

The Evolution of the Online Discourse Community

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Introduction

As discussed by Freed and Broadhead, a discourse community is a distinguished body that shares rules and language for their communications; the rules and language are usually internal to the community, and participants have to standardize their discussions within the parameters set by the discourse community in order to successfully join in the conversation.¹ Although originally developed by linguists interested in speech habits, the term can be applied to several different arenas of communication. This paper will focus on the online discourse community, which can be defined as text communications taking place through a linked, computer-aided medium, such as e-mail or Usenet discussion groups.

Online discourse communities have evolved greatly over time. As membership has broadened, the vocabulary used in online messages has also evolved. Online discourse communities have a spectrum ranging from professional, scientific, or government/military concerns to social and personal developmental concerns. Each community uses its own distinct idioms and jargon to communicate effectively. Elite computer users ("hackers") have evolved a rich language based on different programming protocols. The growing participation of socially oriented discourse partners has evolved a lexicon that tries to simulate physical cues for more effective social communication.

Four different online discourse fora will be examined: ARPANET; Usenet; Bulletin Board Systems (BBS); and the Internet. For each technology, I will examine the type of technology used, the type of messages exchanged within the service, the typical user of each service, and the impact on the users' online vocabulary.

The evolution of online communication technology

ARPANET

In the early 1960s, the United State's Department of Defense (DOD) Advanced Research Projects Agency (ARPA) began to construct a resource-sharing computer network among its contractors. This network became known as the ARPANET, a wide-area packet switching network that later evolved into the Internet. ARPANET was originally conceived to facilitate technical resource sharing between DOD ARPA contractors and

¹ Richard Freed and Glenn J. Broadhead, "Discourse Communities, Sacred Texts, and Institutional Norms," *College Composition and Communications* 38(May 1987).

participant research universities. The initial development focus was on technical resource sharing. This resource sharing included programming libraries, research data, remote procedure calls, and unique software packages available only on specific systems.^{2, 3}

In 1971, the first network e-mail was sent to ARPANET members, and this feature soon became very popular. As is often the case with new technologies, the network e-mail feature was a secondary feature of ARPANET. Soon the network e-mail dynamic replaced standard communications in many uses. The features of e-mail that we are all familiar with today – lack of formality, terseness of language, casual spelling and grammar – were liberating to many ARPANET users. Traditionally, their communication had been performed by telephone call or a personal letter, both methods being time consuming, and often involved secondary partners such as secretaries.

ARPANET also offered a nascent form of Internet Relay Chat (IRC). "Talking" offered users the experience of real-time text conversations over the network.

The first network e-mail users were made up of technical researchers and higher-level employees. Nearly all of the users were white males with a substantial college education. These users were comfortable with an academic environment. Since ARPANET users were usually technical experts, there was a sense of elitism involved. ARPANET use was restricted to these Brahmins, and due to their backgrounds, they had similar interests and values with one another. Diversity was rare. But these users were seriously emotionally engaged in their online discourse, and explored the many possibilities that such discourse allowed.

ARPANET initially had professional, scientific, and military network e-mail communications. Later, communications also evolved a social aspect. Eventually, the military component of ARPANET split off into another group, MILNET.

ARPANET also supported social mailing lists. Among the most popular were NETWORK-HACKERS for programming issues; SF-LOVERS for science fiction; WINE-TASTERS for wine; and HUMAN-NETS for human factors.

Records of the original network e-mail communications from the early 1970s appear to be unobtainable. No originals were printed, and the magnetic storage media no longer exist. However, one can deduce that these early communications, while terse and non-formal, still contained standard language such as that contained in business correspondence.

² *The Evolution of ARPANET email*, Ian R. Hardy, 1996 (History Thesis Paper), <http://www.ifla.org/documents/internet/hari1.txt>.

³ The first four-node network consisted of the University of California Santa Barbara, University of California Los Angeles, Stanford Research Institute (SRI), and the University of Utah. ARPANET expanded to thirteen nodes by January 1971 and twenty-three nodes by April 1972, linking research universities and DOD ARPA contractors.

