates that many individuals who provide support also cause friction, reflecting the complex nature of ambivalent relationships. Given this strong correlation, we tested conflict, support and ambivalence using separate models to avoid multicollinearity.

Table 2. Correlation matrix

Variables	2	3	4	5	6	7	8	9	10	11
1. Support centrality	−.14	−.31	.17	.31	−.05	−.16	−.09	−.01	.25	.12
2. Conflict centrality		.81	.09	.36	−.08	−.29	−.15	−.03	.05	−.05
3. Ambivalence centrality			.15	.36	−.05	−.30	−.15	.06	.03	.04
4. Frequency of interaction				−.00	−.12	−.03	−.09	.09	−.11	.14
5. Duration of the relation					−.04	−.56	−.27	.03	−.03	−.12
6. Gender homophily						.12	.56	−.04	.03	.06
7. Age homophily							0.59	−.02	.00	.22
8. Mother tongue homophily								−.00	.02	.20
9. Prestige of alter									−0.9	0.06
10. Size										−.01
11. Perception of linguistic similarity										

Note: Bold characters are correlations with p -value < 0.05; for the association between binary and continuous variables, Point-Biserial correlations are computed.

Let us note that we observe quite small and non-significant bivariate associations for some of our variables of interest, although as Table 3 shows, in our bivariate models, larger and more significant effects are found. One reason for these differences may lie in the fact that the bivariate correlations do not take into account the nested structure of the data. However, the multilevel models allow within and between-group variation to be taken into account, which can clarify the effects of the binary associations.

The multilevel logistic regression results (Table 3) show the association between the centrality of alters in support, conflict and ambivalent networks and the perception of linguistic similarity. As suggested previously, in order to avoid any multicollinearity issues, support, conflict and ambivalence are treated in separate models. Model 1a refers to the bivariate association for the centrality in the support network, and Model 1b incorporates the control variables. Model 2a focuses on conflict centrality. Model 2b includes the control variables. The same applies to Model 3a and 3b.

The centrality of the alter in the supportive network is significantly and positively associated with linguistic identification. This effect holds even when control variables are added, underscoring the importance of supportive relationships in fostering linguistic alignment. Our results thus allow us to accept H1a.

In contrast, the relationship between conflict centrality and linguistic similarity is more nuanced. In simpler models (Model 2a, Table 3), centrality within conflict networks is negatively associated with linguistic similarity ($OR = 0.88$, $p < 0.05$), but this effect becomes non-significant once control variables are introduced (Model 2b). This suggests that the negative impact of conflict on linguistic identification may be influenced by other factors such as social domain or the nature of the relationships. Although the bivariate association goes in the expected direction, we must reject H1b, as the effect vanishes in more complex models.

Ambivalence centrality, contrary to expectations, shows a significant positive association with linguistic similarity when the control variables are included ($OR = 1.37$, $p < 0.001$). This indicates that in some contexts, ambivalent relationships—those marked by both support and conflict—may still foster identification, potentially reflecting the complexity of family or long-term relationships where ambivalence is more accepted. H2 is therefore rejected.

Table 3. Logistic multilevel regressions odd ratios for the link between linguistic similarity perception and functional-based centralities ($N = 126$, $n = 1035$)

Variables	Model 1a	Model 1b	Model 2a	Model 2b	Model 3a	Model 3b
Intercept	0.49 [0.35–0.68]***	0.07 [0.02–0.34]***	0.94 [0.72–1.22]	0.04 [0.01–0.19]***	0.79 [0.61–1.02]+	0.05 [0.01–0.22]***
Dyadic level						
Support centrality	1.22 [1.12–1.32]***	1.36 [1.23–1.51]***				
Conflict centrality			0.88 [0.78–0.99] *	1.01 [0.87–1.16]		
Ambivalence centrality					1.01 [0.95–1.28]	1.37 [1.14–1.65]***
Control variable at the dyadic level						
Frequency of interaction		1.36 [1.19–1.56]***		1.46 [1.28–1.67]***		1.42 [1.24–1.63]***
Duration of the relation		1.00 [0.97–1.03]		1.01 [0.98–1.04]		1.00 [0.98–1.03]
Gender homophily		1.21 [0.85–1.72]		1.18 [0.84–1.66]		1.19 [0.84–1.67]
Age homophily		3.18 [2.04–4.94]***		3.35 [2.18–5.15]***		3.57 [2.31–5.51]***
Mother tongue homophily		1.38 [0.87–2.20]		1.38 [0.88–2.18]		1.38 [0.87–2.18]
Prestige of the alter		1.07 [0.96–1.20]		1.08 [0.96–1.20]		1.07 [0.96–1.20]
Domain (ref. = other)						
Family		0.71 [0.32–1.59]		1.04 [0.48–2.29]		0.87 [0.39–1.91]
Friends		1.42 [0.85–1.39]		1.46 [0.88–2.42]		1.43 [0.86–2.37]
Control variables at the ego-network level						
Size		0.91 [0.82–1.02]		0.99 [0.90–1.10]		0.99 [0.89–1.10]

