Convenience (for both sender and receiver)
Reliability (actual or perceived)
Communicative agendas (and how email can advance them)
Social conventions (for both sending and responding to messages)

4.6.1. Convenience

We have already noted a number of factors that make email convenient: its marginal cost, its potential for creating its own paper trail (obviating the need for a follow-up phone call or written confirmation), its speed of transmission, and the fact that both senders and receivers can use it on their own time schedule. Moreover, as a written/visual technology, senders and receivers can create and read email, respectively, while attending to other tasks, such as listening to voice mail or speaking on the telephone. (Of course, if email comes to incorporate either auditory or video signals, use of two communication modalities simultaneously will become socially circumspect.)

Ease of access, processing time, and typing skills can tip the balance in favor of email versus another alternative. Depending, of course, upon work styles and access, many senders find it more convenient to pick up the telephone and leave voice mail than to send email. On the receiving end, convenience is a function both of computer access and visual (versus auditory) processing time. On the one hand, users who don’t have constant access to their email (e.g. at home or while traveling) often prefer to receive voice mail messages, which can be collected from nearly any telephone. On the other hand, users who have easy computer access may prefer to receive email messages, since the same amount of information can be processed more rapidly by reading on-screen than by listening to an auditory signal. Moreover, email messages tend to be shorter than telephone exchanges, often dispensing with conventional banter and with opening and closing routines.

4.6.2. Reliability

Initiation of a message carries with it the assumption that the message will be received by the intended interlocutor. For many users, neither voice mail nor email carries clear assurances that messages are properly delivered and opened. Voice mail systems malfunction, computer servers go down, and hard disks crash, wiping out messages before they can be reviewed at the recipient’s convenience. Moreover, many users who have email and voice mail accounts access them infrequently—if at all. Therefore, in choosing a modality for sending a message, the originator must consider the likelihood of the particular intended recipient actually retrieving it. The solution adopted by some cautious users is to send multiple copies of messages via different modalities.

4.6.3. Communicative agendas

Email provides entree to interlocutors with whom other forms of communication would be impossible or inappropriate. We send email to people we would rarely telephone or request to see face-to-face, presumably because email is less intrusive. This lack of intrusiveness is a function of interlocutor timing and choice (interlocutors can read and respond to messages at their convenience, or not at all) and of
sender quasi-anonymity (although the sender's identity is known, there is no vocal or visual presence). Public acceptance of email as a form of access to interlocutors with whom one might not otherwise communicate can be seen in the growing trend of authors (e.g. journalists, academics) to provide email addresses in their publications, but not phone numbers.

Social access through email is now in transition. While most users directly read their own email, a growing number of systems are available for screening incoming messages, much the way that office secretaries or telephone caller ID can be used for monitoring incoming phone calls. Today's situation with email is reminiscent of the early days of the telephone, before organizations began commonly installing secretaries to weed out 'inappropriate' callers. For soon after the telephone was invented, early subscribers quickly realized that

any person off the street may for a trifling payment...ring up any sub-
scriber and insist on holding a conversation with him (Scotsman, 9
December 1884, quoted in Marvin, 1988, p. 103)

4.6.4. Social conventions

Rules of discourse can be intricate in contemporary modern society. We must
decide, for example, what communicative modality to use (e.g. face-to-face con-
dolence visit, handwritten thank-you note). We also need to know when to shift
from one modality to another (e.g. inquiry letter, followed by a phone call) and how
do deal with competing modalities (e.g. interrupting a face-to-face conversation to
answer the telephone).

Email introduces an additional dimension into communicative decision-mak-
ing. Since the technology is both new and rapidly evolving, it is too soon to speak of
clear usage conventions. Rather, like small communities with local dialects, net-
works of email users are developing (often by trial and error) their own discourse
protocols. Culture shock can result when users from one community interact with
those of another that has different conventions. To the extent possible, commu-
nicants need to determine the expectations of their interlocutors. At Microsoft, where
'the phone never rings,' a telephone call from a colleague on an administrative matter
might be socially inappropriate, while an email at a small institution where few people
regularly use the medium would be equally out of line.

Consider the choice of using email rather than some other communicative mod-
ality. I will not forget the first time I encountered a job candidate who returned
home after the interview and emailed a 'thank-you-for-interviewing-me' message to
the search committee, rather than sending a formal letter through the mail. Mem-
bers of the committee, all of whom were comfortable with email, were further sur-
prised when every other candidate interviewed for the position followed suit.
Clearly, cultural conventions were changing, largely along age lines.

