

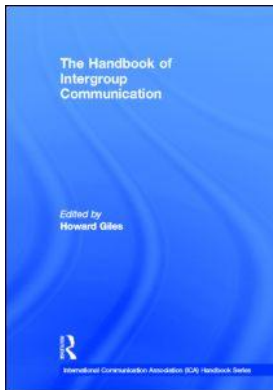
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Approaches and Methods in Intergroup Communication

Cynthia Gallois, Julia Cretchley,
and Bernadette M. Watson

Research in intergroup communication has a long history (see Chapters 1 & 2, this volume), with much of the impetus coming from disciplines other than communication, a relative latecomer to the systematic study of role, culture, and organization *from an intergroup perspective*. Rather, research took place under the heading of intergroup relations (in social psychology, sociology, and political science), intercultural relations (in anthropology and linguistics), or identity (in all these disciplines). The methods of those disciplines came to be employed to study communication (and miscommunication) across group boundaries. In this chapter, we review this diverse and eclectic history, through which virtually every method in social sciences research has been used extensively. We consider many types of quantitative research: experiments, surveys, and questionnaires using direct and indirect measures. We also examine socio-cognitive methods, concentrating on language-based ones (Linguistic Category Model/Linguistic Intergroup Bias, Implicit Attitude Test, linguistic priming). We then turn to qualitative methods, including discourse analysis, discursive psychology, conversation analysis, and ethnography. We canvass some new technology, mainly methods for data organization, textual mining, and visualization, that permit detailed exploration of larger amounts of data.

The eclectic traditions make integration of this field difficult, particularly because scholars in different disciplines have tended to work independently of each other, and to disparage or ignore (or not even be aware of) each other's work. It can sometimes be embarrassing to be at conferences where scholars replicate work done decades earlier, without acknowledging their remaking of the past. It is also clear that scholarship in this area requires an open mind and understanding of diverse research methods. Even more important, it requires understanding of the connection between methodology and theory, and the driving role of the latter in research. In our view, intergroup communication is best characterized by two key features: exploration of the impact of group memberships (*intergroup*) and elucidation of the process and dynamics of interaction (*communication*); this combination distinguishes it from all other fields. The chapter finishes with a discussion of some implications of these key features.

APPROACHES TO INTERGROUP COMMUNICATION

Despite its multi-disciplinary heritage, the systematic study of intergroup communication *per se* has its strongest roots in social psychology and socio-psychological areas of communication studies (interpersonal, intercultural). Intergroup communication emerged *from* social psychology in the 1950s with the work of Lambert and his colleagues (e.g., Lambert, Hodgson, Gardner, & Fillenbaum, 1960). Their work was strongly grounded in experimental social psychology, drawing secondarily on linguistics (see Chapter 2, this volume). Since then, research on communication attitudes (defined as positive or negative beliefs about communicators and communication that influence behavior) and their antecedents and consequences has reflected allegiance to social-psychological methods. On the other hand, intergroup communication also came *out of* social psychology, in that researchers questioned the tendency of social psychologists to concentrate on message source and audience to the exclusion of message characteristics. As communication scholars, they emphasized the message (Hornsey, Gallois, & Duck, 2008). Indeed, it is only in recent years that the study of communication is coming back into mainstream social psychology (see Fiedler, 2007, for examples).

Lambert and colleagues' (1960) early work established a clear link between language attitudes and personality judgments. Depending on their disciplinary background, however, others would date the field's beginning from work on intercultural communication competence (inspired particularly by Hall, 1959), or from the ethnography of communication (e.g., Gumperz & Hymes, 1964), which led to the examination of intercultural and then between-gender and other interactions through close analysis of texts. These traditions did not explicitly theorize communication as intergroup, but rather emphasized the misunderstandings due to following different cultural rules. Intergroup communication *per se* may date more precisely from research in the UK, beginning with Tajfel's social identity theory (SIT; e.g., Tajfel & Turner, 1979) and Giles' speech (later communication) accommodation theory (CAT; Giles, 1973).