Note: Odd ratios are shown, with 2.5 and 97.5 confidence intervals in brackets; *** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ + $p < 0.1$; Intra Class Correlation = 0.22.

Table 4 shows the interaction between functional centrality (support, conflict, ambivalence) and social domains (family, friends, non-family) on linguistic similarity. Models ‘a’ focus on the link between the interactions and the perceptions of linguistic similarities, while the confounding variables are added in Models ‘b’. Models 1 focus on support, Models 2 emphasize conflict and Models 3 include ambivalence. Centrality in the supportive network enhances linguistic similarity across all social domains. Alters who provide support, whether family members or friends, are more likely to be perceived as linguistically similar ($OR = 1.25$, $p < 0.05$ for family; $OR = 1.29$, $p < 0.05$ for friends), compared to other domains.

Conflict centrality shows divergent effects across domains, but only in the simple models. While conflict within non-family networks decreases the likelihood of linguistic similarity ($OR = 0.64$, $p < 0.05$), within family networks, it has a positive association ($OR = 1.76$, $p < 0.05$). This finding suggests that in family settings, conflict may not entirely disrupt linguistic alignment, perhaps due to the enduring nature of family relationships, which often tolerate both conflict and support. However, the effect vanishes when control variables are included in the models.

Ambivalence centrality further supports the idea that family dynamics are unique. Ambivalence is positively associated with linguistic similarity when alter is a family member ($OR = 1.93$, $p < 0.05$), indicating that mixed feelings within family ties do not preclude identification and may even strengthen it. In contrast, ambivalence has no significant effect on linguistic similarity in friendships or non-family relationships, implying that ambivalent ties are more readily accepted in familial contexts.

To sum up, overall our results give validation to H3. We see first that not all function-based exchanges show similar patterns, and that these patterns are not consistent across all domains. We observe that conflict and ambivalence with friends are not related to linguistic identification, whereas that is the case for support, for which we observe that being either a supportive friend or a family member enables social identification.

Other dyadic factors also play a significant role in linguistic identification. More frequent interactions between ego and alter are positively associated with linguistic similarity ($OR = 1.26$, $p < 0.001$), suggesting that regular contact facilitates linguistic alignment. Age homophily is another significant predictor of linguistic similarity ($OR = 3.32$, $p < 0.001$), supporting the idea that shared demographic characteristics enhance identification through language.

When it comes to the impact of the structure of the personal network, it seems that none of the properties exert any influence. The structural effect of level-2 thus seems to be controlled by level-1 properties. However, when size is added to the model without the dyadic-level cofounder, we see a significant and negative relation ($OR = 0.89$, $p < 0.05$), suggesting that the more dispersed and extensive a network, the weaker the individual connections, thereby reducing the likelihood of linguistic alignment.

5. Discussion

This study contributes to our understanding of how social support, conflict and ambivalence within personal networks influence perceptions of linguistic similarity. The findings emphasize that the nature of social ties—whether supportive, conflictual, or ambivalent—significantly shapes perceptions of linguistic alignment, and that these effects differ across social domains.

Supportive ties, particularly when central within a network, foster perceived linguistic similarity. This supports existing sociological theories that positive social exchanges enhance cohesion and identification within groups (Doucerain et al., 2022). Individuals who provide emotional support play a key role in facilitating the perception of linguistic convergence, reinforcing the idea that language is a marker of belonging and social identity (Joseph, 2012). This aligns with previous findings that emphasize the role of supportive relationships in strengthening social bonds and shared identity (McKimmie et al., 2019).