Or consider the question of when to shift from one modality to another. For
example, one might initiate bargaining or contract negotiations via email but switch
to telephone or face-to-face conversation for reviewing points of
contention. Obviously, decisions about when to switch medium (not to mention
initial medium choice) differ from one subculture to another. While many law firms continue to insist upon face-to-face meetings on sensitive issues (eschewing less costly email, conference calls, or even teleconferencing), a number of businesses appear comfortable initiating and concluding contract negotiations entirely by email. Again, appropriateness conditions for email are still very much in flux. Modality choice is also a factor in receiving messages. Nowhere is this issue clearer than in deciding what message to attend to when signals arrive from more than one modality.

A knock on the door nearly always takes precedence over a face-to-face conversation: the outside visitor may leave, while the current interlocutor is already a captive audience. Introduction of the telephone over a century ago posed new dilemmas. Does the (absent) telephone caller have precedence over the physically present interlocutor? Until recently, the answer was typically 'yes'. Once contact was established with an interlocutor, that person was made to wait in queue, while the next person interrupted—a tradition kept live by call-waiting telephone service.

Changing the response conventions can be personally uncomfortable, even if technology facilitates such deviation. While many phones automatically shunt unanswered calls to voice mail, a number of us (and of our face-to-face visitors) find it difficult to continue spoken conversation while a telephone rings in the background.

Where does email fit in? Does it have precedence over face-to-face interaction? Over a ringing phone? In the latter case, the determining factors are technology and cultural expectations. Computers set to beep when new emails arrive are more like telephone calls than letters, especially if you are awaiting a timely email message. Email received without auditory or visual cues is like a letter in your in-basket, available at your leisure. In email-intensive organizations, email may preempt other communication under all circumstances. Markus (1994, p. 141) illustrates this sort of instance in a company where email took precedence over live visitors:

Ted has such an urgency about Mail. When I’m in there talking to him and the terminal beeps, he turns around and starts responding. That makes me mad: he’s supposed to be talking to me. But people here expect such a quick response.

(See Trevino et al. (1990) and Fulk and Boyd (1991) for further discussion of medium choice in organizations.)

5. Beyond dichotomies: email as creole

5.1. Evaluating the linguistics of email

Like beauty, the linguistic character of email resides mainly in the eye of the beholder. A number of users insist that since email is durable representation, it must be a form of writing, though for many others (from retirees sending email instead of calling long-distance, to computer-saturated organizations where 'the phone never rings'), email is largely perceived as speech by other means.
The role of user presupposition in characterizing email linguistically comes into sharp relief when one considers peripheral email users. In the process of completing this article, I asked my computer-savvy 11-year-old son whether email was more like speech or writing. Beholding me as if I had taken leave of my senses, he replied that obviously it was writing. When I began explaining some of the speech-like qualities that others had noted, he respectfully interrupted: 'But you still have to write it.'

From the perspective of a child, for whom production of written text remains a labored activity in comparison with speaking, the fact that one must create an email message letter by letter, word by word, is of primary saliency. To adults for whom physical generation of written text is so practiced as to be nearly as effortless as speech, the act of production is generally less significant than the type of message one is formulating and one's relationship with one's interlocutor. Similarly, while adults may find it more convenient to receive email (e.g. rather than retrieving voice mail or engaging in face-to-face exchange) because of the rapidity with which email can be visually processed, young readers are less likely to find advantage in messages that need to be visually deciphered.

The telephone, again, provides a useful analogy. When telephones were in their infancy, users tended to view telephony as a quasi-formal medium of communication, typically replacing the telegraph rather than substituting for casual face-to-face exchange (Pool, 1977, 1983). Today, few of use are aware of the ease with which we engage in casual conversation on the telephone—until we encounter novice users. Young children must master the rules of telephone discourse, and people from less telephone-intensive societies often find it difficult to engage in informal banter when they can't see their interlocutor face-to-face.

The most persistent theme to emerge from our linguistic analysis of email is that email is a communicative modality in flux (e.g. Sherblom, 1988; Feenberg, 1989; also Murray, 1988; Ferrara et al., 1991). But having said that, can we apply any tools in our general arsenal as linguists to better understand the nature of this evolving system and possible future directions email might take?

5.2. Email as a creolizing modality

Although the origin of human language may never be deciphered, we do know a great deal about how new linguistic systems are forged from older materials. Such emergent linguistic systems may be spoken, signed, written, or, we suggest, the product of new linguistic modalities.