The diverse disciplinary base led to methodological diversity. Nevertheless, there are some commonalities. Overall, this research is closely theorized, exploring an increasing range of group memberships—some long-standing (e.g., intercultural, between-gender), some acquired through life (e.g., intergenerational, interability, interhealth), and some freely chosen (e.g., intergang, intersport; see Chapter 26, this volume). Intergroup communication emphasizes contextual sensitivity, through applications in organizational, health, education, political, and media-based communication, with an increasing number of new contexts. With more emphasis on qualitative methods in the past 20 years (Weatherall, Watson, & Gallois, 2007), researchers now make more use of naturalistic data, rather than constructed stimuli. We begin with quantitative approaches and proceed to qualitative approaches.

QUANTITATIVE METHODS

Most of the methods we describe make use of an experimental paradigm. They compare intergroup interactions across key variables (gender, age, ethnic group, etc.), and where possible use random allocation to condition (usually possible for judgments of targets, but not for participants' own group memberships). This approach gives some scope for causal conclusions; however, experiments strip back the sociolinguistic context to the point that the experiment may have very little to do with real intergroup interactions. Furthermore, experiments are vulnerable to a number of biases, and have been criticized for showing what participants *can* do in the right conditions rather than how they *actually* behave in most circumstances. There have been attempts

to address these issues by combining experimental methodology with unobtrusive measures. This tendency has increased with the rise in popularity of social cognition, so that much contemporary work explores cognitive variables instead of communication *per se*.

Matched-Guise Technique (MGT)

In the 1950s, the main measures of attitudes involved questionnaires, where people were asked structured questions about the attitude object. This method drew comment for its vulnerability to biases such as social desirability and acquiescence. Lambert and colleagues (1960) in Canada took advantage of their bilingual country to invent a clever alternative, the Matched-Guise Technique (see Chapter 2, this volume). They asked French and English bilinguals to listen to tape recordings in French and English and make personality ratings of the speakers. Unbeknownst to respondents, the speakers were the same people across languages, resulting in considerable control by the researchers of vocal features. As predicted, speakers in English guises were perceived as having better education and higher status, whereas French speakers were judged as friendlier and more trustworthy. Lambert proposed that in intercultural contexts, people first judge ethnicity or culture, as signaled by language; this judgment colors further impressions of interlocutors.

Research using this method soon proliferated around the world (for a comprehensive review, see Ryan & Giles, 1982). The original MGT methodology was employed where possible, using bilingual speakers and respondents. In monolingual contexts like the UK, region and social class as signaled by accent became the main object of study (Giles & Powesland, 1975). Where possible, the same speaker(s) were used across accents; otherwise, different speakers were used, with multiple speakers providing experimental control. In general, researchers were able to predict personality judgments based on language and accent by starting from an analysis of the intergroup dynamics in each context (see Chapter 7, this volume).

The MGT represented a significant advance over survey methods, and it opened up a wide array of communicative behaviors to controlled study. Indeed, the MGT and its variants underpin much research on communication accommodation (see Bradac, Cargile, & Hallett, 2001). Even so, it is hard to make guise passages genuinely content-neutral, and they can be vulnerable to the stereotypes of speakers (Nolan, 1983; Pittam, 1994). Guises also make it difficult to study more than one group membership at a time. Furthermore, the MGT has a number of untested assumptions (see Brabant, Watson, & Gallois, 2007). Attitudes are given primacy over behavior; that is, a listener's attitude to a group determines reactions to its speakers. In addition, attitudes are assumed to be stable over contexts outside those tested. Many studies, however, show how the immediate context attenuates, neutralizes, or even reverses attitudes (e.g., Bourhis, 1983), pointing to the need at least to add behavioral studies to attitude-related ones. Finally, the MGT is decontextualized, and researchers using it must assume that unmeasured variables do not interact with focal variables, so that results have sometimes proved difficult to generalize to ongoing communication.

