ELOQUENT AND “MORE DEVELOPED”: NETWORK CENTRALITY IN
MULTINATIONAL TEAMS AS FUNCTION OF LANGUAGE ABILITY, NATIONALITY
AND SELF-EVALUATIONS

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1 Under review at Organization Science. Please do not cite without the author’s permission.
Abstract

Building on expectation states theory and research on intercultural relations and nationality-based stereotyping, I examine the ascribed and achieved status mechanisms behind individual network centrality in self-managed multinational teams. I argue that individuals are sought after for leadership and advice, but not for friendship, on the basis of the level of development of their home country (a diffuse status characteristic) and because of their fluency in the team’s lingua franca (a specific status characteristic). An individual’s core self-evaluation and self-rated spoken language fluency are examined as potential mediators of the effect of status characteristics on network centrality. Data on 286 individuals in 36 real teams confirm the prediction that (1) language fluency and nationality are strong status signals, (2) the mechanisms of formation of instrumental and friendship network structures are different, and (3) the effects of nationality on centrality are partially mediated by individual core self-evaluation. Implications of the achievement/ascription mechanisms driving the formation of instrumental networks for the proliferation of multinational teams in organizations are discussed.

Key words: multinational teams, status characteristics, core self-evaluation, social network centrality
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You can't be a Real Country unless you have a Beer and an airline. It helps if you have some kind of a football team, or some nuclear weapons, but at the very least you need a Beer.

- Frank Zappa

The importance of understanding social networks in organizations lies in part in the notion that informal interaction and influence patterns are at least as important to individual, team and organizational outcomes as formal hierarchies (Barnard 1938). For example, at the individual level, it has been found that employees’ locations in the organizational network shape their attitudes at the workplace (Ibarra and Andrews 1993). At the group level, various studies have demonstrated that team efficacy and performance depend on emergent leadership structures (Carson et al. 2007, Neubert and Taggar 2004). Further, at the organization level, the study by Burt and Ronchi (1990) is a paradigmatic case of plant-wide employee sabotage brought about by the dismissal of a central, high-status actor (see also Burt 1992). Influence and status have been studied in sociometric terms for at least sixty years (Katz 1953). So is there anything left to learn? Perhaps yes, considering the changing nature of workplace (Sackmann and Phillips 2004).

Multinational teams are becoming commonplace in organizations, from privately owned corporations (e.g., Hewlett Packard), to military operations (e.g., US Military Standing Joint Force Headquarters), to nonprofit organizations, (e.g., International Red Cross), to research teams (e.g., International HapMap Project), to learning teams within top MBA programs (e.g., in Darden Business School: Isabella and Harder 2001, see also Connaughton and Shuffler 2007, Crown 2007, Tsui et al. 2007). Understanding the social networks and status hierarchies in such teams, in addition to becoming highly practically relevant, is also theoretically exciting, for several reasons. First, situations in which individuals from multiple countries and cultures work together in collocated groups is an underexplored domain of organizational behavior (Burke et al. 2009). Given that other categorical
group memberships such as gender and race have been shown to matter a great deal for status ascription, achievement and network centrality (Miller 1986), we have every reason to expect that national belonging might too (Larkey 1996, Lee and Fiske 2006, Zander and Romani 2004). More generally, national culture adds an extra dimension to diversity in organizations, which has been clearly linked to social structure (DiTomasso et al. 2007), to the extent that “paying attention to differences in power and status is critical for understanding diversity [in organizations]” (Ely and Thomas 2001, p. 231).

Most importantly, compared to traditional teams, multicultural and multinational teams are characterized by heightened ambiguity and complexity due to differences in work norms and behaviors, differences in language fluency and communication patterns, lack of mutual knowledge and common ground, and possible violation of respect and hierarchy among members (Behfar et al. 2006, Gudykunst and Nishida 2001, Zellmer-Bruhn and Gibson 2006). When multinational teams are also self-managed, they will be ripe with all the more ambiguity and complexity: set apart by the behavioral requirements of self-initiative, self-leadership, and risk taking by individual team members, self-managed teams are by definition uncertain environments (Nicholls et al. 1999). Uncertainty puts a premium on interpersonal perception, often leading to heuristic information processing and stereotyping (Leblebici and Salancik 1981, Greeve and Hogg 1995), while interpersonal perception is an important basis for formation of social networks (Casciaro and Lobo 2008, Kilduff and Krackhardt 2008) and status hierarchies (Magee and Galinsky 2008). The potential interpersonal biases present in multinational teams posit a couple of important questions: What are the bases upon which members of multinational teams confer status onto their peers? Are the mechanisms of “achieving” leadership, advice and friendship network centrality different?

I define social status as the sum of unidirectional attachments to a focal actor in a social system (Gould 2002, Lynn et al. 2009), in line with recent formal definitions. Less formally, status can be understood as one’s standing in the social hierarchy, where status hierarchies are “rank-ordered relationships among actors describing the interactional inequalities formed from actors’ implicit [or explicit] valuations of themselves and one another according to some shared standard of value” (cf. Magee and Galinsky 2008, Ridgeway and Walker 1995, p. 281). We have little understanding of what
a “shared” standard of value may be in highly nationally diverse groups, because current accounts linking networks with diversity are based mostly on the homophily paradigm (i.e., birds of a feather flock together: see McPherson et al. 2001), while much of the literature demonstrating that status mechanisms may outweigh homophily applies theories of social identity or social dominance to contexts in which no more than two social categories are present (e.g., in-group/out-group, majority/minority, native/immigrant, Black/White, male/female, dominant/subordinate: see Ellemers et al. 2002, Pratto et al. 2006; for an exception of social dominance theory applied to several racial groups in the Dominican Republic, see Sidanius et al. 2001).

Here I propose that the level of national development of each team member’s home country is a shared standard of value in multinational teams, used to evaluate the worth of fellow team members and oneself. However, “development” may not be equally valuable for friendship as it is for seeking advice and especially leadership. Apart from nationality, an ascribed status mechanism, language fluency, which is arguably achieved, may be a valuable characteristic of individuals and may propel individuals to central positions within their teams. Status characteristics should be less relevant in illuminating the mechanisms behind friendship centrality. Finally, I acknowledge that individual popularity may be affected simultaneously by the status signals that nationality and language fluency send off, and by the subjective experience of individuals regarding their self-worth. Thus, I examine the role of core self-evaluation and self-rated spoken fluency in the relationship between status characteristics and leadership, advice and friendship centrality in multinational teams. After briefly presenting expectation states theory, on the basis of which I develop my hypotheses, I describe the empirical study and results, and I conclude with implications for theory and practice.