5.2.1. Emergence of spoken languages

New spoken languages emerge from earlier stock through pidginization and creolization. In the early stages of development, a pidgin has a restricted set of communicative functions, is only used by a limited sector of the population, and draws heavily upon two or more contributing systems for its phonological, syntactic, and semantic components. As the system matures—being used by an increasing number of speakers for an ever wider number of functions, it typically develops its own complex character that is no longer a sum of its original progenitors. The
creolization process is largely complete when the linguistic system acquires its own native speakers (see, for example, Baron, 1977; Romaine, 1988).

Many of the spoken pidgins and creoles that typically come to mind have resulted from modern western colonization and imperialism, e.g. Tok Pisin in New Guinea; the creoles of Jamaica, Trinidad and Tobago, or Sierra Leone. Yet the same evolutionary processes also undergirded the formation of several major European languages, including English. Before the fifth century invasions of the Angles and Saxons, Frisians and Jutes, there was no ‘English’ language. These West Germanic roots subsequently became commingled with North Germanic (through the Viking invasions) and Norman French, not to mention several historical waves of Latin and an explosion of linguistic contributions in modern times. Is English a Germanic or a Romance language? In some ways, it’s both—and neither.

In any language system constructed from multiple sources, individual users can choose to emphasize one contributing strand over another. Speakers of English, for example, may favor a heavily Latinate or predominantly Germanic vocabulary. Similarly, in Trinidad and Tobago, speakers can make their language more like British English or more akin to Trinidad and Tobago English Creole, depending not simply upon their level of education but also upon the social group with which they wish to indicate affiliation (Winer, 1993, pp. 60ff).

5.2.2. Emergence of sign languages

Notions of pidginization and creolization have typically been applied only to spoken language. However, the same linguistic processes are at work with other modalities as well. In the realm of sign language systems, we can, for example, characterize American Sign Language (ASL) as a creole emerging from French and American roots. In eighteenth century Paris, the Abbe de l’Epée superimposed the syntax of spoken French onto manual signs then in use within the Parisian deaf community. Laurent Clerc (one of Epée’s pedagogical heirs) and Thomas Hopkins Gallaudet introduced this composite French-based hybrid to members of the American deaf community, who were using their own indigenous system (see Schein and Stewart, 1995). While linguists may debate the extent to which ASL reflects French sign, there is little question that contemporary ASL is a creole in much the same way as spoken English.

5.2.3. Emergence of writing systems

Many writing systems have developed as adaptations of earlier means of durable communication. On the one hand, more abstract types of writing (e.g. syllabaries, the alphabet) can usually be traced to prior iconic forms of representation. On the other hand, trade, migration, or conquest often leads to adoption or imposition of a foreign writing system. The ‘Roman’ alphabet, for example, began with the Semitic peoples, and ‘Japanese’ kanji started as Chinese characters (see, for example, Coulmas, 1989).

As in the case of spoken creoles, mixed writing systems are sometimes tailored to meet the needs of local audiences. In Japan, for example, stories for young Japanese readers are written using both the standard mix of kanji (characters—generally indicating content words) and kana (syllabic representations—typically used for
grammatical markers and foreign words). However, small, supplementary kana—known as yomigana—are also added atop certain kanji to help children sound out words whose characters they don’t yet recognize. In much the same way, centuries ago, the Maya tailored their mix of ideographic and phonetic glyphs to accommodate the anticipated audience (and their reading skills):

Most of the glyphs on outdoor public monuments such as stelae are logographic...However, when texts move to the interior area of buildings away from public space as at Palenque, the complexity of the texts and the degree of phoneticism...expands dramatically...but they are designed for use by professional literates (Schele, 1979, p. 16).

5.2.4. Creolization of a modality
Whenever a new communication technology emerges, it takes users some period of time to understand—or create—its defining linguistic properties. Early printing mimicked careful, time-consuming manuscript production; it took several centuries for print to emerge as a more rapidly prepared medium for mass communication. Similarly, earlier teletechnologies (including the telephone, radio, and television) only gradually attained the conversational, interactive tone they have today (Baron, 1998b).

Email is both a technology in transition and the product of mixed modal lineage. When the linguistic profile of email is compared with those of other evolving communicative systems, it becomes clear that the seemingly schizophrenic character of email reflects ongoing creolization. Users of email (like users of creolized spoken, signed, or written systems) have considerable choice over how to formulate and respond to messages, stressing the character of one progenitor or another. This variation is evident in the stylistic range found in today’s email messages, even when sent by the same individual. For example, given the technological ease of sending email (as opposed to correspondence via traditional postal services), writers who send very informal, error-strewn emails to friends and colleagues often become extremely formal in their ‘official’ correspondence sent via email.