To some extent, the MGT was replaced by the observation of actual behavior in intergroup interactions, direct analysis of sociolinguistic features that differentiate groups (e.g., Kashima & Kashima, 1998), more direct methods of attitude elicitation (e.g., vitality measures, see below), and systematically varied vignettes and video clips using many speakers. These methods have allowed subtle examinations of identity and consequent sociolinguistic impressions. Their disadvantage, as Lambert et al. (1960) first noted, is that obvious manipulations may elicit responses that participants perceive as desirable; thus, the MGT will likely remain a tool in the intergroup communication arsenal for the future.

Surveys and Questionnaires

Questionnaire measures of language attitudes have always been popular (Bradac et al., 2001). Like all questionnaires, these measures permit a large number of questions about attitudes to be asked to many respondents. On the problematic side, researchers must assume that respondents interpret questions in the same way that they themselves do, and that attitudes not salient outside the research context do not have much impact. The most direct measures ask respondents to make straightforward intergroup comparisons about language and communication, for example about the competence and attractiveness of the speaker or the status and power of the speaker's group. These measures often use structured bi-polar scales to study perceptions. Giles, Reid, and Harwood (2010) and Harwood and Giles (2005) provide recent reviews of this research, which has taken place on all continents, in many intergroup contexts. It is easily analyzable by statistical methods, and great strides have been made in applying structural equation modeling and multi-level analysis to explore complex paths from group membership through attitudes to communication.

The Achilles heel of these measures is that, while they are excellent indicators of respondents' expressed attitudes, they are not always good predictors of behavior. As many studies have shown, attitudes do not always predict behavior (Wallace, Paulson, Lord, & Bond, 2005). One reason is politeness; another is lack of ability (see Giles, Coupland, & Coupland, 1991). Overall, direct measures are a good way to discover perceptions, beliefs, and how people think they would behave, but not as good to measure how people behave in real interactions.

Second-language Acquisition and Willingness to Communicate

One important exception, where attitudes *do* predict behavior, is the area of second-language (L2) acquisition. Gardner and his colleagues (e.g., Gardner, Lalonde, & Pierson, 1983), using questionnaires, found that intergroup language attitudes consistently predict motivation to learn a second language (L2), as well as proficiency in the language. They argue that motivation to learn L2 may be instrumental (e.g., a desire to do business in the new language) or intrinsic (identification with or desire to be part of the new language group); the latter predicts greater success in language learning.

In the past 15 years, other questionnaire measures of the impact of the intergroup context on L2 acquisition have appeared. One of the most interesting is an extension of the Willingness to Communicate questionnaire (WTC; MacIntyre, Clément, Baker, & Conrod, 2001). The WTC instrument was originally designed as a measure of communication apprehension (McCroskey & Richmond, 1987), but these researchers have shown its sensitivity to intergroup contexts and its utility in predicting success in L2 learning (Clément, Baker, & MacIntyre, 2003).

Ethnolinguistic Vitality Theory and the Subjective Vitality Measure

Probably the most-used measure of language and communication attitudes was developed from ethnolinguistic vitality theory (EVT; Giles, Bourhis, & Taylor, 1977; see Chapter 8, this volume). EVT proposes that intergroup communication attitudes are predicted by attitudes to three comparisons between the ingroup and one or more outgroups: group strength (numbers, ingroup marriage, etc.); social status and prestige; and support from social institutions (media, government, education, etc.). Normally, questionnaires (called subjective vitality questionnaires, SVQ; Bourhis, Giles, & Rosenthal, 1981) contain from 25 to 50 items tapping these intercorrelated dimensions.