THEORY AND HYPOTHESES

Expectation States and the Nature of Ties

Expectation states theory, first formulated by Joseph Berger and his colleagues (Berger et al. 1974, Berger et al. 1977, Berger and Zelditch 1998), seeks to explain how structures of power, prestige and status emerge and are maintained within groups with a collective task orientation (Correll and Ridgeway 2003). The pressure to perform a certain task well creates anticipations about which
individuals will make more valuable contributions. This anticipation, “called an expectation state for the quality of future performance, permits [team members] to decide whose opinions they want to hear and whose should be suppressed, and helps them to evaluate suggestions of uncertain quality by evaluating the individuals making those suggestions” (Webster 1977, p. 42). The individuals who are deemed more valuable contributors are actually given more opportunity to contribute (e.g., speak more often), which in turn leads to observable differences in status. In other words, expectations that people have for their own and others’ relative contributions and performance lead to status hierarchies through somewhat of a self-fulfilling mechanism.

While sometimes implied to predict affiliations more generally (Lynn et al. 2009), expectation states theory is better-suited to explain the emergence of instrumental rather than friendship ties (Lincoln and Miller 1979). Instrumental ties are involved in carrying out specific tasks and in transferring information, advice and knowledge at work (Balkundi and Harrison 2006, Ibarra 1993, Ibarra and Adrews 1993). In contrast, friendship ties are affective, supplying intimacy and warmth. They are also more personal in nature, meaning that they are contingent on the unique and irreplaceable qualities of actors (Ingram and Zou 2008). Friendship relations have been called egalitarian, whereas instrumental relations “accumulate” when one’s expertise is valued (Gibons 2004, p. 241). These two broad types of ties are not mutually exclusive, and are often found to coexist, both inside (e.g., Ibarra 1993, Casciaro and Lobo 2008) and outside (e.g., Verbrugge 1979) of organizational contexts. Nonetheless, the first and foremost type of relationship in teams is task-oriented (Brass 1985), whereas friendship relations may follow, contingent on the unique qualities of actors (see Balkundi and Kilduff 2006).

If we agree that individual status in task-oriented groups stems from expectations of performance and subsequent status-conferring gestures or attachments (Gould 2002) to those who are instrumental in performance, status characteristics theory should be able to predict how sought-after a given individual is for providing team leadership and for giving advice. Faced with a work-related problem, individuals will look for advice from alters expected to be better able to provide advice. Similarly, having to perform well as group, team members will look for leadership where expectations of high performance lie (Bunderson 2003, Ridgeway 2001). It is less clear how being a popular friend
can be explained by expectation states theory. Given the importance of relative performance expectations for the formation of network structures (Gould 2002, Lynn et al. 2009), it is not surprising that the social factors, which influence the formation of performance expectations themselves, have been extensively theorized and empirically investigated.

An important set of factors is the socially significant characteristics of group members, or what has been called status characteristics (Correll and Ridgeway 2003). Status characteristics theory, a subset of expectation states theory (Wagner and Berger 2002), most generally suggests that there are two types of individual attributes relevant to the formation of performance expectations, namely, specific and diffuse status characteristics. Specific status characteristics reflect ability and/or expertise that are pertinent to the group task, such as relevant training, certification, etc., while diffuse status characteristics (also called nominal characteristics) reflect general beliefs about the desirability of certain, often demographic, traits. As the name implies, specific status characteristics are highly context-specific. In comparison, diffuse status characteristics such as gender, age, race, and social class, manage to diffuse through a wide variety of settings in which they have no obvious task relevance (Correll and Ridgeway 2003). Furthermore, despite the original formulation of specific status characteristics as domain-specific, research soon demonstrated that both diffuse and specific status characteristics might carry a “burden of proof” outside of the domains in which were actually relevant (Webster 1977).

It should be noted that in uncommon scenarios, where actors are initially undifferentiated by status characteristics, expectation states form through interaction, as the result of evaluations of specific performance episodes. While truly homogenous groups are theoretically interesting, groups in which actors are differentiated by some status characteristic appear to be a fact of life (Friedkin and Johnsen 2003). In these groups, expectations seem to form immediately upon first meeting, without observation of any performance (Webster 1977). That said, what the relevant status characteristics are, both specific and diffuse, which allow us to make predictions about leadership and advice centrality in multinational teams, becomes a pertinent question. It is also interesting to examine whether status characteristics – specific or diffuse – may diffuse to being a popular friend, a domain in which they bear no obvious relevance.
Language Proficiency and Centrality in Multinational Teams

Multinational teams are prevalent in a wide variety of settings and are charged with a wide variety of tasks. Therefore, specific, task-relevant status characteristics in such teams will vary depending on the context and task at hand. At the same time, these salient specific status characteristics are unlikely to differ from the salient specific characteristics in homogenous, monocultural teams that are assigned the same task. Put differently, summarizing or testing the effects of task-relevant characteristics in multinational teams hardly presents an interesting, generalizable theoretical case. Nonetheless, illuminating here can be recent research on the criticality of language in multinational teams (e.g., Behfar et al. 2006), as well as emerging research on the importance of language for status in multinational organizations (Neeley 2012a).