Many seasoned users of email insist that their informal missives are ‘speech by other means,’ while acknowledging their formal messages to be more like ‘letters by phone’. Yet other experienced users are equally adamant that no matter what the tone, if you produce the message with an instrument of durable representation (here, the keyboard), it’s necessarily writing. In my own experience, users who fall into the latter category are typically professional writers—academics, editors, and the like—whose emails are, not surprisingly, carefully composed.

Yet admittedly, many other professional writers fall into the former category, often with email styles to match. How do you predict whether a writer will belong to one camp or the other?

The answer may hinge upon authors’ prior presuppositions about distinctions between spoken and written language. It might be instructive, for example, to explore authors’ views on dichotomous versus spectral analyses of the relationship between writing and speech. We would predict that those favoring a dichotomous
model would also see email as necessarily a form of writing. (Recall that young readers and writers—who are highly conscious of writing as a distinct linguistic medium—are equally insistent that email is necessarily writing.)

The creolizing character of email is further defined by its changing scope of uses and usership. When a spoken pidgin expands its range of functions and the number of people regularly communicating through it, the system is ripe for evolving into a more linguistically rich—and stable—creole. What about email? As a technology that is barely three decades old (but one that has only attracted a large usership during the 1990s), email may be too young linguistically to warrant a unified grammar of the sort we might write for a more mature language such as classical Greek or even modern English. Therefore, the important question becomes, how do we see email developing in the future?

5.3. The future of email

The future linguistic shape of email will be determined by interaction between two factors: technological potential and social choice. Technologically, email seems slated to become as ubiquitous as the telephone in terms of ease of access (see Anderson et al., 1995). Given its inherent advantages, email might even supplant the telephone as the primary means of one-to-one dialogue at a distance.

Technology also makes possible expansion of email bandwidth to include vocal and video channels. The question about the future of email is less whether such options will be available (they already are) than whether we find them socially desirable.

While the intrusion of available technologies into our individual and social lives sometimes seems inevitable, there are also historical instances in which technology has been rejected. One of the most profound examples is when Tokugawa Japan voluntarily ‘gave up the gun’ barely 50 years after the introduction of firearms by Europeans in 1543 (Perrin, 1979). As we already noted, earlier in the twentieth century, users rejected videophones, opting instead for conventional telephony.

At the same time, as teletechnologies mature, users generally increase their comfort levels, even changing their presuppositions about what information is, can be, or should be conveyed through the medium, and how messages will be received by interlocutors. A hundred years ago, people using the telephone worried about not being able to see the person with whom they were speaking; there were no cues as to social class, and facial expressions and gestures were not conveyed (see Pool, 1983; Marvin, 1988). Today’s users are rarely concerned with such issues. In fact, many of us gesture freely when conversing on the phone (even bowing if our culture calls for it), though we know intellectually that such kinesic signals are lost on our interlocutors.

In much the same way, seasoned email users seem to be increasingly relaxed about the technological limitations of the medium (see Feenberg, 1989, p. 23). Although emotion is no more easily expressed today via email than it was 10 or 20 years ago, many users no longer feel impelled to rely upon emoticons or flaming to express themselves. Rather, at least for informal email messages, users are increasingly ‘speaking’ more as if face-to-face or on the telephone, even though neither auditory nor visual paralinguistic cues are present.
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Future decisions about whether additional information channels will be incorporated into email—and, if so, how users will interpret them—are as much a function of social convention as of the empirical information signal. The naked Galda Delmarre in Asimov’s novel was not embarrassed at being ‘viewed’ (as opposed to ‘seen’), while earthing Elijah Balev ‘jumped out of his chair and upset it behind him,’ reddening to his hair line at the encounter (Asimov, 1991, p. 61). Lest we mistakenly believe the distinction between ‘viewing’ and ‘seeing’ to be a subtlety reserved for science fiction, we need only think about our own conventions about states of undress. Women who sunbathe topless on European beaches modestly tug at skirts to cover their knees when seated at meetings. In Japan, men and women publicly bathe together naked, though by convention, they don’t acknowledge one another’s presence. In much the same way, we might, in the future, incorporate visual or auditory signals into email, but then tune out information coming from these modalities.

What will be the linguistic (including transmissional) properties of email in the decade ahead? The answer will result more from social decisions than technological fate.

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