Allard and Landry (1994) developed an expanded measure of ethnolinguistic vitality, including perceived behavior and intentions. Their beliefs on ethnolinguistic vitality questionnaire (BEVQ) incorporates the SVQ and adds questions about intention to act to improve the vitality of the ingroup in the future. With this questionnaire, they conducted an extensive investigation of the perceived status of French and minority languages in Canada. The BEVQ predicted a wide range of outcome variables, including identity, attitudes toward language policy, preferences for language use, and fluency in the native language (L1) and L2. There is significant scope to apply this method to other intergroup communication contexts, for example as Williams, Giles, Coup-land, Dalby, and Manasse (1990) did in the inter-generational context. Unfortunately, because research with the SVQ and its variants has tended to be published in language rather than communication journals, there has been less of this kind of extension than one might hope.

Linguistic Category Model and Linguistic Intergroup Bias

Another experimental approach is represented by a clever unobtrusive measure: use of grammatical form to signal intergroup attitudes (see Chapters 1 & 2, this volume). Semin and Fiedler (1992) developed the linguistic category model (LCM) as an indirect measure examining the linguistic properties of words as a way of explaining the relationship between people's cognitions, the words they choose to describe behavior, and their construction of social reality. Semin and Fiedler proposed that when group identity is salient people describe positive behavior by ingroups, and negative behavior by outgroups, with more enduring words (e.g., adjectives), and use more concrete words (e.g., action verbs) for ingroup negative and outgroup positive behavior (see Chapter 2, this volume). Maass and her colleagues applied the LCM to the language used to signal bias towards in- and outgroups (linguistic intergroup bias, LIB), in contexts with strong intergroup demarcations (e.g., Maass, Ceccarelli, & Rudin, 1996). They found support for LIB for desirable (positive) behaviors, although results for undesirable behaviors were less clear.

These studies generally use constructed texts, where verbs and adjectives can be plausibly manipulated in controlled conditions; there are few studies of naturally-occurring speech. In one exception, Schmid and Fiedler (1996) used the LCM to predict adjective and verb choice in closing speeches at the Nuremberg trials. As predicted, more negative and fewer positive words were also used by prosecutors to describe the defendants; the reverse was true for defense attorneys. In other research, Watson and Gallois (2002) employed the LCM to investigate health care interactions (see Chapter 22, this volume). LCM was used in Study 1 to examine word choice in written texts by hospital patients about good and bad conversations with health professionals. In Study 2, videotaped interactions of health professionals and patients, previously rated as either interpersonal or intergroup, were examined for LIB. Their results suggest that positive interactions are perceived more interpersonally, with less clear results for more negative interactions.

The strength of the LCM as a linguistic tool lies in its application to structured texts. In free texts, there are fewer grammatically well-structured sentences. For example, Rubini and Mengatti (2008), using free text, had to weight adjectives according to whether they were derived from specific verb types. This weighting process can diminish the relevance of results to LIB. Furthermore, the LCM was developed for German and does not translate easily to grammar in other languages (this is less true of Maass et al.'s work, 1996). These limitations need some attention in future research. In general, LCM/LIB has the advantages that speakers are unaware of the attitudes being measured, it uses constructed speech to tap subtle aspects of intergroup attitudes, and it makes clear predictions about language form and intergroup judgments in positive and negative contexts. Its disadvantages include that it usually needs constructed speech, and it may depend on a language's structural similarity to German.

Implicit Association Test and Linguistic Attitude Priming

Two newer indirect methods make use of socio-cognitive tools to measure intergroup attitudes as signaled by language or communication. The first is the Implicit Association Test (IAT; see review by Nosek, Greenwald, & Banaji, 2007). This experimental method asks participants to associate (at speed) value-laden words like *good* and *bad* with visual targets like European and African Americans. Because the comparisons are made very quickly, there is little room for conscious biases. Researchers have used this method to reveal intergroup bias in many contexts (Sutton & Douglas, 2008). Essentially, positive words are associated with the ingroup and valued outgroups, and negative descriptors with salient rival outgroups.

