

Media and language change

Introduction*

Susan C. Herring

Indiana University Bloomington

How do communication media affect the structure and use of human language over time? This special issue of the *Journal of Historical Pragmatics* focuses on technologically-mediated communication — from print to television to the Internet — as a facilitator of language change, as a site for the emergence and evolution of linguistic norms, and as socially and ideologically (re)produced over time. To date, little scholarship has systematically addressed communication media in relation to language change, although a number of research paradigms — including historical pragmatics, media discourse, history of communication technologies, and computer-mediated communication (CMC) — touch on related phenomena. The goal of this issue is to bring the perspectives and knowledge from such domains together to inform a more comprehensive perspective, one that can address contemporary concerns about the World Wide Web, for example, in light of understandings about language change in older media, and in technologically-mediated communication in general.

The topic is timely for several reasons. The last 200 years have seen cataclysmic social and cultural changes — in life expectancy, mobility, urbanization, literacy and mass communications — that impact contemporary language change as never before. Scholars of media and language change — especially those who situate their analyses in socio-historical contexts — are ideally equipped to shed light on these contemporary phenomena. Recent technological advances bring both new media to analyze — television, the Internet — and new methods of archiving and analyzing old data. Social change, new media and new methods provide a triple impetus for (re)visiting the study of language change from a media perspective.

The idea for this special issue arose out of a workshop on Media and Language Change that I organized for the International Conference on Historical Linguistics, held in Melbourne, Australia, in August of 2001. The papers by

Andreas Jucker and Rudolf Muhr in this issue were originally presented at the workshop, together with papers by Allan Bell and Susan Herring and John Paolillo. The contributions by Diana ben-Aaron, Colleen Cotter and Patrick Studer were invited later or fortuitously submitted to the journal, affirming the relevance of media research to historical pragmatics. Two book reviews — of Naomi Baron's *Alphabet to Email: How Written English Evolved and Where It's Heading* (Routledge 2000) and Friedrich Ungerer's edited collection *English Media Texts — Past and Present: Language and Textual Structure* (John Benjamins 2000) — later joined the mix. The resulting collection spans a range of technologies from the invention of writing systems through the printing press to newspapers, television, email, and the World Wide Web, as considered through the eyes of scholars with an interest in language change.

As it happens, the contributions focus on mass media, especially news and entertainment discourse. Both of these are plentiful and easily accessible, in addition to being culturally important (Garrett and Bell 1998). However, the approach to media and language change presented in this special issue in no way precludes the study of interactive, interpersonal media. Gold's (1991) description of emergent norms in telephone answering machine discourse, and Herring's (1998) diachronic analysis of language change in an early computer-mediated discussion group could just as well be taken as exemplars of the approach, although such work is not included here.

The remainder of this introduction situates the papers in this collection with respect to media and language change as a research domain. First, we define the terms "media" and "language change" as they are used in this issue. We then describe three currently available approaches to the intersection of the two phenomena, pointing out their strengths and weaknesses. Following this, several central themes are identified and the contributions of the papers in this issue to each are summarized. Our overall goal is to sketch a broad approach to the study of media and language change that not only coherently synthesizes the contributions to the present collection, but also sets an agenda for future research involving a wider array of media.

1. Defining "media" and "language change"

1.1 Media

The term "medium" in this collection refers to any communication technology that is used by human beings to create and transmit messages to other human

beings by means of natural language. Examples of media include hand-writing, print, the typewriter, the telegraph, the telephone, radio, television, the tape recorder, and the Internet.

Media are conventionally classified into types according to three criteria: means of production, intended audience, and purpose (or genre). *Means of production* has traditionally led to a binary classification: spoken (produced directly by means of the tongue, lips, vocal cords, etc. to an addressee within normal hearing range) and written (produced by making marks with an instrument on material which preserves a record of it, which can be read by non-present addressees at a later time) (Chafe and Danielewicz 1987). However, spoken media such as radio and television, which do not require speaker(s) and addressee(s) to be co-present, challenge the first classification, and written (typed) media such as the Internet, especially synchronous chat modes which enable real-time interaction, challenge the latter. Thus, while it is useful to note that telephones, for example, involve speaking (and listening), and typing involves writing (and reading), this distinction alone is insufficient as a basis for classification of media types. In the approach to media and language change presented here, the technological aspects of the means of production and reception are potentially important, and must be considered separately for each communication medium.

