ESSAY

Flame First, Think Later: New Clues to E-Mail Misbehavior

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Jett Lucas, a 14-year-old friend, tells me the kids in his middle school send one other a steady stream of instant messages through the day. But there's a problem.

"Kids will say things to each other in their messages that are too embarrassing to say in person," Jett tells me. "Then when they actually meet up, they are too shy to bring up what they said in the message. It makes things tense."

Jett's complaint seems to be part of a larger pattern plaguing the world of virtual communications, a problem recognized since the earliest days of the Internet: flaming, or sending a message that is taken as offensive, embarrassing or downright rude.

The hallmark of the flame is precisely what Jett lamented: thoughts expressed while sitting alone at the keyboard would be put more diplomatically — or go unmentioned — face to face.

Flaming has a technical name, the "online disinhibition effect," which psychologists apply to the many ways people behave with less restraint in cyberspace.

In a 2004 article in the journal CyberPsychology & Behavior, John Suler, a psychologist at Rider University in Lawrenceville, N.J., suggested that several psychological factors lead to online disinhibition: the anonymity of a Web pseudonym; invisibility to others; the time lag between sending an e-mail message and getting feedback; the exaggerated sense of self from being alone; and the lack of any online authority figure. Dr. Suler notes that disinhibition can be either benign — when a shy person feels free to open up online — or toxic, as in flaming.

The emerging field of social neuroscience, the study of what goes on in the brains and bodies of two interacting people, offers clues into the neural mechanics behind flaming.

This work points to a design flaw inherent in the interface between the brain's social circuitry and the online world. In face-to-face interaction, the brain reads a continual cascade of emotional signs and social cues, instantaneously using them to guide our next move so that the encounter goes well. Much of this social guidance occurs in circuitry centered on the orbitofrontal cortex, a center for empathy. This cortex uses that social scan to help make sure that what we do next will keep the interaction on track.

Research by Jennifer Beer, a psychologist at the [University of California](), Davis, finds that this face-to-face guidance system inhibits impulses for actions that would upset the other person or otherwise throw the interaction off. Neurological patients with a damaged orbitofrontal cortex lose the ability to modulate the amygdala, a source of unruly impulses; like small children, they commit mortifying social gaffes like kissing a complete stranger, blithely unaware that they are doing anything untoward.

Socially artful responses emerge largely in the neural chatter between the orbitofrontal cortex and emotional centers like the amygdala that generate impulsivity. But the cortex needs social information — a change in tone of voice, say — to know how to select and channel our impulses. And in e-mail there are no channels for voice, facial expression or other cues from the person who will receive what we say.

True, there are those cute, if somewhat lame, emoticons that cleverly arrange punctuation marks to signify an emotion. The e-mail equivalent of a mood ring, they surely lack the neural impact of an actual smile or frown. Without the raised eyebrow that signals irony, say, or the tone of voice that signals delight, the orbitofrontal cortex has little to go on. Lacking real-time cues, we can easily misread the printed words in an e-mail message, taking them the wrong way.

And if we are typing while agitated, the absence of information on how the other person is responding makes the prefrontal circuitry for discretion more likely to fail. Our emotional impulses disinhibited, we type some infelicitous message and hit "send" before a more sober second thought leads us to hit "discard." We flame.

Flaming can be induced in some people with alarming ease. Consider an experiment, reported in 2002 in The Journal of Language and Social Psychology, in which pairs of college students — strangers — were put in separate booths to get to know each other better by exchanging messages in a simulated online chat room.

While coming and going into the lab, the students were well behaved. But the experimenter was stunned to see the messages many of the students sent. About 20 percent of the e-mail conversations immediately became outrageously lewd or simply rude.

And now, the online equivalent of road rage has joined the list of Internet dangers. Last October, in what The Times of London described as "Britain's first 'Web rage' attack," a 47-year-old Londoner was convicted of assault on a man with whom he had traded insults in a chat room. He and a friend tracked down the man and attacked him with a pickax handle and a knife.

One proposed solution to flaming is replacing typed messages with video. The assumption is that getting a message along with its emotional nuances might help us dampen the impulse to flame.

All this reminds me of a poster on the wall of classrooms I once visited in New Haven public schools. The poster, part of a program in social development that has lowered rates of violence in schools there, shows a stoplight. It says that when students feel upset, they should remember that the red light means to stop, calm down and think before they act. The yellow light prompts them to weigh a range of responses, and their consequences. The green light urges them to try the best response.

Not a bad idea. Until the day e-mail comes in video form, I may just paste one of those stoplights next to my monitor.