The IAT has been criticized for being a measure of familiarity rather than intergroup attitude; it is argued that positive judgments tend to be made of more familiar targets. Some research has explored this hypothesis. Tam, Hewstone, Harwood, Voci, and Kenworthy (2006) examined both reported communication and the IAT in the context of grandparent-grandchild communication. They found that quantity of communication (mere exposure) predicted positive judgments on the IAT, and that both quantity and quality of contact predicted explicit communication measures. Thus, familiarity may partly (but not completely) explain IAT results. To date, relatively little research has pursued the relationship between the IAT and actual communication behavior; its value to research in intergroup communication has yet to be determined.

A second socio-cognitive method involves linguistic priming. In this method, photos or words are used to make a particular communication context salient. For example, Kimmelmeier (2003) found that priming American participants with words invoking individualist or collectivist values changed their expressed attitudes about affirmative action (more individualist primes resulted in less favorable attitudes). Chiu, Leung, Kwan, Katayama, and Cohen (2007) found that they could prime the favorability of Hong Kong bilinguals toward the United States and China, their sense of identity, and their individualist or collectivist values, through the use of language and photographs invoking the two countries. A meta-analysis of research on linguistic priming of individualism and collectivism (Oyserman & Lee, 2008) showed that these effects are robust across experiments and nationality of participants. Thus, this method, like the IAT, seems to be a good indirect way of tapping intergroup attitudes. Linguistic priming also awaits field testing to determine the extent to which it can predict actual communication behavior.

Experimental and survey methodology reveals a great deal about the attitudes people hold about intergroup communication, and about what people think they do. These methods, however, have been questioned for lacking realism and weakness in predicting actual communication outside the laboratory. Many researchers have turned toward a deep exploration of the words people use in intergroup communication. After three decades of research, this research has also borne rich fruit.

QUALITATIVE METHODS

Discourse Analysis

The diversity of discourse studies, ranging from detailed analyses of pragmatic structures and sociolinguistic markers to broad analyses of spoken texts, is reviewed by Van Dijk (1997). Even this broad review, however, omits some distinctions between variants of discourse analysis that are important in intergroup communication (see Chapter 5, this volume). For example, within psychology, at least two forms of discourse analysis have been proposed. One style, discursive

psychology, has theoretical roots in ethnomethodology, conversation analysis, and speech act theory (e.g., Edwards & Potter, 1992). The other is more heavily influenced by Foucault and post-structural theory (e.g., Gavey, 2005). Variants of the first form, which emphasizes analysis of social interaction, have been very important in describing the expression of subtle prejudice. For example, Buttny and Williams (2000) examined the way people use reported speech to distance themselves from racist talk (yet still use such talk). Similarly, Wetherell and Potter (1992) explored the ways in which interviewees in New Zealand used reported speech, disclaimers, and the like to communicate racism while simultaneously denying racist beliefs. Finally, Tracy's (2005) action-implicative discourse analysis foregrounds identity and moral issues in interactional conduct. Tracy's approach is unique in proposing that discursive practices can be evaluated in terms of their communicative outcomes. Wetherell and Potter (1992) argued for researchers to take a position (rather than trying to remain objective) when collecting data through interviews. Tracy has applied similar concepts to the analysis and interpretation of discourse, arguing that it makes sense and is useful to make value judgments about discourse strategies.

A distinct variety that occasionally appears in the study of intergroup communication is critical discourse analysis (CDA; Fairclough & Wodak, 1997). A central aspect of CDA is its emphasis on the analysis of language use and power. Through a detailed analysis of language forms, researchers aim to explicate the ways in which language across forms and media are shaped by the power relations in social institutions and society as a whole.