Classifying media in terms of *intended audience* gives rise to useful distinctions between mass and interpersonal communication. In the former, the audience is large, and its exact size and membership are unknown, as with newspapers, radio and television (Jucker 1995). In the latter, communication is directed to an individual or individuals who are the intended recipients of the message, as with personal letters, the telephone, and email. Interpersonal communication also generally involves interactional reciprocity, or the potential to reciprocate using the same medium in more or less the same ways, whereas mass communication involves one-way message broadcast. To this we must add a third distinction, personal communication, or externalized communication to and for oneself, as in the case of personal diaries. This three-way distinction becomes blurred, however, when it comes to classifying communication on the Internet (Morris and Ogan 1996; O'Sullivan 1999). Is "spam" (unsolicited email messages advertising a product, service or Web site) interpersonal or mass communication? What about large group exchanges in public discussion forums? Interactive news sites on the World Wide Web? Are Web logs ("blogs") — online diaries in which individuals post personal reflections on a regular basis for others to read and respond to — personal,

interpersonal or mass communication? These challenges point out that while media tend to be associated with conventional audience types, some are flexible in their scope of delivery. Even the telephone, which we now think of exclusively as an interpersonal medium, was used in its early history both for person-to-person conversation and to broadcast musical concerts to assembled audiences (Baron 2000).

The third basis for classification of media types involves *purpose* for communication. Media can be classified according to whether their prototypical uses are informative (newspapers, telegraph), entertainment (films), persuasive (advertising media), social (Instant Messaging), expressive (graffiti), etc., although the above caveat about flexibility applies — radio, for example, has informative, entertainment, and persuasive uses. More precise is a classification of media sub-types in terms of *genre*, which crucially involves the notion of purpose (Swales 1990). Thus although it is meaningless to speak of “the Internet” as associated with a single communicative purpose, we may meaningfully speak of Internet genres such as blogs (expressive), chat rooms (social) and commercial Web sites (informative, persuasive). Similarly, we may speak of genres of newspaper writing, such as news stories (informative), human interest stories (entertainment) and editorials (persuasive) (cf. Ljung 2000). Such an approach to classification allows for the comparison of communication that functions similarly in different media — for example, news stories in print newspapers, on television, and on the Internet — as a means of understanding how the media themselves affect the nature of communication.

Once classified, a medium can function as an analytical construct in several ways. Along with genre, dialect, social class of the text producer(s), etc., it can be considered a “textual parameter” (Herring, van Reenen, and Schøsler 2000a): an aspect of the production of texts that potentially influences how language is structured and used. A medium in this sense can be taken as an independent variable or contextual factor, where the dependent variable, or focus of investigation, is a linguistic feature or features, narrowly defined. This is the case in the papers by Studer (on headlines in eighteenth-century British newspapers), Cotter (on sentence-initial connectives in twentieth-century California newspapers), and Muhr (on lexical borrowing in Austrian German under the influence of German German satellite television). Alternatively, media can be taken as objects of analytic focus in their own right, and their communicative norms, conventions, and associated social practices described. This approach is evident in the papers by ben-Aaron (on U.S. national independence day stories in the *New York Times*) and by Jucker (on the emergent conventions of newspapers on the World Wide Web).

1.2 Language change

“Language change” is used broadly here to include both change that is diachronically measurable (e.g. between one point in time and a later point) and emergent change as evidenced through synchronic variation. The nature of data and the methods of sampling and analysis are traditionally quite different in the two cases: the data for the former tend to be written and discontinuous, and for the latter, spoken and continuous, but over a very short time span. Accordingly, a perennial challenge in historical linguistic studies of texts produced using old media is obtaining sufficient, comparable data from different time periods (Herring et al. 2000a; Labov 1994). In contrast, synchronic studies are limited by a paucity of diachronic evidence — change must be inferred in apparent time (Van de Velde et al. 1996). New media such as film, television and the Internet offer the possibility of plentiful, near-continuous real-time data, at a steadily-expanding time depth. As yet, however, this potential has been largely untapped in research on language change (but cf. Elliott 2000 on change in rhoticity in the English spoken in Hollywood films over a 40-year period, and Van de Velde et al. 1996 on the devoicing of fricatives over 58 years of Dutch radio recordings).

Language change can operate simultaneously on multiple levels — lexical, structural, semantic, discourse-pragmatic, ideological, generic — any one or combination of which constitutes a legitimate object of study within the approach envisaged here. Thus, both Studer’s diachronic analysis of eighteenth-century newspaper headlines and Cotter’s analysis of sentence-initial coordinating connectives in twentieth-century newspapers trace structural and pragmatic changes, while ben-Aaron’s analysis of national holiday stories in the *New York Times* focuses on changes in the discourse used to express ideological positions on nationalism and civic order. Muhr’s focus in his analysis of the effects of late-twentieth-century German satellite television broadcasting on Austrian German is primarily lexical, while Jucker adopts a generic approach in characterizing the emerging conventions of news discourse on the World Wide Web at the beginning of the twenty-first century.