Language ability is a key status characteristic, specific to multinational teams but less salient in other team settings, which can greatly facilitate an individual’s contribution to the group. Misunderstandings, lack of trust, and conflict in multinational teams is in large part due to lack of common meaning broadly, but even due to heavy accents and lack of vocabulary richness concretely (Behfar et al. 2006, Brett et al. 2006, Henderson 2005). Individuals who are fluent at the team’s lingua franca are likely to be deemed valued members, because of their ability to translate meaning and resolve misunderstanding. Native speakers of the team’s lingua franca, regardless of the fact that their language fluency is inherited and not achieved, can make valuable contributions (Neeley et al. 2012). They are certainly not likely to receive a status “discount” (Mendez Garcia and Perez Cañado 2005). As Neeley has recently shown, building on Bourdieu (1991), native English speakers in a French organization experienced a status gain under an organization-wide English language mandate because of the benefit they reap from speaking in their native language, while “the reverse is the case for nonnative speakers who, by definition, have a linguistically subordinate position relative to native speakers” (Neeley 2012a, p. 2). However, among the non-native speakers, those who are proficient in the lingua franca were more assertive, more learning-oriented, and experienced less status loss.
(Neeley 2012a). Because it is reasonable to assume that most global teams in today’s work and educational settings carry out their communication in English (Neeley 2012b)¹,

HYPOTHESIS 1: In multinational teams, English proficiency (a specific status characteristic) predicts advice and leadership centrality, but not friendship centrality.

Nationality and Centrality in Multinational Teams

Perceptions of competence in work groups often emerge based on stereotypes related to demographic characteristics. Since status is linked to the respect one has in the eyes of others, it generates opportunities for social advancement that favor those with a prior status advantage (Gould 2002, Magee and Galinsky 2008). “Prior status advantage” can stem from one’s belonging to favored nominal groups, such as male, White, or white-collar. That gender inequality continues to exist not only in the U.S., but also worldwide, is a topic of extensive discussion in a wide variety of fields (for example, in management, Davidson and Burke 2011, and in politics, Kenworthy and Malami 1999). Race has been a salient social feature and a subject of scholarly interest in multiracial societies, mostly those with a history of colonization and slavery (Loury 2002, Wade 1997), but its relevance in a global setting is yet to be determined (Pratto et al. 2006). Finally, one’s socioeconomic status (or class) also influences the extent to which one is perceived as competent (e.g., Darley and Gross 1983): income predicts the deference that one is given by peers and, thus, the influence one ultimately exerts in a group (for a review, see Smith 2002).

In multinational groups, nationality is naturally a strong candidate for a salient nominal characteristic (Eagley & Kite 1987). The structure of society itself shapes individual status (Pratto et al. 2006); status in multinational teams will be shaped by the structure of the global society. A long-standing, and perhaps somewhat forgotten, body of research suggests that the generally accepted conception of national identities is associated with a status hierarchy (Peabody 1985). Studies of

¹Ongoing research suggests that within the European Union, English fluency, and not educational attainment, is currently the strongest predictor of socioeconomic advancement (personal communication with Dr. Juan Díez Medrano on July 3, 2012).
immigrant stereotyping also show that “not all immigrants are created equal” – instead, they are perceived more or less favorably depending on their country of origin (Fiske et al. 2002, Lee and Fiske 2006).

A characteristic of a nation that may bring “prior status advantage” to its nationals is its relative development. It has been hinted that GDP per capita serves as a status characteristic within culturally and nationally diverse organizational settings (Ravlin and Thomas 2005, p. 978), but this remains untested to date. Indices of national income have the advantages of parsimony and widespread use, while simultaneously allowing us to solve the pressing operationalization problem of making status predictions based on categories with more than two nominal states, such as nationality. That is, GDP and similar indices provide a straightforward way to rank nationality along a status hierarchy. However, I argue that indices more comprehensive than GDP may prove more promising in explaining variance in individual status in multinational teams. The Human Development Index (HDI, UNDP 2009) is an index that, apart from sharing most of the advantage of an income index, is more comprehensive. The HDI includes not only measures of national income, but also of how income is turned into education and health opportunities and therefore into higher levels of human development (UNDP 2009). Both health (Marmot 2004, Marmot et al. 1991) and education (Sirin 2005) are intrinsically linked not only to socioeconomic status, but also to each other (Mirowsky and Ross 2003). In other words, “you are from a rich country, then you must be competent” is less intuitively appealing than “you are from a more developed country, then you must be competent”. To summarize, I argue that individuals from “more developed” nations will stereotypically be deemed more valuable members of multinational teams and,

HYPOTHESIS 2: In multinational teams, national development (a diffuse status characteristic) predicts advice and leadership centrality, but not friendship centrality.

To illustrate, GDP per capita and the HDI would provide distinct predictions for the relative status of many Arabs, such as nationals of Qatar, Kuwait and the UAE. These three nations rank in the top 10 of the World Bank GDP per capita country ranking (World Fact Book 2009), but drop twenty places down, according to the HDI (UNDP 2000). It is largely an empirical question to determine the predictive validity of each index with respect to individual advice and leadership centrality in multinational teams.
The Role of Self-Evaluations in the Status Characteristics – Centrality Relationship

While according to some expectation states theorists, performance expectations are not directly observable (Friedkin and Johnsen 2006), status characteristics will shape an individual’s relative status within teams based on the expectations that individuals have for their own, as well as others’ relative performance. While performance expectations we hold of others may be difficult to disentangle from status characteristics empirically, it has been shown that actors’ self-judgments perpetuate status hierarchies (Pratto et al. 2006). It is highly plausible that specific and diffuse characteristics send off status cues partially through their influence of individual self-evaluations, and behavioral patterns in turn. For example, Neeley (2012a) showed that when an individual’s fluency ratings differed, self-assessed rather than objective fluency determined the feelings and actions of participants. When self-assessments were skewed lower than objective evaluations, job-related anxieties and behavioral patterns mapped on to individual’s own lower linguistic self-assessments. She concluded that while it is important to develop theories of status as the prestige and admiration that others confer onto actors, it is equally important to take into account self-definition of status positions. Because plenty anecdotal evidence and a recent meta-analysis have revealed that speaking often and confidently is one of the strongest correlates of social dominance (Schmidt Mast 2002), I hypothesize,

HYPOTHESIS 3: In multinational teams, self-evaluated spoken English partially mediates the relationship between English proficiency and advice and leadership centrality.