Table 4. Logistic multilevel regressions odd ratios for the link between linguistic similarity perception, domains, and functional-based centralities ($N = 126, n = 1035$)

Variables	Model 1a	Model 1b	Model 2a	Model 2b	Model 3a	Model 3b
Intercept	0.54 [0.30–0.97]*	0.10 [0.02–0.53]**	1.12 [0.70–1.78]	0.05 [0.12–0.25]***	0.99 [0.63–1.56]***	0.06 [0.01–0.28]***
Dyadic level						
Support centrality	1.24 [1.03–1.48]*	1.12 [0.92–1.37]				
Support centrality × Family	1.18 [0.96–1.45]	1.25 [1.00–1.57]*				
Support centrality × Friends	1.14 [0.91–1.42]	1.29 [1.02–1.64]*				
Conflict centrality			0.64 [0.44–0.93]*	0.75 [0.50–1.13]		
Conflict centrality x Family			1.76 [1.18–2.64]**	1.44 [0.93–2.23]		
Conflict centrality x Friends			1.46 [0.93–2.31]	1.25 [0.77–2.02]		
Ambivalence centrality					0.67 [0.38–1.18]	0.76 [0.41–1.43]
Ambivalence centrality x Family					2.28 [1.25–4.16]**	1.93 [1.00–3.78]*
Ambivalence centrality x Friends					1.94 [0.96–3.94]+	1.71 [0.78–3.68]
Control variable at the dyadic level						
Frequency of interaction		1.38 [1.20–1.58]***		1.25 [1.27–1.65]***		1.42 [1.24–1.62]***
Duration of the relation		1.0 [0.98–1.04]		1.01 [0.98–1.04]		1.01 [0.98–1.04]
Gender homophily		1.17 [0.82–1.67]		1.87 [0.84–1.67]		1.17 [0.82–1.65]
Age homophily		3.28 [2.11–5.10]***		3.26 [2.12–5.02]***		3.48 [2.25–5.39]***
Mother tongue homophily		1.42 [0.89–2,26]		1.39 [0.88–2.19]		1.40 [0.88–2.22]

Table 4. Continued

Variables	Model 1a	Model 1b	Model 2a	Model 2b	Model 3a	Model 3b
Prestige of alter		1.07 [0.95–1.20]		1.07 [0.96–1.20]		1.07 [0.96–1.20]
Domain (ref.=Other)						
Family	0.27 [1.13–0.55]***	0.38 [0.13–1.09]+	0.41 [0.24–0.72]**	0.73 [0.69–1.66]+	0.35 [0.21–0.59]***	0.61 [0.26–1.45]
Friends	1.17 [0.62–2.22]	0.83 [0.41–1.69]	1.16 [0.71–1.89]	1.25 [0.67–0.89]	1.19 [0.74–1.93]	1.18 [0.67–2.08]
Control variables at the ego-network level						
Size		0.91 [0.81–1.02]+		0.99 [0.90–1.10]		0.99 [0.89–1.01]

Note: Odds ratios are shown, with 2.5 and 97.5 confidence intervals in brackets; *** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$ + $p < 0.1$.

Conflict introduces complexity into these dynamics. While conflict generally weakens identification, particularly in non-family relationships, the results in the simple models suggest that conflict within family networks does not necessarily disrupt linguistic similarity. This resilience in familial ties may be due to the enduring nature of family relationships, where conflict and support coexist, allowing for continued identification despite negative exchanges (Bochatay et al., 2019). Such findings challenge traditional assumptions that conflict inherently undermines cohesion, highlighting the need for a more nuanced understanding of how conflict operates within close social ties (Widmer, 2010).