2. Approaches to studying media and language

A basic motivation for this collection, and one that sets it apart from previous work to date, is to begin to address how the technological and social means of

production of communication media affect language structure and use over time. Several existing research paradigms contribute usefully towards this goal, but none has it as its primary focus. In what follows, I group these paradigms into three approaches: historical, sociopolitical and technological.

2.1 Historical

Historical linguists have long been aware of the effects of writing technologies and practices on the properties of written texts. Scholars of medieval texts often attribute orthographic and syntactic innovations to "scribal interference" in the writing and copying of manuscripts, although such influence is usually be-moaned, rather than taken as a legitimate object of scholarly reflection (Fleischman 2000). In a similar vein, Baron (2000) attributes effects on orthography to the printing press and the typewriter. However, in most historical linguistic analysis, the properties of the medium are not the object of interest. This is true for most historical genre studies as well (e.g. Bach 1995 on wills; Gieszinger 2000 on advertising), although we may cite exceptions such as Kytö's (2000) study of a corpus of Early American hand-written diaries. Even Elliott (2000) and Van de Velde et al. (1996), who make use of novel corpora (films and radio, respectively), do not reflect much on the unique properties of the media that provide their data, treating them as effectively equivalent to unmediated speech. In response to the general invisibility of medium and other production effects in historical linguistic research, Herring, van Reenen and Schøsler (2000a) caution that textual parameters such as medium should be taken into account, lest the analysts inadvertently end up comparing unlike samples, and arrive at invalid generalizations as a result.

Yet although they may not yet have fully realized it, historical linguists — especially those employing social, pragmatic and discourse approaches to older texts — bring to the task knowledge and perspectives that are potentially invaluable to the study of media and language change. First among these is access to and understandings of the properties of texts produced in *older (written) technologies*, and how the conventions of such texts evolved over time. Second is *methods of linguistic analysis* that are sensitive to socio-historical contexts. Last but not least, *theories of language change* articulated by historical linguists for spoken and "text" languages (Fleischman 2000) provide potential explanatory mechanisms for change in progress in newer media.

2.2 Socio-political

Language use in contemporary media has also received considerable attention from linguists (Bell 1991; Fairclough 1995a, 1995b; Fowler 1991; van Dijk 1990). A concern underlying much of this research is how media discourse conveys ideological and political meanings (cf. the Critical Discourse Analysis (CDA) approach articulated by Fairclough 1992, 1995b). Media discourse researchers sometimes explicitly consider the technical properties of the media analyzed, as in Bugyi-Ollert's (2000) analysis of how camera angles in television talk shows interact with linguistic turn-taking to create the impression that the conversational locus of control resides with the guests, rather than the talk show hosts. However, although CDA is broadly concerned with social change, the media discourse approach is essentially synchronic: it rarely investigates change over time. An exception is Bell (2002), who compares news reports of Antarctic expeditions in different media from three different historical periods.

Media discourse analysts have a great deal to contribute to the study of language change. First is understandings of *contemporary (especially mass) media texts* — how they are produced, their conventions of use, and how they are received and responded to by audiences (Garrett and Bell 1998). Second is *methods of analysis* for identifying ideologies in media texts, including visual analytic methods (Kress and van Leeuwen 1996). Last, they contribute a *socio-political perspective*, providing a useful counterbalance to the tendency towards technological determinism in some contemporary Internet research (see below).

2.3 Technological

The technological approach to media and language owes its current popularity to the Internet, although studies of earlier "teletechnologies" (Baron 2000) sometimes ventured speculations about the effects of those technologies on patterns of communication. Most such work is not linguistic (see e.g. Blondheim 1994; Pool 1977), although the study of computer-mediated communication has attracted some linguists (Herring 2001). The main strength of the technological approach is also its main limitation: it tends to over-ascribe a deterministic influence to the technical properties of communication systems (see my review of Baron (2000) in this issue). This is understandable in part, given the newness of the Internet. It is easier to see what is material and novel than to (fore)see the long-range social effects of a new medium (Sproull and Kiesler 1991). For this reason, the technological approach tends not to be

historical (but cf. Herring 1998; Rowe In press, for diachronic studies of CMC).

The study of media and language change can benefit from CMC research. CMC researchers bring a *fresh perspective* — and a fresh set of questions — to bear on media language, precisely because Internet communication is not (yet) familiar and naturalized to the point of the medium having become effectively invisible, as it is in older communication technologies. This freshness, including an interest in the *technological aspects of mediated message production*, is energizing the study of language change as well, as CMC scholars start to evaluate empirically popular claims that the Internet is transforming language structure and use. CMC researchers also contribute specific knowledge of *current and emergent technologies*, effectively expanding the range of speculation about language change into the future.