Conversation Analysis

Arising from an interest in the routine activities of everyday life, conversation analysis (CA) emerged from ethnomethodology, where language was recognized as organizing social action (see Fitch & Sanders, 2005, for a review; see Chapter 5, this volume). A distinctive feature of CA is that, rather than imposing external social causes or internal motivations onto textual analysis, words in conversation are analyzed per se as the arena in which social life and identity are constructed. The structures identified as shaping social interaction include conversation turns and sequences, membership categorization devices, preference structure, openings, closings, and sequential relevance. CA has been especially important in the analysis of organizational interaction and more recently in health (e.g., Maynard & Heritage, 2005), where detailed CA analyses revealed that doctors do not give patients in initial interviews sufficient time to tell the story of their problem. In addition, CA has informed analyses in a variety of contexts, ranging from openings in Internet relay chat (Rintel, Mulholland, & Pittam, 2001) to refusing sex (Gavey, 2005).

Sociolinguistic Methods

Linguistics has provided another set of methods for intergroup communication, all involving analysis of a body of text or corpus (see Chapter 6, this volume). For example, Labov (1972) and Milroy (1980) investigated the ways in which people mark their group (mainly ethnic and class) identity through the use of higher- and lower-prestige features of accent, vocabulary, and syntax. This work, along with that on code-switching (e.g., Fishman, 1970), has done much to increase understanding of negotiating intergroup relations through language. This research has illustrated the ways in which bi- or multi-linguals switch languages, dialects, or styles as a signal of context and attitude toward their own and other groups. This interesting work has an as-yet unrealized potential for intergroup communication.

A second sociolinguistic method is the ethnography of communication (see Chapter 4, this volume). With disciplinary roots in anthropology, ethnographers of communication emphasize

the influence of culture and identity on ways of speaking (e.g., Gumperz & Hymes, 1964; see Chapter 28, this volume). They usually gather data through participant observation and consultation with native speakers. This analytic approach contrasts with CA, where researchers rely entirely on the text for interpretation. Ethnographers of communication have described patterns of language in social interaction in many cultures, as well as highlighting how ways of speaking define social group boundaries within cultures (e.g., Carbaugh, Berry, & Nurmikari-Berry, 2006). Tannen (2004) has also applied this methodology systematically to the study of between-gender and family interaction, showing how subtle communication differences between women and men can lead to serious conflict (see Chapter 15, this volume).

Overall, qualitative methods have led to a better understanding of the subtle use of words to communicate—indeed to construct—intergroup relations. Their great advantage lies in the fact that they give priority to communicative behavior over attitudes and beliefs. They have tended to be limited to the study of words, however, eschewing the non-verbal communication that has often preoccupied other researchers (although in recent times the whole communication context has received more attention).

A serious limitation of qualitative methods is their labor-intensive nature. It is so difficult to analyze behavior in such detail that, in many cases, only a few interactions, interviews, or corpora are used. Thus, skeptics question the representativeness and validity of qualitative work. In response, some new tools have been developed with the intention of making qualitative analysis quicker; we describe some briefly below. It is fair to say, however, that for some qualitative analysts there is no substitute for researcher-driven interpretive analysis. These researchers even assert the superiority of small corpora over larger ones, because they can be completely understood. This debate about depth and representativeness is not likely to be resolved soon.

NEW TECHNOLOGY

NVivo (www.qsrinternational.com) is probably the most widely used software tool for handling unstructured text (but see also Ethnograph; www.qualisresearch.com). NVivo supports construction of an electronic database for coded data, and is an excellent alternative to manual classification practices using word processing or spreadsheets. NVivo allows researchers to create a set of thematic nodes. They then allocate excerpts of text to the appropriate nodes, reading the text repeatedly to do this. Newer versions also allow users to classify pieces of audio and video recordings, broadening NVivo's scope beyond verbal analysis alone.

NVivo gives researchers full control over the coding frame and its definition, as well as over how text excerpts are classified. This avoids the possibility that excerpts are misclassified in the researcher's view. Nodes are constructed in a hierarchy to reflect relationships in the data, and researchers can establish other relationships between nodes to reflect connections they perceive in the data. The philosophy behind NVivo is to leave data analysis to the researcher. Thus, NVivo is an excellent tool for managing interpretive coding of unstructured text. It helps researchers to organize large quantities of text, enables them to access representative excerpts more quickly for further analysis and interpretation, and has great potential for more subtle understanding of intergroup communication. For example, Lauring (2011) used NVivo coding of in-depth interviews with Danish expatriates to explore the relationships between power, organizational context, and culture in informal intercultural interactions. Lennon, Gallois, Owen, and McDermott (2005), similarly, used NVivo to explore focus group transcripts about communication of young women's social identities connected to smoking.