Finally, the fundamental appraisals individuals make about their self-worth and capabilities, or what is known as core self-evaluation (Chang et al. 2012, Judge et al. 1997), are likely to affect status hierarchies in multinational teams, by channeling the effect of national development on centrality. Core self-evaluation is a higher-order construct composed of broad and evaluative traits, including self-esteem, self-efficacy, emotional stability and locus of control (Judge et al. 1997). The fundamental sense of worth that individuals experience may be a function of one’s group belonging, as indicated by evidence that women judge men more favorably than they judge other women (Jost and Burgess 2000), and Filipinos judge Chinese more favorably they judge other Filipinos (Peabody 1985, pp. 37-38). Furthermore, core self-evaluation fits within a performance expectations framework not
only because of the sense of value that individuals attach to themselves, but also because of how valuable individuals may find the contributions of a peer team member, contingent on that peer’s core self-evaluation. As meta-analytical findings demonstrate, core self-evaluation is positively related to job performance (Chang et al. 2012, Judge and Bono 2001), but even more so to salary level (Chang et al. 2012). In other words, individuals who deem themselves valuable perform better and are also more likely to be rewarded for the good performance. Core self-evaluation has also recently been linked to popularity at work (Scott and Judge 2009), as well as to expatriate adaptation and developing more social ties while abroad (Chiu et al. 2009, Johnson 2003). I expect that higher-status nationals will have higher core self-evaluation, and that core self-evaluation in turn will partially determine the performance expectations others have of them. Therefore,

HYPOTHESIS 4: In multinational teams, core self-evaluation partially mediates the relationship between national development and advice and leadership centrality.

To summarize, I have argued that expectation states theory and status characteristics theory will be able to explain the centrality of individuals in the instrumental networks of multinational teams. I have hypothesized that language ability, as a specific status characteristic, and national development, as a diffuse status characteristic, will be predictive of individual leadership and advice centrality, but not friendship centrality. Further, I have attempted to answer calls to take into account self-definition of status positions (Neeley et al. 2012a, Pratto et al. 2006) when developing theories of status as the prestige and admiration that others confer onto actors. In doing so, I have hypothesized that self-rated spoken English fluency as well as the more fundamental core self-evaluation will partially mediate the relationship between status characteristics and leadership and advice centrality.

METHODS

Data and Sample

In order to test these hypotheses, a sample of highly multinational teams is required. After conducting some preliminary interviews, I collected data from 286 individuals of 46 different nationalities, working in 36 seven-to-eight member teams. All participants belong to one MBA cohort of an
international business school in Spain. Maximizing team diversity in terms of nationality, gender, and professional background, the program assigns students to teams, in which they work intensively (in English) throughout the entire first academic year. Thus, all teams are highly diverse, with an average of 7.95 team members \( (SD = 0.22) \) from on average 6.75 different countries \( (SD = 0.77) \). National diversity is very high in all teams but largely invariable across teams, as indicated by the Blau’s index \( (\text{mean} = 0.82, \ SD = 0.03) \). Students have no knowledge of one-another prior to the formation of the teams, and there are no formally assigned leaders of these, hence they generally function as self-managed. As a substantial part of various course requirements, students need to work together and deliver assignments as teams, for which they are then evaluated as teams. Team grades form approximately 30% of individual grades, and so these teams exhibit the task orientation and outcome interdependence necessary for expectation states theory to hold. Of the participants, twenty-five percent are female, and the average age is almost 28 years \( (SD = 2.01) \). On average, participants have more than four years of business experience \( (SD = 2.25) \).

I collected data at three time points, and from several different sources. At Time 1, I requested demographic and biographic data from the school administration. This data was collected for admissions purposes four to nine months prior to the formation of the teams. Right before the formation of the teams (Time 2), a web-based survey was administered to collect individual self-evaluations. Three months after the formation of the teams (Time 3), a web-based survey was administered to collect sociometric data (i.e., individuals were asked to indicate their ties of friendship and advice, and on whom they rely for leadership within the team). Participants were assured of the confidentiality of their responses.

Measures

Centrality. Social network centrality is measured at Time 3 with relational data as the sum of attachments directed towards an actor (in-degree centrality), consistent with formal theoretical arguments on the formation of status hierarchies (Gould 2002, Lynn et al. 2009) and with empirical status and prestige research (e.g., Umphress et al. 2003). An attachment is defined as a valued unidirectional tie of (1) friendship, (2) advice, and (3) leadership. Specifically, respondents were asked
to indicate, on a seven-point Likert-type scale, the extent to which they “consider this team member a personal friend”, “go to this team member for help or advice”, and “rely on this team member for leadership”. Status in groups has been conceptualized with alternative network centrality measures, such as eigenvector centrality, but in-degree centrality is one of the most stable centrality measures, whereas missing data from even one team member may lead to biased results for Bonacich’s eigenvector measure of centrality (Costenbader and Valente 2003). In addition, evidence suggests that status and deference may be best captured by the simple in-degree centrality measure (Kang 2005, 2007).

*English Proficiency.* Language ability was measured during admissions (Time 1). For all non-native English speakers, fluency in English had to be demonstrated with an official TOEFL or a TOEIC test certificate. Because these two tests have a different score range, a unified measure was obtained by scaling the measures on a 0 to 1 scale. As native English speakers were not required to take a language proficiency test, their score was entered as 1. This is consistent with the expectation that all non-native speakers will receive a status discount by definition. Alternative analyses where dummy variables were included for (1) native speakers, and/or (2) test type (TOEFL = 1, TOEIC = 0) yielded similar results and are omitted from the following presentation.

*National Development.* Nationality was collected at admissions and again at Time 2, where respondents were provided with a single choice. Reports at the two time points were identical. I operationalize the level of development of a given country with the Human Development Index (HDI) of 2009 (UNDP 2009), as this was the latest index year available at the time of admission into the MBA program. Alternative analyses, omitted from the following presentation, with the HDI of 2008 and the HDI of 2010 yielded the same results, and similarly, GDP per capita yielded highly consistent (positive and significant) but slightly smaller effect sizes, which is fully consistent with the arguments made earlier about the superiority of more inclusive indices of national development.

*Self-Evaluated Spoken English.* Individuals were asked to rate their spoken English from “none” = 0 to “mother tongue” = 5.

*Core Self-Evaluation.* Core self-evaluation was measured at Time 2 on a seven-point Likert-type scale with the instrument developed by Judge et al. (2003). Sample items include “I am confident
I get the success I deserve in life” and “I am filled with doubts about my competence” (reverse-coded). Cronbach’s alpha for this scale was .80.