The contributions to this issue span the above approaches. The perspective in Studer's study of British newspaper headlines is predominantly historical; one of the stated goals of the analysis is to identify early headline uses and trace their evolution over the course of the eighteenth century. Cotter introduces a socio-historical dimension in relating changes in sentence-initial connective use in twentieth-century newspapers to contextual factors such as competition from television news. Ben-Aaron, in contrast, presents a discourse analysis of 150 years of independence day news stories from the *New York Times* that focuses not so much on changes in such stories over time (although certain changes are noted), but on how the stories function to achieve similar ideological ends within the broader frame of news reporting. Muhr's analysis of the impact of German satellite television broadcasting on Austrian German also comprises a critical component: he situates the two language varieties within an asymmetrical power ecology, and draws on this asymmetry to interpret language contact and accommodation effects. Jucker's contribution, which deals with the World Wide Web, is technological in orientation in that it foregrounds the material properties of the Web itself (such as the presence of graphics and hypertextual links) in defining Web newspapers as an emergent genre. Taken together, these analyses shed light on a number of central themes in media and language change.

3. Themes

3.1 Medium effects

At the heart of the study of media and language change lies the question of technological determinism, or how the medium itself affects the communication that takes place within it. Societies appear to be more sensitive to technological impacts in the early days of a new medium, when the medium is novel and its differences from traditional communication media perceptually salient, than at later stages of adoption and use. Thus the introduction of each major teletechnology has been greeted by predictions of revolutionary change in communication patterns: the printing press (typewriter, telegraph, radio, telephone, Internet, etc.) would improve (or degrade) users' linguistic skills, break down social hierarchy, spread seditious ideas, reduce face-to-face contact, and the like — by virtue of its technical means of transmission and reception (Baron 2000). While these revolutionary predictions have rarely come to pass, more modest medium effects have been observed: clay tablets led to wedge-shaped writing in Ancient Sumeria due to the difficulty to making curved lines in clay; the typewriter led to increased attention to spelling, because poor handwriting could no longer mask uncertain spellings (Baron 2000); computer text chat disrupts turn-taking and causes users to make increased use of cohesive devices to link their messages (Herring 1999). However, the extent of the deterministic effect of the means of message production remains controversial, from the debate about the effects of writing on cognition (Goody 1987; Ong 1982; Scriber and Cole 1981) to claims about the effects of CMC on linguistic sophistication, variation and anti-social behavior (Baron 1984; Hale 1996; Kiesler et al. 1984). Many technologically deterministic claims regarding CMC, for example, have been found to make incorrect predictions in specific contexts of use, and a call has gone out for explanations of computer-mediated behavior that take social and contextual factors into account (Cherny 1999).

What can a historical approach to media and language tell us about medium effects? The papers in the present issue are more revealing for what they show about social forces than for the influence of the technological means of production. Cotter, for example, makes a convincing argument that the increase in sentence-initial connectives in U.S. newspapers over the course of the twentieth century is driven by a journalistic imperative to engage readers by using more "speech-like" linguistic features. Readers needed more engaging, in part, because more media were competing for their attention. Nothing inherent

in print newspapers (beyond the more static nature of print relative to dynamic visual media) pushed them in the direction of spoken usage; rather, the forces were environmental and social. A similar point is made by ben-Aaron, who observes “more visual and narrative styles” in the *New York Times* starting around 1966.

The attention-grabbing nature of television implicitly underlies Muhr’s claim that Austrian youth are borrowing German German lexicon due to heavy exposure to satellite television broadcasts from Germany. Their exposure is heavy because television is visually compelling — but since he must also explain why German programming is preferred to Austrian programming in the same medium, Muhr ultimately prefers a sociolinguistic explanation in terms of the demographic and economic dominance of Germany over Austria, and the resultant higher prestige of German German for young television viewers.

More ambiguous are the observations of Studer about eighteenth-century headlines (which he classifies in terms of typography/typesetting) and of Jucker about the properties of newspaper Web pages (characterized in terms of features such as hypertextuality, interactivity, speed of dissemination, and reduction of fixity). To the extent that these properties are taken to be definitional of the phenomena of interest, they clearly play a role in shaping communication in the media. But do they drive change over time? Newspaper headlines become more typographically (and functionally) diverse over a 40-year period, but Studer does not attempt to relate this to changes in typesetting technology — rather, he suggests that it is styles that have changed. Of course it is early to look for evolution in Web pages, and Jucker does not attempt to do so (but cf. Schmid-Isler 2000, who notes changes in layout over several successive generations of Web pages, related partially to an increasing stylistic sophistication and partially to the availability of new Web authoring tools).