NVivo's process enhances researchers' control, but it takes time and effort to classify textual data accurately, so there is a limit to the amount of data that can be handled. Perhaps a bigger concern is subjectivity—hard to avoid when the meaning of the text must be determined and classified by the researcher. NVivo's approach requires researchers to make (and document) subjective decisions at every point in the coding process. Successful coding also depends on the application of theory to the data, or development of theory from the data. It is imperative for researchers to avoid the claim by skeptics that they have found what they are looking for, so they must deal with the breadth of the data and potentially disconfirming evidence. NVivo provides the tools for this, but the time, effort, and sophistication required are great.

Some newer tools potentially offer qualitative researchers more in terms of automatic text analytics, by departing from the NVivo philosophy that researchers should apply their own interpretation of the text to make sense of it. Instead, they use automatic ways of gleaning meaning from text. One approach, WordStat (www.provalisresearch.com/wordstat/Wordstat.html), applies a pre-defined dictionary to the data, providing researchers with a set of existing taxonomies to characterize their data. This works to the extent that the meanings of words in the data match those in the dictionary, but less well in specialist research domains, where words are used in unusual ways. WordStat includes modules for counting keywords and extracting features. It is probably best suited to researchers with a strong background in content analysis, who have a clear view on what will suit their theory and research questions.

Another strategy is to rely on grammatical rules to identify different parts of speech, and then classify these words (cf. LCM/LIB). Text analytic programs using this approach usually require considerable time to set up the rules. They work well where the text is well-structured and conforms to grammatical rules. Unfortunately, quite a lot of textual data does not meet these criteria. Interviews and focus groups are spoken and conversational in style, and utterances may not employ standard grammar. Texts generated by modern social media, such as twitter feeds, also tend to be terse and not include sufficient grammatical content to produce useful results. One solution is to use a training data set to generate a coding taxonomy that can be applied to a test data set, which works well where such sets can be identified.

Other ways have been found to discern meaningful results quickly from textual data. Leximancer's (www.leximancer.com/) artificial-intelligence approach uses word associations to identify groups of words that often occur together in a text (called concepts). This allows a tailored thesaurus to be built for each concept, avoiding the need to apply a general dictionary or pre-defined taxonomy, and reducing the risk of bias or error from making inappropriate assumptions about the data. Leximancer suggests a list of concepts found in the data; users approve the codes and define additional concepts of interest. Finally, Leximancer keeps track of which concepts are often mentioned together, and uses this as a measure of relationship between them. This allows a concept map to be constructed.

Essentially, Leximancer uses relational conceptual analysis to develop a semantic network of results for exploration by the researcher. Concepts are clustered into higher-level themes based on their relationships. Researcher involvement is essential in interpreting Leximancer analyses, as researchers must synthesize the information to draw meaningful conclusions. For example, in the health arena Braithwaite (2010) used Leximancer to analyze literature from medical and psychological databases describing social boundaries between health care groups. Baker, Gallois, Driedger, and Santesso (2011) used Leximancer to analyze interviews with chronically ill patients and doctors in Australia and Canada; doctors communicated encouragement to accept the illness as a "new normal," whereas patients expressed their desire to "get back to normal" (previous level of functioning).

Finally, Travaglia, Westbrook, and Braithwaite (2009) analyzed health professionals' free text evaluations of a new incident reporting system, finding intergroup differences in language describing reactions to it. Comparing Leximancer with traditional content analysis, they concluded that Leximancer provided richer insights.