Records from communications from the early 1980s are readily available. These messages contain text that is scholarly in tone, with excellent grammar and spelling. However, even in 1981 there existed a language division between participants, as this posting to the HUMAN-NETS e-mail discussion list depicts:

Date: 20 May 1981 13:53 cdt

From: VaughanW at HI-Multics (Bill Vaughan)

Subject: influencing the language

It would be nice if some of the MIT community (who seem at times to dominate these lists) would recall that there are indeed members of the lists who do not use such terms as foo, hack, frob, moby and mung in their everyday language; that those people probably have their own jargon (many folk seem to use "fred" where an MIT'er would use "foo"); but particularly that some parts of the MIT jargon (I have in mind "win" and "lose") are also in the standard language with different semantics and are therefore likely to be misinterpreted by the rest of us...⁴

USENET

The Usenet (derived from "Users' Network") is a distributed BBS supported mainly by Unix machines. Originally implemented in 1979-1980, Usenet still enjoys immense popularity today. Usenet was developed to allow UNIX computers to exchange data over phone lines and to distribute information of interest to people in the UNIX community. Usenet's popularity spread and it evolved into a powerful online discourse tool.

"Newsgroups" on Usenet collect messages for special interest groups. Groups can be "unmoderated" (unsupervised and directly posted) or "moderated" (submissions are automatically screened by a moderator before posting). Today, Usenet connects tens of thousands of sites around the world.

Since inception, Usenet has been categorized as a broadband news service allowing individuals with similar interests to communicate. Thus, these communications have no limitations: a newsgroup can be established by any special interest group to discuss matters in a unique discourse community.

Usenet users, with their specialized educations, quickly evolved a language that used programming language to replace standard phrases in their correspondence. Often these replacement words were based on UNIX codes. According to *The on-line hacker Jargon File*, other conventions included:

⁴ Hardy.

- Verb Doubling: Doubling a verb may change its semantics
- Soundalike Slang: Punning jargon
- The -P convention: A LISPy way to form questions
- Overgeneralization: Standard abuses of grammar
- Spoken Inarticulations: Sighing and <*sigh*>ing
- Anthropomorphization: online components were named "Homunculi," "daemons," etc., and there were also "confused" programs
- Comparatives: Standard comparatives for design quality ⁵

These new language conventions were mostly used by self-identified “hackers,”⁶ sophisticated computer programmers and users. Thus a Usenet jargon evolved which served to exclude less knowledgeable users.

The original users of Usenet tended to be Unix-savvy individuals. These individuals were often centered in universities, research facilities, or computer companies. However, as Usenet became accessible through platforms other than UNIX, Usenet’s popularity grew. The user base grew to include individuals not as technically proficient as the UNIX users, and the discourse community expanded as Usenet became more popular. As "newbies" joined more and more Usenet discussion groups, experienced users found it necessary to reinforce the rules of etiquette.

However, less technically sophisticated Usenet users also evolved other standards of language and usage. These standards are now often referred to as “netiquette,” and their use is applied to all online communications. Netiquette standards are social conventions for Usenet protocols. Typical standards include not typing in capital letters, not posting “me too” replies to messages, or not forwarding chain e-mail to other recipients. RFC 1855: *Netiquette Guidelines* (<http://www.dtcc.edu/cs/rfc1855.html>) provides a good overview of standards for online communication.

BBS

Before the development of microcomputer bulletin board systems (BBS), the few individuals who owned personal modems connected to large computers in universities or private computer networks. But in 1978, an on-line message base for utilizing a common home microcomputer and modem was introduced. BBSs allowed computer hobbyists to

⁵ *The on-line hacker Jargon File*, version 4.2.3, 23 NOV 2000, <http://www.comedia.com/hot/jargon-4.2.3/html/index.html>.

⁶ It is only recently that the term "hacker" meant a malicious, damage-causing individual who caused mechanical problems for Internet computer systems.

exchange helpful tips, discuss information about their machines, and participate in social discussions. Many of these BBSs were supported by individual computer hobbyists.

The first BBSs were message centers with e-mail facilities and open discussion areas. Later developments included allowing users to share files by “uploading” and “downloading” them into a central area. Larger commercial networks (such as CompuServe) offered features such as multi-user on-line chat areas, large download sections, and local call access in large cities (allowing the user to avoid long-distance telephone charges for a modem connection).

Another later development was BBS networking, which allowed the BBSs to be programmed to call other BBSs automatically and exchange public messages, e-mail and files. This extended the range of the BBS platform.

BBS users were often computer hobbyists. They used the BBS to exchange helpful tips, information about their machines, and to have an occasional discussion. Many of these BBSs were supported by individual computer hobbyists. BBS users often had a different focus than did Usenet users; they often had less formal education than Usenet contributors.

These differences helped produce an adolescent BBS subculture that exists in some forms even today. One subculture (mostly teenagers running IBM-PC clones from their bedrooms) consider themselves to be technological rebels, outside the mainstream of BBS.