Ambivalence extends this pattern, its effects varying with social role. Our results indicate that ambivalence has a positive association when alter is a family member. As previously suggested, mixed feelings are more acceptable and natural in family relationships, benefiting social identification. Ambivalence may be seen as a consequence of positive involvement that comes with emotional costs. As Girardin et al. (2018) argue, negative feelings often stem from positive ones. Familial support therefore fosters stronger identification compared to other types of relationship (Richardson et al., 2022), compensating for the negative impact of ambivalence. Among young adults, ambivalent ties are more socially accepted in family contexts (de Bel and Widmer, 2024) because ambivalence is often seen as part of the process of developing autonomy, making negative interactions more manageable within the complexity of familial dynamics. This effect of ambivalence, however, does not extend to friendships, contrary to prior expectations (Sherman et al., 2006). While it was hypothesized that ambivalence would harm friendships, recent evidence shows that even less harmonious ties in friendships do not impact well-being (de Bel and Widmer, 2024), and a similar association emerges for linguistic identification. These results are also aligned with the argument that ambivalent relations have a greater effect than univalent negative relations (Zoopolat et al., 2014; Costarelli and Palmonari, 2003).

The domain-specific nature of these findings is critical. Family relationships appear to accommodate a wider range of emotional exchanges, both supportive and conflictual, while still maintaining identification. In contrast, non-family relationships may be less tolerant of conflict or ambivalence, requiring clearer valence for social identification to occur (Postmes and Jetten, 2006). These results align with the idea that social identification is context-dependent, varying by social domain and by the expectations that govern relationships within each domain (Stets and Serpe, 2016; Richardson et al., 2022).

Our results are aligned with the wider literature linking homophily and social identification (McFarland and Pals, 2005; Graupensperger et al., 2021; Rodrigues et al., 2019; Umaña-Taylor et al., 2020). Increased contact frequency strengthens linguistic identification, consistent with the homophily and social influence theories, which suggests that similarity increases with more frequent interactions (McPherson and Smith-Lovin, 1987). Interestingly, the duration of relationships shows no significant effect, implying that linguistic identification relies more on actively maintained ties rather than longer, but potentially dormant connections that act as social reserves (Cullati et al., 2018). Age-based homophily also plays a crucial role in perceived linguistic similarity, supporting prior research that highlights age as a key boundary marker in social groups. Language often reflects and reinforces the age-based structure of social organization (Kirkham and Moore, 2018).

5.1. Limitations

Despite the contributions of this study, several limitations must be acknowledged. One limitation is the absence of key variables such as the nationality or ethnicity of both ego and alter, as well as nationality homophily, which could influence perceptions of linguistic similarity. Our data only distinguish respondents and alters as Swiss, French, or other, which limits a more nuanced analysis. However, we do control for linguistic factors by including mother tongue and other languages spoken by both ego and alter. Given the strong correlation between nationality and language, this variable helps capture some of the potential national and ethnic influences that might otherwise be missed.

Our reliance on cross-sectional data limits the ability to draw causal inferences, as the temporal dynamics of social ties and linguistic similarity cannot be fully captured. We understand that the interplay between homophily and social identification is intricate, given its cyclical and self-reinforcing nature. Future research would benefit from longitudinal designs that track changes in social ties and perceptions of linguistic similarity over time.

The sample's homogeneity, consisting mainly of college students from the French-speaking part of Switzerland, also limits the generalizability of the findings. Expanding the study to more diverse populations, both culturally and demographically, would enhance the broader applicability of the results. The choice of this age group is driven by the fact that this period is pivotal not only for the students themselves but also for their social relationships. As individuals navigate this transition, their participatory roles shift, affecting resource distribution and shaping future life trajectories (Levy and Bühlmann, 2016). It also significantly alters the composition of personal networks, often leading to the formation of new friendships at the expense of family ties (Bidart and Lavenu, 2005).

6. Conclusion

In this paper, we have examined how social similarity dynamics are shaped by broader social structures. Our findings show that dyadic attitudes are not isolated but are embedded within a larger social network. This suggests that identification processes depend not only on direct exchanges between ego and alter but also on alter's centrality within the broader network. Thus, social identification is influenced by both dyadic interactions and the relational structure within the group.

This study also highlights the importance of considering different types of relations and incorporating the quality of ties. It extends prior research on social identification and language by taking a sociological perspective. While previous quantitative sociolinguistic research, often grounded in identity theory (Tajfel, 1981), focuses on group-based identities and attributes, we emphasize relational patterns and roles in the emergence of social identification.