3.2 Norms and standards

Another central theme in media and language change is how conventions arise and evolve in new media, including how genres of mediated communication emerge and become established. Sproull and Kiesler (1991) observe that new media tend historically to be first used for pre-existing communicative purposes, and later evolve new purposes — and practices — according to their potential. The determinants of a medium’s “potential” include both its mechanical properties and its institutional contexts of use. Conventions such as simplification and explicit turn-taking cues in radio dispatcher language, for example, reflect the potential and limitations of two-way radio as a mechanical

medium. These are further shaped by the requirements of dispatch work, as for example in law enforcement, for efficiency and avoidance of ambiguity. Still other conventions — such as the use of the name “Roger” as a turn-taking signal in some two-way radio genres — are essentially arbitrary, arising through chance events or individual innovation, and raising questions about precedence and influence as historical processes.¹ Once practices have emerged as normative, they may be formally codified and transmitted as prescriptive standards.

Over the roughly four hundred year history of print periodical newspapers, standards of journalistic practice have undergone considerable evolution and codification, as discussed in all three papers that address newspaper discourse. Headlines become more contentful and more set off visually from the text; sentences and paragraphs become shorter; the “inverted pyramid” structure of putting the most important information first appears; and genres of news writing such as front page stories, human interest stories, and editorials emerge, along with linguistic usage characteristic of each. How did these conventions arise, and what forces shaped their evolution? The authors in this issue cite increasing competition for readers’ attention and increased association of values such as informativity and objectivity with newspapers as historical factors. Newspaper conventions are codified in journalistic style guides and taught in journalism courses as prescriptive standards. Perhaps for this reason, they carry over in Web newspapers, consistent with Sproull and Kiesler’s (1991) observation that new media are first put to old uses. Yet already the Web gives evidence of innovation: interactive chat forums to discuss current news, near-continuous news updates, and customizable news all expand the limits of print and give rise to new norms and practices, as Jucker notes.

Muhr touches obliquely on this debate in invoking Web pages as evidence for the influence of German German on Austrian German. Here we are presumably dealing not with innovation arising on the Internet itself, but with the Internet as a medium for the diffusion of language change triggered in other domains (in this case, through television). Norms of Internet usage shape when and where such changes are adopted: in Muhr’s data, German German borrowings are commonly found in advertising and entertainment Web sites, both of which are targeted at a youthful audience, and which employ features of spoken, interactive language. This knowledge of Internet norms, in turn, helps us interpret the stylistic connotations of the borrowed words.

3.3 Power and persuasion

Last but not least, media are vehicles for furthering the agendas of politics, institutions, groups and individuals, as expressed through discourse. Mass media have traditionally reflected the interests of in-power groups, because of the high cost and amount of manpower required to maintain the infrastructure required for mass production and distribution. At the same time, technologies that are inexpensive to use and widely accessible, such as the mimeograph and photocopy machine, have been used by out-of-power groups such as workers' unions to organize (Bacon 1996). The Internet, where the cost of creating and diffusing content is also low, and the range of diffusion broader, has been hailed as even more empowering (e.g. Liverpool Dock Shop Stewards' Committee 1996). Media are powerful to the extent that they enhance access to information, speed of delivery, number of recipients and/or the impact of a message, which can itself be constructed in various ways to be persuasive (e.g. via use of sound, graphics, formatting and text).

The two contributions in this issue that deal most directly with power and persuasion involve uses of mass media that further dominant interests. The U.S. nation is the symbolic beneficiary whose agenda — of civic order and nationalism — is furthered by independence day stories in the *New York Times*. Ben-Aaron analyzes such stories as symbolic acts of citizens "paying face" (in the sense of Brown and Levinson 1987) to the nation, a respect that is not so much coerced as constructed hegemonically, through news writing that leaves ambiguous whether the media are authorities or peers.

The popularity of German television in Austria is another case of apparently voluntary participation, here by Austrian youth, in a situation that legitimates an asymmetrical power structure at the expense of the participants' self-interest. Germany is advantaged by the fact that its language and media pervade neighboring states, but is this outcome a conscious goal, and can Germany be held morally accountable if other states lose cultural and/or linguistic autonomy as a result? Similar questions can be raised on a global scale about the U.S. and the Internet (Ess 2001). To the extent that media are carriers of culture, and to the extent that popular media can become socially, politically and economically necessary, creating peer pressure that effectively removes the concept of "choice", the apparently agentless spread of communication media is itself an issue of power and can be subjected to critical analysis.