Mechanically, a typical BBS served a role very close to its real-world component: users would post messages in certain areas, and would revisit the board to get replies or questions. A system operator (sysop) would own a machine that was solely devoted to serving as the central repository of data files. Usually, the system would have one incoming and one outgoing modem line (although more ambitious sysops were able to have more than two connections). The board was "up" for use when the sysop turned on her BBS software and opened the modem connections. Users would then dial in, choose an area to post messages, then read, reply, and create original postings on topics.

BBS discussions about computer hardware and software were common, but these discussions were not dominated by technical discussions. As with ARPANET, BBS users quickly found ways to use the BBS forum socially. Movie reviews, favorite authors, automobiles, bicycles, and other "real world" topics were discussed vigorously in these time-delayed postings.

However, as mentioned above, a group of self-considered “non-establishment” BBS users created a distinct set of slang and jargon to distinguish themselves from the BBS community mainstream. Often self-identified as “warez d00dz”⁷ or “crackers,” these individuals were usually adolescent males, often heavily influenced by skateboard-type

⁷ "warez d00dz" ("wares dudes") refers to illegal software pirates; "crackers" refers to individuals who compromise computer security systems, usually with the intent of malicious mischief.

lingo. The warez d00dz lexicon is unused by any other online discourse users, and remains characterized as immature. However, since many computer users are adolescent males, we continue to see this language pervade online communications, and it's useful to review where the conventions came from. They include:

1. Misspell frequently. The substitutions fone for phone, and phreak for freak, are obligatory.
2. Always substitute `z's for `s's. (i.e. "codes" -> "codez"). The substitution of 'z' for 's' evolved to indicate an illegal or cracking connection. Examples: Appz, passwordz, pornz, sitez, downloadz, FTPz, etc.
3. Type random emphasis characters after a post line (i.e. "Hey Dudes!#!\$##!#!\$")
4. Use the emphatic `k' prefix ("k-kool", "k-rad", "k-awesome") frequently.
5. Abbreviate compulsively ("I got lotsa warez w/ docs").
6. Substitute `0' for `o' ("r0dent", "l0zer").
7. TYPE ALL IN CAPS LOCK, SO IT LOOKS LIKE YOU'RE YELLING ALL THE TIME.⁸

The Internet

The Internet that we are familiar with today grew from the original ARPANET (see above). The phrase "World Wide Web" ("WWW") incorporates all resources and users on the Internet using the Hypertext Transfer Protocol (HTTP). The mainstream community was introduced to the Internet in the early 1990s, after the National Science Foundation lifted restrictions that previously prevented commercial use of the Internet.

The Internet is used by the entire world. Although some groups are more represented than others (i.e., Third World citizens, certain ethnic and economic groups, etc.), there remains a wide audience being served by the Internet technology. Ironically, the most advanced and elitist Internet users are now developing a more exclusive, post-Internet forum.

The Internet has several vehicles for communication, which allow participants to communicate in IRC, postings, or even website presentation. The topics of Internet communications range as broadly as Usenet (and in fact Internet browsers allow users a connection to Usenet).

Internet users currently use a wide range of language to express themselves; however, "netiquette" standards are considered to apply to the Internet also.

⁸ *The on-line hacker Jargon File.*

Perhaps the most significant change that the Internet has had on the online discourse community is the sheer volume of Internet users who joined the discourse. For example, America On Line (AOL) is responsible for introducing millions of "mainstream" users to the Internet. These individuals have no history of discourse, and are unaware of conventions already in place to facilitate communication. As with the Usenet discussions described above, experienced users find it necessary to reiterate netiquette. AOL has such a reputation for "lowering the threshold" of user access that it is not uncommon for more experienced users to screen out, or ignore, individuals whose e-mail account originates from AOL.

The Evolution of an Expressive Online Lexicon

Since the inception of online communication, authors have been motivated to invoke a lexicon to provide behavioral cues (such as smiling, sarcastic tones, unspoken verbalisms, etc.) that are not evident with the simple text presentation. As Howard Rheingold explains,

It's amazing how the ambiguity of words in the absence of body language inevitably leads to online misunderstandings. And since the physical absence of other people also seems to loosen some of the social bonds that prevent people from insulting one another in person, misunderstandings can grow into truly nasty stuff before anybody has a chance to untangle the original miscommunication. Heated diatribes and interpersonal incivility that wouldn't crop up often in face to face or even telephone discourse seem to appear with relative frequency in computer conferences. The only presently available antidote to this flaw of CMC as a human communication medium is widespread knowledge of this flaw -- aka 'netiquette.'

To foster these behavioral cues, a multitude of symbols – ranging from the emoticon¹⁰ glyph to acronyms of physical actions to textual references of emotions – have been developed.