The study also opens several promising directions for future research in both sociolinguistics and social network analysis. The findings highlight the importance of ambivalence in relationships—especially within family networks—challenging the traditional view that only positive or supportive ties foster linguistic similarity. Future studies could delve more deeply into the role of ambivalent relationships in shaping language use, particularly across different social domains and cultural contexts, to understand the nuanced ways in which mixed emotions influence linguistic behavior.

Finally, the observed influence of alter centrality on linguistic practices suggests that future research should explore the interplay between network structure and language dynamics in more detail. Studies could investigate how different types of central actor (e.g., influential leaders vs. peripheral members) affect linguistic alignment within diverse groups, shedding light on the intersection of power, status and language use in social networks.

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Data availability. The data is available upon request.

Note

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References

- Aral, S., & Walker, D. (2014). Tie strength, centrality, and social influence: a large-scale networked experiment. *Management Science*, 60(6), 1352–1370.
- Arnett, J. J. (2000). Emerging adulthood: a theory of development from the late teens through the twenties. *The American Psychologist*, 55(5), 469–480. doi: [10.1037/0003-](https://doi.org/10.1037/0003-).
- Ash, S. (2018). Social class. In: Chambers, J. K., & Schilling, N. (eds.), *The Handbook of Language Variation and Change* (second ed.) (pp. 350–368). Oxford: Wiley Blackwell.
- Bell, A. (1984). Language style as audience design. *Language in Society*, 13(2), 145–204.
- Bernard, H. R., Killworth, P. D., & Sailer, L. (1980). Informant accuracy in social network data, IV: a comparison of clique-level structure in behavioral and cognitive data. *Social Networks*, 2(3), 191–218.
- Bidart, C., Degenne, A., & Grossetti, M. (2020). *Living in Networks: the Dynamics of Social Relations*, vol. 49. Cambridge: University Press.
- Bidart, C., & Lavenu, D. (2005). Evolution of personal networks and life events. *Social Networks*, 27(4), 359–376.
- Bochatay, N., Bajwa, N. M., Blondon, K. S., Junod Perron, N., Cullati, S., & Nendaz, M. R. (2019). Exploring group boundaries and conflicts: a social identity theory perspective. *Medical Education*, 53(8), 799–807.
- Brenner, P. S., Stets, J. E., & Serpe, R. T. (Eds.). (2021). *Identities in action: Developments in identity theory* (Vol. 6). London, UK: Springer Nature.
- Bucholtz, M., & Hall, K. (2005). Identity and interaction: A sociocultural linguistic approach. *Discourse studies*, 7(4-5), 585–614.
- Burke, P. J., & Stets, J. (2023). *Identity Theory* (second ed.). Oxford: University Press.
- Chow, C. M., Roelse, H., Buhrmester, D., & Underwood, M. K. (2012). Transformations in friend relationships across the transition into adulthood. In: Laursen, B. W., & Collins, W. A. (eds.), *Relationship Pathways: From Adolescence to Young Adulthood*.
- Connidis, I. A. (2015). Exploring ambivalence in family ties: progress and prospects. *Journal of Marriage and Family*, 77(1), 77–95.
- Costarelli, S., & Palmonari, A. (2003). Ingroup ambivalence and experienced affect: the moderating role of social identification. *European Journal of Social Psychology*, 33(6), 813–821.
- Cullati, S., Kliegel, M., & Widmer, E. (2018). Development of reserves over the life course and onset of vulnerability in later life. *Nature Human Behaviour*, 2(8), 551–558.
- Cruwys, T., Haslam, S. A., Dingle, G. A., Haslam, C., & Jetten, J. (2014). Depression and social identity: an integrative review. *Personality and Social Psychology Review*, 18(3), 215–238.
- de Bel, V., & Widmer, E. D. (2024). Positive, negative, and ambivalent dyads and triads with family and friends: a personal network study on how they are associated with young adults' well-being. *Social Networks*, 78, 184–202.