4. Future directions

This introduction has attempted to sketch a broad agenda for the study of media and language change, one that is empirical, diachronic, socio-politically contextualized and sensitive to the constraints and affordances of a range of communication media. The papers in this special issue — and the books reviewed in it — all contribute towards this agenda. At the same time, much research that would flesh out the agenda is not included here, due to space limits, authorial time constraints, and the fact that some important work has not yet been carried out.

Some of this needed work can be done on existing data, within currently available methodological paradigms. In particular, more research is needed that engages seriously with the contexts of production — technological and social — of older communicative artifacts, dating from the times when the technologies were first used and patterns of precedence set. The overall agenda would also benefit from more empirical, diachronic studies of personal and interpersonal communication such as diary and letter writing, as a basis for comparison with related modern phenomena such as blogs and email on the Internet.

At the same time, new technologies are making new kinds of research possible, and media and language change scholarship stands to benefit especially from these developments. Three such technologies are worthy of mention here. *Computerized corpora and computer-assisted methods of analysis* are already changing the face of historical linguistics, enabling significant patterns of variation to emerge (e.g. Biber and Finegan 1989; Kroch 2000; Kytö 2000; Studer, this issue). More such historical corpora need to be created, along with annotation standards, such that corpora can be shared and compared (cf. TEI 2002). Ultimately, however, the enterprise of creating historical corpora is limited by the number of older texts that have been preserved. It is also limited, at present, largely to written texts.²

Fortunately, new and diverse texts are being preserved in the meantime, including through spoken media such as radio, film, television and various speech recording devices such as wax cylinders, the phonograph, the tape recorder and voice mail. *Historical records in spoken media* now span more than 100 years, a time depth sufficient to reveal a number of real-time changes. Such records constitute an exciting resource that has only recently begun to be tapped by linguists (e.g. Elliott 2000; Van de Velde et al. 1996). The analysis of such data can be further enhanced by the application of automated methods such as those used in the field of information retrieval (e.g. Jacquemin 2001) to index linguistic content in spoken and visual corpora.

Most recently, *the Internet* has introduced new forms of written — and, increasingly, spoken and graphical — communication that is plentiful and leaves a persistent record. Automatically archived corpora of asynchronous CMC are available dating back to the 1970s (e.g. the eleven-year MsgGroup corpus analyzed in Herring 1998, and the large-scale Usenet archives accessible via the Google search engine at <http://www.google.com/groups>). For Web analysis, the Internet Archive project (<http://www.archive.org/>) includes a search engine, *The Wayback Machine*, that can access Web pages back to 1996.³ Such archives, which are machine searchable and amenable to computer-assisted analytic methods, constitute an abundant and freely-available source of data for diachronic analysis. Even though the time-depth of the Internet is shallow, what research has thus far been conducted in this area reveals that changes are already taking place (Herring 1998; Rowe In press; Schmid-Isler 2000). Future diachronic research needs to examine larger corpora and more varieties of CMC, especially communication produced in real-time chat modes, which are not self archiving and have received almost no diachronic attention to date.

The availability of new data and new computer-assisted methods of analysis for old data provides abundant motivation to undertake research into media and language change. There is a deeper motivation, as well: the promise of new theoretical understandings that could arise from a systematic, cross-media comparison of mechanisms of language change, particularly when continuous, plentiful, socially-contextualized data are available for analysis. Towards this end, the findings of historical studies of older media constitute an important interpretive resource. The day may come in the not-too-distant future when we are able to track — automatically and more-or-less exhaustively — a linguistic innovation from its first use across multiple contexts of diffusion, observing what forces propel and resist it, and how it interacts with other features of the linguistic system (and the systems of other languages) with which it comes into contact — and then situate that trajectory in relation to larger patterns and principles that encompass language change in older media.

We look forward to that day.

Notes

* I am grateful to John Paolillo for discussion (including the two-way radio example) and comments on this introduction. Andreas Jucker also commented helpfully.

1. With respect to precedence, see Mufwene (1996) on the Founder Principle.
2. But cf. the London-Lund Corpus of Spoken English (<http://khnt.hit.uib.no/icame/manuals/LONDLUND/INDEX.HTM>), which contains transcribed samples of British English from as far back as 1960, and the Linguistic Data Consortium (<http://www ldc.upenn.edu/>), which has been archiving spoken broadcast and telephone corpora in a variety of languages since 1993.
3. The Archive, which was created by Brewster Kahle, also includes historical documentation on the ARPANET (the predecessor of the Internet), and 360 movies from 1903 to ca. 1973.