Control Variables. At the individual level, I control for a variety of human capital indicators, or potential signals of an individual’s task-relevant (“true”) quality. These include undergraduate grade point average (GPA, on a 10-point scale), total GMAT score, and years of work experience. Data on these three specific or achieved status characteristics was collected at Time 1, where a test certificate and an undergraduate transcript were required to demonstrate GMAT and GPA, respectively. This procedure ensured that measures of “intrinsic quality” are completely exogenous to one’s acquired status within the MBA team – an important consideration, given a potential reciprocal relationship between status and quality (Simcoe and Waguespack 2011). I also control for the number of languages an individual knows, which was self-reported during admissions (Time 1). The measure was repeated at Time 2, due to potential self-promotion biases at admissions, by prompting individuals to answer “How many languages do you speak fluently?”. The difference between the two measures was not significant (difference = 0.05, *p* = 0.53), thus the first measure was retained. I also control for gender (1 = male, 0 = female), marital status (1 = married, 0 = single), age and its curvilinear effect. Demographic data was collected directly from participants by the researcher at Time 2, as well as by the school administration at Time 1. No discrepancies were found between the two sources. At the group level, I control for team membership with team dummies (team fixed effects), which accounts for minor differences in team size, diversity, and other potential confounding factors at the group level.¹

**RESULTS**

**Summary Statistics**

Descriptive statistics and correlations of this study’s variables are presented in Table 1. With a few exceptions, the pattern of correlations generally follows the expected direction. Friendship centrality is

¹ Alternative multilevel analysis where group-level diversity variables were included showed that diversity has no effects on network centrality.
strongly positively correlated with advice centrality ($\rho = 0.90, p < 0.05$), but slightly less so with leadership centrality ($\rho = 0.74, p < 0.05$), while advice and leadership centrality are also strongly positively correlated ($\rho = 0.84, p < 0.05$). Notably, leadership and advice centrality, but not friendship centrality, are positively correlated with English proficiency ($\rho = 0.19, p < 0.05$ for leadership, $\rho = 0.15, p < 0.05$ for advice, and $\rho = 0.06, n.s.$ for friendship centrality) as well as with national development ($\rho = 0.22, p < 0.05$, $\rho = 0.13, p < 0.05$, and $\rho = 0.07, n.s.$, respectively). Self-rated level of spoken English is positively correlated with English proficiency ($\rho = 0.26, p < 0.05$), but not correlated with centrality. Finally, core self-evaluation is positively correlated with national development ($\rho = 0.15, p < 0.05$), as well as with all three types of centrality, namely leadership ($\rho = 0.38, p < 0.05$), advice ($\rho = 0.26, p < 0.05$) and friendship ($\rho = 0.17, p < 0.05$).

Effects of Status Characteristics on Centrality

To test the hypotheses, I performed a seemingly unrelated regression (Zellner 1962), which allows for correlation between the residual variances of the three dependent variables (leadership, advice and friendship centrality), and facilitates the computation of indirect effects, following recently recommended procedures (Hayes et al. 2011, Preacher and Hayes 2008, Rucker et al. 2011). Table 2 summarizes the results of the analysis conducted to test Hypothesis 1 and 2. Both unstandardized and standardized coefficients were estimated, as shown in the table, in order to facilitate the interpretation of the relative magnitude of effects. Hypothesis 1 states that English proficiency will have a positive effect on leadership and advice, but not friendship centrality in multinational teams. As the first column in Table 2 shows, the effect of English proficiency on leadership centrality is positive and significant ($\beta = 0.11, p < 0.05$). English proficiency also has a positive and significant effect on advice centrality ($\beta = 0.10, p < 0.05$). Finally, the effect of English proficiency on friendship centrality is only marginally significant ($\beta = 0.06, p < 0.10$). Taken together, these findings generally provide support for Hypothesis 1.
Hypothesis 2 states that in multinational teams, the level of national development of an individual’s home country will have a positive effect on leadership and advice centrality, but not on friendship centrality. The relationship between national development and leadership centrality is positive and significant ($\beta = 0.20, p < 0.001$). The effect of national development on advice centrality is also positive, but only marginally significant ($\beta = 0.09, p < 0.10$). National development does not affect friendship centrality ($\beta = 0.04, n.s.$). Taken together, these findings provide support for Hypothesis 2. The standardized coefficients obtained to test the first two hypotheses demonstrate that, all else equal, leadership centrality is most affected by one’s country of origin, followed by one’s gender. Indeed, leadership centrality is better predicted by national development (a diffuse characteristic) than by English fluency (a specific status characteristic). Both factors are comparably relevant for advice centrality. Males fare better than females both in terms of not only leadership ($\beta = 0.14, p < 0.01$), but also advice ($\beta = 0.12, p < 0.01$) and friendship ($\beta = 0.12, p < 0.01$) centrality. Surprisingly, GMAT is not related to leadership and advice but is negatively related to friendship centrality ($\beta = -0.13, p < 0.01$), a finding that needs to be addressed by future research.

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**The Mediating Role of Self-Evaluations**

To test Hypothesis 3, which states that self-evaluations will partially mediate the effects of status characteristics on centrality, I conducted another seemingly unrelated regression, including self-evaluated spoken English and core-self evaluation both as predictors of centrality and as outcomes of status characteristics. In order to ensure the robustness of the mediation results, I conducted supplementary analyses combining the product of coefficients approach with bootstrapping, which accounts for the possibility that the distribution of the indirect effects is non-normal, possibly skewed or kurtotic (MacKinnon et al. 2002; Taylor et al. 2008). Table 3 shows the results of this analysis.