- Dodsworth, R., & Benton, R. A. (2020). *Language Variation and Change in Social Networks: A Bipartite Approach*. New York and London: Routledge.
- Doucerein, M. M., Amiot, C. E., & Ryder, A. G. (2022). Balancing out bonding and bridging capital: social network correlates of multicultural identity configurations among Russian migrants to Canada. *Self and Identity*, 21(5), 527–552. doi: [10.1080/15298868.2021.1914154](https://doi.org/10.1080/15298868.2021.1914154).
- Fagyal, Z., Swarup, S., & Escobar, A. M. (2010). Centers and peripheries: network roles in language change. *Lingua*, 120(8), 2061–2079.
- Fernandez, G. P. (2023). On the effect of reciprocal dyadic relations on the share of lexical practices. *Connections*, 43(1), 26–49.
- Felder, S. (2020). Patterns of intra-individual variation in a Swiss WhatsApp corpus: analysing real-time change and long-term accommodation. In: Rüdiger, S., & Dayter, D., ed. *Corpus Approaches to Social Media* (pp. 89–110). John Benjamins.
- Fought, C. (2018). Ethnicity. In: Chambers, J. K., & Schilling, N., ed. *The Handbook of Language Variation and Change (Second Edition)* (pp. 388–407). Oxford: Wiley Blackwell.
- Gallois, C., Gasiorek, J., Giles, H., & Soliz, J. (2016). CAT integrations and new framework developments. In: Ed, H. G., ed. *Communication Accommodation Theory: Negotiating Personal Relationships and Social Identities across Contexts* (pp. 192–210). Cambridge: University Press.
- Giles, H. (2016). *Communication Accommodation Theory: Negotiating Personal Relationships and Social Identities across Contexts*. Cambridge, UK: Cambridge University Press.
- Girardin, M., Widmer, E. D., Connidis, I. A., Castrén, A. M., Gouveia, R., & Masotti, B. (2018). Ambivalence in later-life family networks: beyond intergenerational dyads. *Journal of Marriage and Family*, 80(3), 768–784. doi: [10.1111/jomf.12469](https://doi.org/10.1111/jomf.12469).
- Graupensperger, S., Panza, M., & Evans, M. B. (2021). Network centrality, group density, and strength of social identification in college club sport teams. *Group Dynamics: Theory, Research, and Practice*, 24(2), 59–73.
- Haslam, C., Cruwys, T., Milne, M., Kan, C. H., & Haslam, S. A. (2016). Group ties protect cognitive health by promoting social identification and social support. *Journal of Aging and Health*, 28(2), 244–266. doi: [10.1177/0898264315589578](https://doi.org/10.1177/0898264315589578).
- Häusser, J., Abdel Hadi, S., Reichelt, C., & Mojzisch, A. (2023). The reciprocal relationship between social identification and social support over time: a four-wave longitudinal study. *British Journal of Social Psychology*, 62(1), 456–466.
- Hernández-Campoy Juan, M. (2016). *Sociolinguistic Styles*. UK: Wiley Blackwell.
- Holt-Lunstad, J., Smith, T. B., Baker, M., Harris, T., & Stephenson, D. (2015). Loneliness and social isolation as risk factors for mortality: a meta-analytic review. *Perspectives on Psychological Science*, 10(2), 227–237.