References

- Bach, Ulrich. 1995. Wills and will-making in 16th and 17th century England: Some pragmatic aspects. In: Andreas H. Jucker (ed.), *Historical Pragmatics*. Amsterdam/Philadelphia: John Benjamins, 125–144.
- Bacon, David. 1996. *Unions: Organizing Silicon Valley's High Tech Workers*. <http://www.igc.org/dbacon/Unions/04hitec0.htm>.
- Baron, Naomi S. 1984. Computer-mediated communication as a force in language change. *Visible Language* 18, 118–141.
- Baron, Naomi S. 2000. *Alphabet to Email: How Written English Evolved and Where It's Heading*. London/New York: Routledge.
- Bell, Allan. 1991. *The Language of News Media*. Oxford: Basil Blackwell.
- Bell, Allan. 2002. Dateline, deadline: journalism, language and the reshaping of time and place in the millennial world. To appear in James E. Alatis, Heidi E. Hamilton, and Ai-Hui Tan (eds.), *Georgetown University Round Table on Languages and Linguistics 2000–Linguistics, Language, and the Professions: Education, Journalism, Law, Medicine, and Technology*. Washington, D.C.: Georgetown University Press.
- Bell, Allan, and Peter Garrett (eds.). 1997. *Approaches to Media Discourse*. Oxford: Blackwell.
- Biber, Douglas, and Edward Finegan. 1989. Drift and the evolution of English style: A history of three genres. *Language* 65, 487–51.
- Blondheim, Menahem. 1994. *News Over the Wires: The Telegraph and the Flow of Public Information in America, 1844–1897*. Cambridge, MA: Harvard University Press.
- Brown, Penelope, and Steven Levinson. 1987. *Politeness: Some Universals in Language Use*. Cambridge: Cambridge University Press.
- Bugyi-Ollert, Renate. 2000. Verbal turn-taking and picture turn-taking in TV interviews. In: Friedrich Ungerer (ed.), 241–262.
- Chafe, Wallace L., and Jane Danielewicz. 1987. Properties of spoken and written language. In: R. Horowitz, and S. I. Samuels (eds.), *Comprehending Oral and Written Language*. San Diego: Academic Press, 83–113.
- Cherny, Lynn. 1999. *Conversation and Community*. Stanford: Center for the Study of Language and Information.
- Elliott, Nancy. 2000. *A Sociolinguistic Study of Rhoticity in American Film Speech from the 1930s to the 1970s*. Ph.D. dissertation, Indiana University Department of Linguistics.