As shown in the table, the effects of status characteristics on centrality remain largely unchanged, once the mediator variables are included. Self-evaluated spoken English ability is positively related to one’s English proficiency ($\beta = 0.24, p < 0.001$), as expected, but unrelated to leadership ($\beta = -0.06, n.s.$) or advice ($\beta = -0.02, n.s.$) centrality. This finding fails to support Hypothesis
3. As expected, self-evaluated spoken English is also not related to friendship centrality ($\beta = -0.03$, n.s.). The 5,000 bootstrap-replication analysis of the indirect effect of English proficiency on centrality via self-evaluated oral ability further demonstrates that Hypothesis 3 is rejected. Namely, as shown by the percentile bootstrap (CIp) and bias-corrected bootstrap (CIbc) confidence intervals, self-rated spoken ability does not mediate the effect of English proficiency on leadership centrality ($B = -0.72$, 95% CIp = [-2.78; 0.70], 95% CIbc = [-2.80; 0.70]), advice centrality ($B = -0.31$, 95% CIp = [-2.34; 1.29], 95% CIbc = [-2.35; 1.28]) or friendship centrality ($B = -0.40$, 95% CIp = [-2.24; 0.94], 95% CIbc = [-2.22; 0.94]).

Hypothesis 4 suggests that national development affects advice and leadership centrality not only directly but also indirectly via core self-evaluation. As shown in Table 3, the effect of national development on core self-evaluation is positive and significant ($\beta = 0.16$, $p < 0.05$). Further, core self-evaluation has a strong positive effect on leadership centrality ($\beta = 0.29$, $p < 0.001$), and a weaker but significant positive effect on advice centrality ($\beta = 0.12$, $p < 0.05$). The indirect effect of national development on leadership centrality via core self-evaluation is significant ($B = 2.59$, 95% CIp = [0.28; 5.47], 95% CIbc = [0.56; 5.96]). The indirect effect of national development on advice centrality via core self-evaluation is marginally significant ($B = 1.19$, 95% CIp = [-0.11; 3.24], 95% CIbc = [0.07; 3.77]). Finally, the indirect effect of national development on friendship centrality via core self-evaluation is not significant, as expected ($B = 0.18$, 95% CIp = [-0.98; 1.46], 95% CIbc = [-0.80; 1.66]).

These findings lend support to Hypothesis 4. Not explicitly shown in Table 3 are the standardized indirect effects or total (direct + indirect) effects of national development on centrality. The standardized indirect effect of national development on leadership is 0.03, whereas the total effect is 0.21. For advice centrality, the indirect effect is 0.01, whereas the total is 0.11. These findings show that the total effect of core self-evaluation on leadership and advice centrality (0.29 and 0.12, respectively) is similar in magnitude as the total effect of national development.

DISCUSSION
In this paper, I have hoped to contribute to research on the role of diversity and status effects in the formation of intrateam social networks, especially in the multinational domain. I find that within multinational teams, nationality has important consequences for an actor’s centrality in advice and leadership networks. I also find that the effect of gender is non-negligible. Specifically, males and individuals from more developed countries (i.e., countries with higher HDI) tend to be held in higher esteem as leaders, and be more sought-after for advice. I find that the fundamental appraisals that an individual makes about his or her self-worth and capabilities (i.e., core self-evaluation) partially determine the extent to which fellow team members will find him or her worthy and capable. Not surprisingly, however, males and individuals from more developed nations tend to appraise their self-worth and capabilities more highly, a finding consistent with social dominance theory (Pratto et al. 2006) and attempts to integrate expectation states and social network theory (Friedkin and Johnsen 2003). In sum, I show that ascribed status along national belonging plays an important part in the formation of instrumental networks, especially leadership networks, in multinational self-managed teams. As expected, national belonging does not affect the formation of friendship networks.

Language fluency, a status characteristic that might actually be relevant for team performance (Neeley et al. 2012), also matters for individual preferences for leaders and advisors, but its effect is slightly weaker, and not mediated by self-evaluated proficiency. This finding shows mixed support for recent qualitative work on the effects of language on status in multinational contexts (Neeley 2012a). Namely, with respect to language, I find that one’s perceived capabilities are not relevant; what matters is one’s actual language proficiency. While this remains to be corroborated by future research, a preliminary explanation can perhaps be provided. As a specific status characteristic, English fluency is easily visible and more susceptible to external evaluation than overall quality or competence. Whereas peer judgments of overall worth may partially stem from self-judgments of overall worth (and subsequent behavior, which was not measured here), fluency in English is relatively more observable and verifiable. It was found, as expected, that the more fundamental evaluations that individuals make of their own general self-worth (core self-evaluation), shape networks in teams. This finding contributes to the accumulating body of research on the effects of personality and cognitions in networks (Kilduff and Krackhardt 2008).
Theoretical Implications

Organizational scholars are increasingly interested in status and its effects on social ties (e.g., Benjamin and Podolny 1999), but in the domain of organizational behavior, most of our attention is directed to gender and race inequalities (e.g., Mehra et al. 1998). I hope that this study has paved the way for more theoretical and empirical research on nationality-based inequality, particularly as it influences networks. Such research is desperately needed because cross-national encounters are an increasing feature of today’s workplace. A strength of this study is the choice of national development to operationalize individual nationality as a diffuse status characteristic. This choice was made in light of research on socioeconomic class and perceived individual competence (e.g., Darley and Gross 1983), as well as research on pre-conceived notions of national esteem (Fiske et al. 2002, Peabody 1985). I am aware, however, that this choice parts ways with a strong tradition in cross-cultural organizational behavior, where substantial cultural differences between nations are of interest, or at least accounted for. This research tradition has made invaluable contributions to understanding the dynamics of intercultural interaction. I have struggled to incorporate historical, political and cultural arguments into my analysis, but I find that this is a Sisyphean task in groups that are this historically, politically and culturally diverse. At the very least, I have tried to make initial strides toward incorporating linguistic arguments, as well as an index of national development that includes sociological and not only purely economic factors, into my analysis of status in multinational teams.

Having said that, an alternative analysis was attempted by clustering countries along a classification provided by House et al. (2004). Most of the cluster categorical variables had insignificant effects. While membership in none of the clusters had significant positive effects on friendship, advice or leadership centrality, membership in the South Asian, Confucian, Sub-Saharan African and Eastern European cluster had (marginally) significant negative effects on advice and leadership centrality. These findings are consistent with the more parsimonious HDI model. Overall, a model that requires clustering countries along cultural values (but partially tapping into socioeconomic development, religion, climate, language, etc.) is perhaps far more objectionable than my approach here. To illustrate, in House et al.’s (2004) classification, Israel forms part of Latin Europe. In the analysis, when the Latin European cluster includes Israel, individual belonging to this cluster is
positively related to centrality. When the Latin European cluster excludes Israel, individual belonging to the Latin European cluster is not related to centrality. While Israel is similar in national development to most countries in Latin Europe (although it ranks first, before France, Spain, Italy, Greece, etc.), its inclusion into this cluster is much more debatable than simply computing the effect of a relatively objective indicator such as the human development index. In this case, the classification of Israel according to House et al.’s typology would have obscured the strong status effect of an Israeli nationality. Finally, House et al.’s (2004) typology does not include many nations, in my sample and more generally, which requires that either data is lost or that assumptions are made about a country’s belonging to a given cultural cluster.