- Hox, J., & McNeish, D. (2020). Small samples in multilevel modeling. In: R. van de Schoot and M. Miočević, ed. *Small Sample Size Solutions: A Guide for Applied Researchers and Practitioners* (pp. 215–225). Routledge.
- Jetten, J., Spears, R., & Manstead, A. S. (2001). Similarity as a source of differentiation: the role of group identification. *European Journal of Social Psychology*, 31(6), 621–640.
- Joseph, J. E. (2012). Identity. In: Llamans, C., & Watt, D., ed. *Language and Identities* (pp. 9–18). Edinburgh: University Press.
- Kiesling, S., & F 2018). Constructing identity. In: Chambers, J. K., & Schilling, N., ed. *The Handbook of Language Variation and Change (second edition)* (pp. 448–469). Oxford: Wiley Blackwell.
- Kirkham, S., & Moore, E. (2018). Adolescence. In: Chambers, J. K., & Schilling, N., ed. *The Handbook of Language Variation and Change (second edition)* (pp. 277–296). Oxford: Wiley Blackwell.
- Kovács, B., & Kleinbaum, A. M. (2020). Language-style similarity and social networks. *Psychological Science*, 31(2), 202–213.
- Krackhardt, D., & Kilduff, M. (1999). Whether close or far: social distance effects on perceived balance in friendship networks. *Journal of Personality and Social Psychology*, 76(5), 770–782.
- Labov, W. (1976). *Sociolinguistique*. Paris: Les éditions de minuit.
- Labov, W. (2001). *Principles of Linguistic Change (Vol. 2): Social Factors*. Malden, MA: Blackwell.
- Lee, D. N., Hutchens, M. J., George, T. J., Wilson-Howard, D., Cooks, E. J., & Krieger, J. L. (2022). Do they speak like me? Exploring how perceptions of linguistic difference may influence patient perceptions of healthcare providers. *Medical Education Online*, 27(1), 2107470.
- Leszczensky, L. (2013). Do national identification and interethnic friendships affect one another? A longitudinal test with adolescents of Turkish origin in Germany. *Social Science Research*, 42(3), 775–788. doi: [10.1016/j.ssresearch.2012.12.019](https://doi.org/10.1016/j.ssresearch.2012.12.019).
- Lev-Ari, S. (2018). Social network size can influence linguistic malleability and propagation of linguistic change. *Cognition*, 176, 31–39.
- Levy, R., & Bühlmann, F. (2016). Towards a socio-cultural framework for life course analysis. *Advances in Life Course Research*, 30, 30–42.
- Lüscher, K. (2011). Ambivalence: a sensitizing construct for the study and practice of intergenerational relationships. *Journal of Intergenerational Relationships*, 9(2), 191–206. doi: [10.1080/15350770.2011.568338](https://doi.org/10.1080/15350770.2011.568338).
- Markowski, K. L. (2021). The structure of friendship: how network density influences identity verification. In: Brenner, P., Stets, J., & Serpe, R., ed. *Identities in Action: Developments in Identity Theory* (pp. 265–284). Cham: Springer.
- McCroskey, J. C., Richmond, V. P., & Daly, J. A. (1975). The development of a measure of perceived homophily in interpersonal communication. *Human Communication Research*, 1(4), 323–332.