These tools can identify trends over time, but do not offer real-time analysis. Discursus (<http://discursus.com>; Angus, Smith, & Wiles, 2011) offers this capability, which has obvious applications for enlarging the scope of analysis using DA and CA. Discursus charts the consistency of comments made between participants in a conversation over time, analyzing content in consecutive turns at talk. It constructs a matrix depicting the content overlap of turns between speakers. The researcher can hone in on a turn or sequence of interest and review it in context within the text. Discursus provides an excellent view of the unfolding dynamics in conversations, and allows researchers to identify points of agreement and divergence quickly (e.g., identifying a failure of conversational uptake by an interlocutor). Such real-time analysis is likely to become increasingly popular in intergroup communication research.

EPILOGUE

As noted above, virtually every social science method has been used in the study of intergroup communication. There has been intergroup conflict among researchers about appropriate methodology, the primacy of theory, and the extent to which research should be embedded in its context. This means that research sits in journals across several disciplines, and the effort needed to integrate research is huge (for "good" intergroup reasons; see Chapter 23, this volume). Nevertheless, to have an impact on the unfolding of intergroup communication in real-life contexts, this is what researchers must do.

We believe this area cries out for mixed-method, programmatic research. The experimental and survey methods favored by social psychologists have many strengths, but risk being a piecemeal collection of laboratory-based studies that overlap only slightly with the real contexts of intergroup interaction. By the same token, close qualitative analysis (as in DA or CA) also has many virtues, but researchers have relied too heavily on small corpora, sometimes using the same corpus over many studies with little acknowledgement of how this text fits into ongoing intergroup interactions. In both cases, there is too little attention to ecological validity and so, not surprisingly, this research has had relatively little impact outside academia.

To achieve impact, researchers must ground their work in ongoing intergroup interactions, and apply the research methods that best address these contexts. They must collect and analyze data of sufficient quantity and quality to be convincing to skeptical readers from other perspectives. For qualitative analysis, the software tools we describe here, and others like them, will be useful, partly because they afford analysis of larger texts from more participants. As the examples above show, they permit subtle exploration of the communication of social identity and intergroup relations *in context* via interviews, written texts, focus groups, and ongoing conversation, in ways that questionnaires, reactions to stimuli (e.g., MGT, LCM), and implicit measures (e.g., IAT or linguistic priming) simply do not. This inevitably means extension of theories; indeed, such extension has already occurred in recent versions of CAT where qualitative methods have been employed (e.g., Baker et al., 2011).

Likewise, there are new statistical methods for longitudinal and multi-level analysis that will help quantitative researchers. These methods allow researchers to address changes across time, to examine more complexity in associations among variables, and to compare groups across a larger variety of communication variables. To the extent that research can move away from

simple designs (often parodied as classical 2×2 ANOVAs), it will be a better analogue of real life and afford more subtle examination of intergroup theory. Research programs (and they will be interdisciplinary and large) that can convincingly combine qualitative and quantitative methods, in our view, represent the future of intergroup communication analysis.

We also believe that intergroup communication research must be theory-driven. This has generally not been a problem in the past, but as researchers grapple with more complex contexts, there is a temptation to abandon theoretical analysis in favor of description and sometimes advocacy. We believe that theory determines methodology, because theory determines research questions. Intergroup theories like SIT and CAT are sufficiently broad to handle real-life contexts, and future research using them and other theories should be programmatic and systematic.

Overall, we expect methodology in intergroup communication to remain eclectic as the field remains interdisciplinary, and we welcome the mixture of approaches. This means, however, that researchers must understand and appreciate methods that they do not use themselves. It is time for communication scholars—and for the discipline-based journal editors who are their gatekeepers—to overcome their (intergroup-based) tendency to specialize in one methodology and ignore all others; some journals (including *JLSP*) achieve this, but these journals are too few. It is also time for research students to be trained in the breadth of methodologies in the field, and to learn to communicate with and work with scholars from other disciplines, who may use different approaches. The potential to make a difference to intergroup relations, via a systematic study of communication, is great.

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