Exchanging the extent to which belonging to a particular cultural cluster is related to status is an interesting avenue for future research on status in multinational teams. Now that the effect of nationality on individual centrality in teams has been established, the mechanisms of cognition and interpersonal perception that shape interpersonal relations need to be studied in further depth. One way to go about this would be to focus on the near-universal dimensions social perception – competence and warmth (Cuddy et al. 2009). Nationality has been shown to trigger stereotypes of competence and warmth (Fiske et al. 2002, Lee and Fiske 2006), whereas perceptions of competence and warmth have been shown to affect organizational networks (Casciaro and Lobo 2008). I have argued that national development goes hand in hand with perceptions of competence, but I did not measure such perceptions. A more nuanced understanding of why certain country nationals emerge as central, while others do not, can be provided by future work along the lines of social cognition. Perceptions of competence and warmth might also be able to explain the surprising negative effect of GMAT on friendship centrality.

I must emphasize that my sample consists of teams where formal hierarchies were not put in place, which allowed me to isolate undesirable variance, but at the same precluded an exploration of the interplay between formal and informal social structures. Furthermore, the sample consists of highly diverse teams only, as diversity was maximized by design upon the formation of the teams. This feature of the sample allowed me to keep a number of additional confounding factors constant (e.g., homophily, sub-group formation), and focus on status effects. While I explained centrality in
teams’ instrumental networks of leadership and advice with status effects, I could not explain centrality in teams’ friendship networks, as friendship may form on the basis of shared social identity (Mehra et al. 1998). Future work may continue examining the interplay of homophily and status (Pearce and Xu 2012) as well as of sub-groups and network ties in teams (Harrison and Eiston 2011), especially in teams composed of more than two nations (Cramton and Hinds 2005, Salk and Brannen 2000, Schwieren and Glunk 2008), where the in-group/out-group dynamics are less automatic. While I did not find team diversity effects in my sample, future work may examine whether the level of diversity in teams has positive, negative, or curvilinear effects of status achievement versus ascription.

In a way, this paper speaks to the eternal debate over achieved versus ascribed status (e.g., DiTomaso et al. 2007, Ravlin and Thomas 2005), but in a brand new setting: multinational teams. Not only are organizations increasingly relying on self-managed teams to structure their work (Lawler 1998), but “employees, teams, and organizations are increasingly operating in multicultural contexts” (Tsui et al. 2007, p. 33, Crown 2007). Within self-managed teams, often there is a reliance on a member or members to step forward and informally carry out leadership functions within the team. Reliance on a leader who emerges informally is often deemed appropriate for two reasons (1) it is possible that the natural selection process will result in the most qualified member assuming leadership responsibilities and (2) it is believed the persons actually doing the work (i.e. the team members) are in the best position to determine who should take various role responsibilities (Carte et al. 2006, Erez et al. 2002). Unfortunately, leadership perceptions may be more highly related to perceived social status than to functional behavior (Lord 1977), especially highly uncertain environments (Bunderson 2003), such as those of multinational teams.

Although leadership emergence within small groups has been scientifically studied for almost a century – at least since the director of German military psychology J.B. Rieffert originated the “leaderless group discussion” in 1920 (Bass 1954) – research interest in the phenomenon is not winding down, partially because of the recent rise of self-managed work teams (Curtin 2004). This study further strengthens the promise that social network research has recently given to research on leadership emergence (Balkundi and Kilduff 2006, Carson et al. 2007). In particular, I show that
leadership networks are different from the conventionally studied networks of friendship and advice, and perhaps more susceptible to expectation states analysis (Bunderson 2003).

The results of this study indicate that the formation of instrumental ties follows status logic, whereas the formation of friendship ties does not – or does so to a much lesser extent. Indeed, there appears to be a gradual shift in the importance of status characteristics for centrality in different types of team networks. Compared to advice and especially friendship centrality, centrality in the team’s leadership network is based largely on nationality, and as such arguably most ascribed. Conversely, compared to leadership ties, advice ties tend to be more achieved on the basis of language proficiency. This finding supports the notion that social structure cannot be fully understood if the content of social ties is disregarded (Podolny and Baron 1997) and demonstrates the need for further research on the determinants of specific tie types, where a distinction more fine-grained than instrumental and friendship ties may be desirable. To illustrate further, it is reasonable to expect that leadership preferences are most competence or status-based, most socially determined and consensual in nature (Offerman et al. 1994), and as such much more collectively emergent on the team level. On the other hand, friendship ties are largely a function of the match or fit between two individuals. Advice ties in multinational teams perhaps lie in between: they are somewhat more contingent upon the specific parties involved than leadership ties, but less particularistic than friendship ties.

**Managerial Implications**

This study has important implications for organizational justice, as the ascription of status might significantly impair team member and employee conceptions of equality and fairness. Managers and team leaders, especially of diverse teams, where the relationship between the quality of team members and the status order is often not straightforward, should pay special heed to emergent social networks in teams. Even though this study does not show that the “wrong” status hierarchy might have undesirable group performance consequences, previous work has made this assertion (e.g. Bunderson 2003). More importantly, perhaps, the “wrong” status hierarchy might be unethical and demotivating in the long run. Work is needed on the factors that foster a more egalitarian distribution of status in multinational teams – the team’s diversity perspective (Ely and Thomas 2001) is one likely candidate,
and the team’s cultural intelligence (Earley and Ang 2003) may be another. Developing a safe team environment has also been shown to greatly facilitate individual contributions to the team, and we already have some ideas about the steps organizations can take to develop safe, integrative, learning team environments (Edmondson and Roloff 2008).