- McFarland, D., & Pals, H. (2005). Motives and contexts of identity change: a case for network effects. *Social Psychology Quarterly*, 68(4), 289–315.
- McKimmie, B. M., Butler, T., Chan, E., Rogers, A., & Jimmieson, N. L. (2019). Reducing stress: social support and group identification. *Group Processes & Intergroup Relations*, 23(2), 241–261.
- McPherson, M., & Smith-Lovin, L. (1987). Homophily in voluntary organizations: status distance and the composition of face-to-face groups. *American Sociological Review*, 52(3), 370–379.
- McPherson, M., Smith-Lovin, L., & Cook, J. M. (2001). Birds of a feather: homophily in social networks. *Annual Review of Sociology*, 27(1), 415–444. doi: [10.1146/annurev.soc.27.1.415](https://doi.org/10.1146/annurev.soc.27.1.415).
- Milroy, L. (1987). *Language and Social Networks (Second edition)*. New York: Basil Blackwell Ltd.
- Mok, A., Morris, M. W., Benet-Martinez, V., & Karakitapoglu-Aygün, Z. (2007). Embracing american culture: structures of social identity and social networks among first-generation biculturals. *Journal of Cross-Cultural Psychology*, 38(5), 629–635. doi: [10.1177/0022022107305243](https://doi.org/10.1177/0022022107305243).
- Offer, S., & Fischer, C. S. (2018). Difficult people: who is perceived to be demanding in personal networks and why are they there? *American Sociological Review*, 83(1), 111–142. doi: [10.1177/0003122417737951](https://doi.org/10.1177/0003122417737951).
- Penelope, E. (2000). *Linguistic variation as social practice: The linguistic construction of identity in Belten High*. Oxford, UK: Blackwell.
- Postmes, T., & Jetten, J. E. (Eds.). (2006). *Individuality and the Group: Advances in Social Identity*. Sage.
- Poupart, J. (2011). Tradition de Chicago et interactionnisme: des méthodes qualitatives à la sociologie de la déviance. *Recherches qualitatives*, 30(1), 178–199.
- Queen, R. (2018). Gender, sex, sexuality, and sexual identities. In: Chambers, J. K., & Schilling, N., ed. *The Handbook of Language Variation and Change (second edition)* (pp. 368–388). Oxford: Wiley Blackwell.
- Remez, R. E., Fellowes, J. M., & Nagel, D. S. (2007). On the perception of similarity among talkers. *The Journal of the Acoustical Society of America*, 122(6), 3688–3696.
- Repke, L., & Benet-Martinez, V. (2017). Conceptualizing the dynamics between bicultural identification and personal social networks. *Frontiers in Psychology*, 8. doi: [10.3389/fpsyg.2017.00469](https://doi.org/10.3389/fpsyg.2017.00469).
- Richardson, J., Postmes, T., & Stroebe, K. (2022). Social capital, identification and support: scope for integration. *PLoS ONE*, 17(4), e0266499. doi: [10.1371/journal.pone.0266499](https://doi.org/10.1371/journal.pone.0266499).
- Rodrigues, A. I. C., Evans, M. B., & Galatti, L. R. (2019). Social identity and personal connections on the mat: social network analysis within Brazilian Jiu-Jitsu. *Psychology of Sport and Exercise*, 40, 127–134. doi: [10.1016/j.psychsport.2018.10.006](https://doi.org/10.1016/j.psychsport.2018.10.006).
- Sapin, M., Joye, D., & Wolf, C. (2020). The ISSP. 2017 social networks and social resources module. *International Journal of Sociology*, 50(1), 1–25.
- Sharma, D. (2017). Scalar effects of social networks on language variation. *Language Variation and Change*, 29(3), 393–418.
- Sherman, A. M., Lansford, J. E., & Volling, B. L. (2006). Sibling relationships and best friendships in young adulthood: warmth, conflict, and well-being. *Personal Relationships*, 13(2), 151–165. doi: [10.1111/j.1475-6811.2006.00110.x](https://doi.org/10.1111/j.1475-6811.2006.00110.x).
- Snijders, T. A. B., & Bosker, R. J. (2012). *Multilevel Analysis: An Introduction to Basic and Advanced Multilevel Modeling* (2nd ed.). London, UK: SAGE.
- Stets, J. E., & Serpe, R. T. E. (2016). *New Directions in Identity Theory and Research*. Oxford: University Press.
- Stryker, S. (2008). From Mead to a structural symbolic interactionism and beyond. *Annual Review of Sociology*, 34(1), 15–31. doi: [10.1146/annurev.soc.34.040507.134649](https://doi.org/10.1146/annurev.soc.34.040507.134649).
- Tajfel, H. (1981). *Human Groups and Social Categories: Studies in Social Psychology*. Cambridge, UK: Cambridge University Press.
- Umaña-Taylor, A. J., Kornienko, O., McDermott, E. R., & Motti-Stefanidi, F. (2020). National identity development and friendship network dynamics among immigrant and non-immigrant youth. *Journal of Youth and Adolescence*, 49(3), 706–723. doi: [10.1007/s10964-019-01181-1](https://doi.org/10.1007/s10964-019-01181-1).
- Van Hofwegen, J. (2015). Dyadic analysis: factors affecting African American English usage and accommodation in adolescence peer dyads. *Language & Communication*, 41, 28–45.
- Walker, M. H., & Lynn, F. B. (2013). The embedded self: a social networks approach to identity theory. *Social Psychology Quarterly*, 76(2), 151–179.
- Wasserman, S., & Faust, K. (2018). *Social Network Analysis: Methods and Applications*. Cambridge, UK: Cambridge University Press.
- Welkowitz, J., & Feldstein, S. (1969). Dyadic interaction and induced differences in perceived similarity. *Proceedings of the 77th Annual Convention of the American Psychological Association*, 4, pages 343–344.
- Widmer, E. D. (1999). *Les relations fraternelles des adolescents*. Paris: PUF.
- Widmer, E. D. (2010). *Family Configurations: A Structural Approach to Family Diversity*. UK: Routledge.
- Zoppolat, G., Righetti, F., Faure, R., & Schneider, I. K. (2024). A systematic study of ambivalence and well-being in romantic relationships. *Social Psychological and Personality Science*, 15(3), 329–339.