The invention of the emoticon is attributed to Scott E. Fahlman, Principal Research Scientist, Carnegie Mellon University School of Computer Science. Fahlman has been quoted by The Boston Globe as saying that "I had no idea that I was starting something that would soon pollute all the world's communication channels." As he wrote in the following e-mail:¹¹

⁹ "A Slice of Life in My Virtual Community," Howard Rheingold, 1992, <http://interact.uoregon.edu/MediaLit/MLR/readings/articles/aslice.html>.

¹⁰ "Emoticon" is often believed to have derived from "emotional icon."

¹¹ Obtained from COMM300 - Communication Theory, University of Arizona, <http://www.ic.arizona.edu/~comm300/mary/smile.html>. However, this quote appears in many documents as part of the standard history of emoticons.

Date: Sat, 29 Apr 95 01:06:54 -0400

From: "Scott E. Fahlman"

To: Don Z'Boray

Subject: Re: smileys

Yes, I am the one who first suggested the use of the :-) and :- (glyphs in E-mail and bboard posts sometime around 1981. People were making sarcastic comments in posts, others were taking them more seriously than they were intended (no body language on the net), and silly arguments were breaking out. So I suggested on one of the CMU bboards that people explicitly label comments not meant to be serious with a :-) glyph. Very quickly this idea spread all around the world and others started creating clever variations on the theme. The awful term "emoticons" is much more recent. Unfortunately, I didn't save the original note. I post things like this all the time, and never guessed that this one would make history.

Cheers,

Scott

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=====  
Scott E. Fahlman                Internet:  sef+@cs.cmu.edu  
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Pittsburgh, PA 15213            Mood:    :- )  
=====
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In addition to emoticons, acronyms to indicate social behaviors have also evolved. These acronyms can be used to indicate the writer's social or emotional placement at the time of composition. For example, you can inform your reader(s) that you are **ROTFL** (rolling on the floor laughing) from mirth, or you **LOL** (laugh out loud) at a particular thought or message. Statements can be couched with social expressions, such as **FWIW** (for what it's worth), **IMHO** (in my humble opinion), and **OTOH** (on the other hand). These acronyms are used by authors who wish to preserve a social component in their communication. Ironically, messages are capable of including a perceived rude statement (flame), an emoticon (the author tries to couch the statement in a less-threatening frame), and an acronym (to add the social touches which may assist communication).

As the user base on the Internet grew exponentially, the online lexicon also evolved. The "socializers" outlined above are used more and more regularly by message posters.¹² There are now indexes of emoticons and acronyms on the Internet to help writers "socialize" their message (and to decipher others' messages).

Conclusion

As discussed above, while the physical components of online computer mediated communications evolved, so also did the online discourse community. Each technological improvement changed the profile and size of the discourse community members. Common through all of these fora, however, is the need of the users to have social interactions along with the formal information exchanges. ARPANET had its small "social groups" discussing Star Trek and wine; BBS users began to evolve a netiquette when discussing Star Trek and Jolt Cola; Usenet users continued to evolve the netiquette as they formed highly specialized interest groups such as alt.startrek or alt.microbrews to pursue individual interests. Finally, we have the Internet, which has leveled the user playing field to such an extent that formal information exchange during online discourse becomes less and less common. Anyone can look up an exhaustive history of Star Trek or beer, and there is no special status associated with sharing that information.

Now that the world is "wired," many commentators worry that the Internet will be "choked" with commercial interests and social groups, leaving little room for the elite user to exchange information. The Internet, it seems, is a victim of its own success.

In response, the Next Generation Internet (NGI) Initiative has been formulated by multiple Federal research and development agencies. The NGI initiative began October 1, 1997, with the following participating agencies:

Defense Advanced Research Projects Agency (DARPA), National Aeronautics and Space Administration (NASA), National Institutes of Health (NIH), National Institute of Standards and Technology (NIST), and the National Science Foundation (NSF). Using the success of ARPANET as a model, these agencies seek to create a new online communications medium, including "advanced networking technologies, ...revolutionary applications that require advanced networking, [with] ...testbeds that are 100 to 1,000 times faster end-to-end than today's Internet."¹³

Based on the discussion above, I strongly suspect that along with the hard scientific data, there will be at least one person using this new medium to ask another person, "What have you heard about the new Star Trek series?"

¹² It's not unusual for elitist users to "prohibit" the use of emoticons in their newsgroups.

¹³ "Internet2 and the Next-Generation Internet (NGI)," <http://government.internet2.edu/ngi.html>.