The study also has implications for training individuals to form part of multinational teams. First, individuals not completely proficient in English may receive additional language training so that their potential contributions to the team are not devalued by their lack of fluency. Non-native speakers, regardless of their level of fluency, may be trained to “stick to English” and practice as much as possible, while native speakers can be trained to take concrete steps to keep quiet on occasion and encourage less proficient speakers to contribute to team discussions (Neeley et al. 2012). Finally, the study suggests that individual self-assessments contribute to perpetuate national stereotypes. Thus, with aim of upgrading the status and fueling the contributions of individuals from less developed nations, attempts to foster more positive core self-evaluations may prove promising. This too can be done through training, as we know that self-efficacy increases with training (Gist et al. 1989, Tannenbaum et al. 1991), and that internal locus of control, even among older adults, does too (Wolinsky et al. 2010). Based on evidence that leadership centrality is better predicted by national development and core self-evaluation than by English fluency, positive self-perception is worth investing in.

**Concluding Remarks**

In conclusion, despite its limitations, this study has important theoretical and managerial implications. I contribute to research on the formation of intrateam social networks, especially in the multinational domain. Thus, I help further integrate diversity, status and inequality theories into the study of the micro foundations of the formation and perpetuation of social structure. Showing that within multinational teams nationality has important consequences for an actor’s centrality in advice and leadership networks, the results of this study evoke the wisdom of Mr Frank Zappa: nations without a Beer and a football team appear to be taken less seriously.
REFERENCES


Casciaro, T., M. S. Lobo. 2008. When competence is irrelevant: The role of interpersonal affect in task-related ties. *Administrative Science Quarterly* 53(4) 655-684.


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*Note. n = 286. Significance levels are two-tailed. *p < .05
### Table 2  Summary of Seemingly Unrelated Regression Analysis of Status Characteristics Predicting Centrality

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\( R^2 \) = 0.48 \( \text{SE} \) = 0.60 \( \text{GMAT} \) = 0.66

**Notes.** \( n = 259 \). B = unstandardized coefficient; SE = standard error; \( \beta \) = standardized coefficient. Team fixed effects (team n = 36) included but not shown for ease of presentation.

\( \text{†} p < .10 \) \( * p < .05 \) \( ** p < .01 \) \( *** p < .001 \)
### Table 3  Summary of Mediation Analysis

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<td>Undergraduate GPA</td>
<td>-0.05 (0.03)</td>
<td>-0.09</td>
<td>0.04 (0.04)</td>
<td>0.05</td>
<td>0.64 (0.33)</td>
</tr>
<tr>
<td>GMAT Score</td>
<td>0.00 (0.00)</td>
<td>0.06</td>
<td>0.00 (0.00)</td>
<td>0.07</td>
<td>-0.00 (0.01)</td>
</tr>
<tr>
<td>Number of Languages</td>
<td>-0.12 (0.04)</td>
<td>-0.20 **</td>
<td>0.06 (0.04)</td>
<td>0.07</td>
<td>0.52 (0.34)</td>
</tr>
<tr>
<td>English Proficiency</td>
<td>1.06 (0.31)</td>
<td>0.24 **</td>
<td>0.13 (0.39)</td>
<td>0.02</td>
<td>6.37 (3.02)</td>
</tr>
<tr>
<td>National Development</td>
<td>1.02 (0.32)</td>
<td>0.22 **</td>
<td>0.97 (0.40)</td>
<td>0.16 *</td>
<td>9.85 (3.11)</td>
</tr>
<tr>
<td>Self-Evaluated Spoken English</td>
<td>-0.68 (0.65)</td>
<td>-0.06</td>
<td>-0.29 (0.67)</td>
<td>-0.02</td>
<td>-0.38 (0.57)</td>
</tr>
<tr>
<td>Core Self-Evaluation</td>
<td>2.66 (0.52)</td>
<td>0.29 ***</td>
<td>1.23 (0.54)</td>
<td>0.12 *</td>
<td>0.18 (0.46)</td>
</tr>
</tbody>
</table>

"R²“ = 0.33 0.30 0.55 0.62 0.66

<table>
<thead>
<tr>
<th>Indirect Effect</th>
<th>Observed Coefficient B</th>
<th>Bootstrapped SE</th>
<th>95% Normal-Based CI</th>
<th>95% Percentile CI</th>
<th>95% Bias-Corrected CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership Centrality via Self-Evaluated Spoken English</td>
<td>-0.72</td>
<td>0.88</td>
<td>(-2.44, 1.01)</td>
<td>(-2.78, 0.70)</td>
<td>(-2.80, 0.70)</td>
</tr>
<tr>
<td>Advice Centrality</td>
<td>-0.31</td>
<td>0.89</td>
<td>(-2.06, 1.44)</td>
<td>(-2.34, 1.29)</td>
<td>(-2.35, 1.28)</td>
</tr>
<tr>
<td>Friendship Centrality</td>
<td>-0.40</td>
<td>0.79</td>
<td>(-1.96, 1.16)</td>
<td>(-2.24, 0.94)</td>
<td>(-2.22, 0.94)</td>
</tr>
<tr>
<td>National Development via Core Self-Evaluation to Leadership Centrality</td>
<td>2.59</td>
<td>1.33</td>
<td>(-0.03, 5.20)</td>
<td>(0.28, 5.47)</td>
<td>(0.56, 5.96)</td>
</tr>
<tr>
<td>Advice Centrality</td>
<td>1.19</td>
<td>0.86</td>
<td>(-0.50, 2.88)</td>
<td>(-0.11, 3.24)</td>
<td>(0.07, 3.77)</td>
</tr>
<tr>
<td>Friendship Centrality</td>
<td>0.18</td>
<td>0.58</td>
<td>(-0.97, 1.32)</td>
<td>(-0.98, 1.46)</td>
<td>(-0.80, 1.66)</td>
</tr>
</tbody>
</table>

**Notes.** n = 228. Results of seemingly unrelated regression analysis and bootstrapped indirect effects (5,000 bootstrap replications). B = unstandardized coefficient; SE = standard error; β = standardized coefficient; CI = confidence interval. Team fixed effects (team n = 36) included but not shown for ease of presentation.

†p < .10  *p < .05  **p < .01  ***p < .001