- Ess, Charles (ed.), with Fay Sudweeks. 2001. *Culture, Technology, Communication: Towards an Intercultural Global Village*. Albany: State University of New York Press.
- Fairclough, Norman. 1992. *Discourse and Social Change*. London: Polity.
- Fairclough, Norman. 1995a. *Media Discourse*. London: Edward Arnold.
- Fairclough, Norman. 1995b. *Critical Discourse Analysis*. London: Longman.
- Fleischman, Suzanne. 2000. Methodologies and ideologies in historical linguistics: On working with older languages. In: Susan C. Herring, Pieter van Reenen, and Lene Schøsler (eds.), 33–58.
- Fowler, Roger. 1991. *Language in the News: Discourse and Ideology in the Press*. London: Routledge.
- Garrett, Peter, and Allan Bell. 1997. Media and discourse: A critical overview. In: Allan Bell, and Peter Garrett (eds.), *Approaches to Media Discourse*. Oxford: Blackwell, 1–20.
- Giesinger, Sabine. 2000. Two hundred years of advertising in *The Times*: The development of text type markers. In: Friedrich Ungerer (ed.), 85–110.
- Gold, Ruby. 1991. Answering machine talk. *Discourse Processes* 14.2, 243–260.
- Goody, Jack. 1987. *The Interface Between the Written and the Oral*. Cambridge: Cambridge University Press.
- Hale, Constance. 1996. *Wired Style: Principles of English Usage in the Digital Age*. San Francisco: HardWired.
- Herring, Susan C. 1998. Le style du courrier électronique: variabilité et changement. *Terminogramme* 84–85, 9–16.
- Herring, Susan C. 1999. Interactional coherence in CMC. *Journal of Computer-Mediated Communication* 4.4. <http://www.ascusc.org/jcmc/vol4/issue4/>.
- Herring, Susan C. 2001. Computer-mediated discourse. In: Deborah Schiffrin, Deborah Tannen, and Heidi Hamilton (eds.), *Handbook of Discourse Analysis*. Oxford: Blackwell, 612–634.
- Herring, Susan C. (ed.). In press. *Computer-Mediated Conversation*. Cresskill, NJ: Hampton Press.
- Herring, Susan C., Pieter van Reenen, and Lene Schøsler. 2000a. On textual parameters and older languages. In: Susan C. Herring, Pieter van Reenen, and Lene Schøsler (eds.), 1–31.
- Herring, Susan C., Pieter van Reenen, and Lene Schøsler (eds.). 2000b. *Textual Parameters in Older Languages*. Amsterdam/Philadelphia: John Benjamins.
- Jacquemin, Christian. 2001. *Spotting and Discovering Terms Through Natural Language Processing*. Cambridge, MA: MIT Press.
- Jucker, Andreas H. 1995. Mass media. In: Jef Verschueren, Jan-Ola Östman, and Jan Blommaert (eds.), *Handbook of Pragmatics*. Amsterdam/Philadelphia: John Benjamins, 1–14.
- Kiesler, Sara, Jane Siegel, and Timothy W. McGuire. 1984. Social psychological aspects of computer-mediated communication. *American Psychologist* 39, 1123–1134.
- Kress, Gunther, and Theo van Leeuwen. 1996. *Reading Images: The Grammar of Visual Design*. London: Routledge.
- Kroch, Anthony, Ann Taylor, and Donald Ringe. 2000. The Middle English verb-second constraint: A case study in language contact and language change. In: Susan C. Herring, Pieter van Reenen, and Lene Schøsler (eds.), 353–391.
- Kytö, Merja. 2000. Robert Keayne's notebooks: A verbatim record of spoken English in early Boston? In: Susan C. Herring, Pieter van Reenen, and Lene Schøsler (eds.), 273–308.
- Labov, William. 1994. *Principles of Linguistic Change: Internal Factors*. Oxford: Basil Blackwell.
- Liverpool Dock Shop Stewards' Committee. 1996. Dockers' Charter no.5: Cyberpickets. <http://www.labournet.org/docks/other/CHART5.HTM>.
- Ljung, Magnus. 2000. Newspaper genres and newspaper English. In: Friedrich Ungerer (ed.), 129–150.
- Morris, Merrill, and Christine Ogan. 1996. The Internet as a mass medium. *Journal of Computer-Mediated Communication* 1.4. <http://www.ascusc.org/jcmc/vol1/issue4/morris.html>. Reprinted from *Journal of Communication* 46.1 (1996).
- Mufwene, Salikoko. 1996. The Founder Principle in creole genesis. *Diachronica* 12, 83–134.
- Ong, Walter J. 1982. *Orality and Literacy: The Technologizing of the Word*. London: Methuen.
- O'Sullivan, Patrick. 1999. 'Personal broadcasting': Theoretical implications of the Web. <http://www.ilstu.edu/~posull/PersBroad.htm>.
- Pool, Ithiel de Sola (ed.). 1977. *The Social Impact of the Telephone*. Cambridge, MA: MIT Press.
- Rowe, Charley. In press. Whatcanade?: Rapid language change in a private email sibling code. In: Susan C. Herring (ed.).
- Schmid-Isler, Salome. 2000. The language of digital genres. A semiotic investigation of style and iconology on the World Wide Web. *Proceedings of the 33rd Hawaii International Conference on System Sciences (HICSS 33)*. IEEE Press. <http://www.computer.org/proceedings/hicss/0493/049333/0493toc.htm>.
- Scribner, Sylvia, and Michael Cole. 1981. *The Psychology of Literacy*. Cambridge, MA: Harvard University Press.
- Sproull, Lee, and Sara Kiesler. 1991. *Connections: New Ways of Working in the Networked Organization*. Cambridge, MA: MIT Press.
- Swales, John. 1990. *Genre Analysis*. Cambridge: Cambridge University Press.
- TEI. 2002. *Text Encoding Initiative*. <http://www.tei-c.org/>.
- Ungerer, Friedrich (ed.). 2000. *English Media Texts — Past and Present: Language and Textual Structure*. Amsterdam/Philadelphia: John Benjamins.
- Van de Velde, Hans, Merinell Gerritsen, and Roeland van Hout. 1996. The devoicing of fricatives in Standard Dutch. A real-time study based on radio recordings. *Language Variation and Change* 8.2, 149–175.
- van Dijk, Teun. 1990. *News as Discourse*. Hillsdale, NJ: Lawrence Erlbaum.

About the author

Susan C. Herring is an Associate Professor of Information Science and Linguistics at Indiana University, Bloomington. Trained as a functional grammarian and historical linguist, she currently researches language and language use on the Internet. Her publications include: *Computer-mediated Communication; Linguistic, Social and Cross-Cultural Perspectives* (ed. 1996), *Textual Parameters in Older Languages* (co-ed., 2000), and *Computer-Mediated Conversation* (ed., in press).