

# Sky-Writing, Or, When Man First Met Troll

STEVAN HARNAD - Steven Harnad is a professor of cognitive science at University of Southampton.

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*Editor's note: Stevan Harnad wrote the following essay in 1987 while at Princeton just as the Internet we know coalesced into being. It describes his first experience with a troll and then a flame war on a USENET bulletin board. I repost it for three reasons: 1) As Clive Thompson put it when he [tweeted the essay](#) yesterday, "some things haven't changed!" Which is satisfying to my brain at least. We \*have\* a culture on this here Internet, for good or ill. 2) Going back to such a finely observed primary document lets us feel the strangeness of the Internet again. This was something new unto the world! 3) I wish Harnad's term for Internet discourse -- skywriting -- had caught on. From his place in cognitive science, he intuited early on that Internet culture was something like a return to oral culture, as you can find summarized in his later paper, "[Back to the Oral Tradition Through Skywriting at the Speed of Thought](#)."*

I want to report a thoroughly (perhaps surreally) modern experience I had recently. First a little context. I've always been a zealous scholarly letter-writer (to the point of once being cited in print as "personal communication, pp. 14 - 20"). These days few share my epistolary penchant, which is dismissed as a doomed anachronism. Scholars don't have the time. Inquiry is racing forward much too rapidly for such genteel dawdling -- forward toward, among other things, due credit in print for one's every minute effort. So I too had resigned myself to the slower turnaround but surer rewards of conventional scholarly publication. Until I came upon electronic mail: almost as rapid and direct and spontaneous as a telephone call, but with the added discipline and permanence of the written medium. I quickly became addicted, "logging on" to check my e-mail at all hours of the day and night and accumulating files of intellectual exchanges with similarly inclined e-epistoleans, files that rapidly approached book-length.

And then I discovered sky-writing -- a new medium that has since made my e-mailing seem as remote and obsolete as illuminated manuscripts. The principle is the same as e-mail, except that your contribution is "posted" to a global electronic network, consisting currently of most of the universities and research institutions in America and Europe and growing portions of the rest of the scholarly and scientific world. I'm not entirely clear on how "the Net," as it is called, is implemented and funded, but if you have an account at any of its "nodes," you can do skywriting too.

The transformation was complete. The radically new medium seemed to me a worthy successor

in that series of revolutions in the advancement of ideas that began with the advent of speech, then writing, then print; and now, skywriting. All my creative and communicative faculties were focused on the lively international, interdisciplinary [scholarly interactions](#) I was having on the issues of intellectual interest to me at the time (which happened to arise from Searle's "[Chinese Room Argument](#)" and eventually came to be called the "[symbol grounding problem](#)"). Who needs conventional publication when, within a few hours, the "article" you post on the Net is already available to thousands and thousands of scholars (including, potentially, all of your intended conventional audience), who may already be posting back e-responses of their own? I was in the dizzying Platonic thrall of sky-writing and only too happy to leave the snail-like scope and pace of the old epistolary technology far below me.

But then something quite unexpected happened. With hindsight I can now see that there had already been some hints that not all was as it should be. First, veteran e-mailers and skywriters had warned me that I ought to restrict my contributions to the "moderated" groups. (Most of the subjects discussed on the Net -- including physics, mathematics, philosophy, language, artificial intelligence, and so on -- have, respectively, both a moderated and an unmoderated group.) I ignored these warnings because postings to the moderated groups are first filtered through a moderator, who reads all the candidate articles and then posts only those he judges to be of value. I reasoned that I could make that judgment for myself -- one keystroke will jettison any piece of skywriting that does not interest you -- and that "moderation" certainly isn't worth the huge backward step toward the old technology that the delays and bottle-necking would entail. And indeed the moderated groups carry much less material and their exchanges are a good deal more sluggish than the unmoderated ones, which seem to be as "live" and spontaneous as direct e-mail (but with the added virtue of appearing in the sky for all to see and contribute to).

Apart from the warnings of the veterans, other harbingers of cloudier horizons had been the low quality of many of the responses to my postings, and the undeniable fact that some of them were distinctly unscholarly, in fact, downright rude. No matter. I'm thick-skinned, I reasoned, and perfectly able and willing to exercise my own selectivity solo, in exchange for the vast potential of unmoderated skywriting.

Then it happened. In response to a rather [minor posting of mine](#), joining what was apparently a long-standing exchange (on whether or not linguistic gender plays a causal role in social discrimination), there suddenly appeared such an [astonishing string of coprolalic abuse](#) (the lion's share not directed at me, but at some other poor unfortunate who had contributed to earlier phases of the exchange) that I was convinced some disturbed or malicious individual had gained illicit access to someone else's computer account. I posted a [stately response](#) about how steps must be taken to prevent such abuses of the Net and, much to my surprise, the reaction was a torrent of [echo-coprolalia](#) from all directions, posted (it's hard to judge in this medium whether it was with a straight face) under the guise of defending free speech. For several weeks the Net looked like a [global graffiti board](#), with my name in the center.

The veteran fliers told me they'd told me so; that the Net was in reality a haven for student pranksters and borderline personalities, motherboard-bred, for whom the completely unconstrained nature of the unmoderated groups represents an irresistible medium for acting out. Moreover, certain technical problems -- chief among which was the unsolved "authentication" problem, namely, that there is no way to determine for sure who posted what, where -- had made the Net not only virtually unregulable, but also, apparently, immune to defamation and libel laws.

My penchant for skywriting has taken quite a dive since this incident. I don't relish what's been happening with my name, for example, but I suppose the only way to have prevented it would have been to have stayed away from the Net altogether, hoping it might never occur to anyone to bring me up spontaneously. There's an element of Gaussian Roulette in exposure to any of the media these days, no doubt. But before I wrote it all off as one of the ineluctable technological hazards of the age of Marshall McLunacy, I thought I'd post it with the old, land-based technology, to see whether anyone has any ideas about how to prevent the vast intellectual potential of skywriting from being done in by noise from the tail end of the normal distribution. If the Wright brothers' invention were at stake, or Gutenberg's, what would we do?