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The Sound of No Hands Tapping

The opposable thumb helps make us human, yet our technology is relegating dexterity to the sidelines. How should we handle the change?

By Daniel Akst

He's got your hands," people tell me, looking at the giant paws on one of my sons. I'm charmed—who wouldn't be?—but I know what's ahead. Someday soon, somewhere on the bumpy road to independence, he'll look at my wife and utter a version of those immortal words, "Look, Ma, no hands!"

Like so many kids these days, my boys will probably learn to play soccer rather than the handball common in the New York of my youth. They'll resent me if my treatment of them isn't evenhanded, and they'll feel my absence, I hope, if I'm not sufficiently on hand. But what will they be like when they get older? Will they be handy around the house? Pull down a handsome income and get high-handed because of it? Or find themselves living hand-to-mouth and moping about in hand-me-downs?

As befits a species set apart by opposable thumbs, we seem to use hands in our language almost as much as we do in life. Hands are what enable us to do things, after all; literally as well as etymologically, our manipulations often depend upon them. Instructions for products, when not presented in the new hieroglyphics of global commerce (equally incomprehensible everywhere), are printed in a manual, as if in acknowledgment that these directions must be carried out by hand, and even though my own aging mitts are soft, manual labor of a sort is what I perform at this keyboard every day.

Not many years from now, however, my sons may read these words in disbelief. Already, "natural speech" technology enables fairly run-of-the-mill personal computers to comprehend normally spoken words with a rate of errors not much different from that of many high school graduates prevailed upon to take dictation, and the software is getting better all the time. The day seems not far off when, like the character in Star Trek who travels back in time to the era of primitive microchip technology, we will be astonished when we address our computer by name and it

remains inert, deaf to any entreaties save the laying on of hands.

It's unsettling to think that my generation of Americans may be among the last so firmly connected to the world by our hands. When my boys get older, I can tell them about junior high school shop class the semester we boys had printing (the girls probably had home economics). We'd all stand over cases full of type, arranging the letters one by one. Dexterity mattered. Can you believe this? It wasn't even 30 years ago, but Ben Franklin would have felt at home in that room, and even Gutenberg himself might not have been much confused by the scene.

A few summers later I got the chance to work with my hands again, helping to pleat skirts in a sweatshop in New York's garment district. I found the work excruciatingly boring, and never got much of a feel for fabrics. Subsequently I worked in a bank, clearing checks by hand and managing transfers of money by wire, but by the time I got to college I had found a better way to support myself manually: accomplished typists were very much in demand. But as it turns out, almost all the jobs I did with my hands in those days are now obsolete or very nearly so.

In one sense, the rise of voice-based technologies affirms the triumph of the spoken word over the printed one, just as the evolution of computers into multimedia devices will tend to emphasize pictures and sound over text. As Alvin Kernan pointed out in *The Death of Literature* (Yale University Press, 1990), the decline of the printed word as the repository of truth has vast implications for the way people know things, the nature of knowledge, and our sense of ourselves.

But the spread of no-hands systems also implies a sharp new increase in the level of abstraction at which most of us live. Already, work for many Americans is blessedly removed from the manipulation of physical objects in the cause of production. Business editors everywhere fret that no matter what someone's job or field of enterprise, photos always turn out the same: a person in front of a computer. Which is the steelworker and which is the novelist? (It might be easier to tell from their health insurance.)

This is really quite a change. The centrality of hands has been acknowledged throughout history, after all. People shook hands in greeting, perhaps to show that they held no weapons, and in countries given to draconian punishments, thieves had their hands cut off. Personally, I'll never forget the wrenching moment in *The Best Years of Our Lives*, William Wyler's 1946 classic, when Harold Russell comes home from the war and reveals to his beloved that he's lost his hands. What a terrible injury, especially for a seaman, whose very identity is manual. Sailors are summoned to

assembly, after all, with the cry, "All hands on deck!"

Yet it seems to me that making things happen without using our hands is really the logical conclusion of something larger in our culture. The rise of the automobile, central air conditioning, office work, hyperspecialization (on the part of everyone from medical practitioners to those in building trades), television, canned and frozen foods and countless other developments have taken prosperous Americans further and further away from not just the natural world, but from the breadth of experience that formerly went with normality. Chance encounters, home cooking and other such earthiness are increasingly banished from encapsulated lives. Our growing fear of microbes-unseen killers of seemingly ever-more-exotic and ever-more-lethal varieties-has led lately to a boom in products that tout themselves as anti-bacterial. Who can blame us, given our preference for living and traveling in sealed seclusion, for not wanting to reach out and touch anything? I notice that, since my boys were born, I always seem to be washing my hands.

Hands-free systems are a boon to the handicapped, of course, and can make complicated machines more accessible to people now intimidated by them. Yet isn't there something just a little alienating about a world that increasingly responds not to our touch, but to our words? I discover now that when I negotiate a computerized telephone tree, I am less and less frequently required to press buttons. Instead I am asked to "press or say three" for customer service. Lately I have been saying three, and getting what passes for customer service. The next step in this progression, of course, is that our conversations won't be with human beings at all-they'll be with machines. Call directory assistance these days and you're not likely to speak to a person. Instead, a computer asks what listing you want, you answer, and the computer recites the number. "You could be talking to a machine right now and not know it," observes Douglas G. Danforth, a very human senior research engineer at Stanford University's Applied Speech Technology Laboratory. "But do I threaten your existence? Talking to a machine in this way could be very useful."

But what of a world that responds not to our words but to our being? After all, personal computers are only the latest manifestation of the increasing tendency of things to work without any of the hand-to-hand combat traditionally required of users. Some of these technologies are quite homely: For a while now I have had a speaker phone, and motion-sensor lights on the outside of my house, while at the neighborhood supermarket they are so glad to see a glutton like me that the doors part magically at my arrival. When our twins were born, I got my wife a cordless phone with a headset; I try to give her a hand every way I can.

Someday, when my boys are 18 hands high, we'll take all this for granted, but during the foggy technological interregnum in which we now find ourselves, caught between hands-on and hands-off, these issues can be disconcerting. Not long ago, at an airport, I found myself in one of those automated bathrooms, where I witnessed the puzzlement of some techno-tyro confronted for the first time with an auto-flushing urinal. Not wanting to violate the ancient taboo against failing to wash away his sins, this poor naf looked high and low for some lever, knob, switch or other means of initiating the ritual cascade, only to peer back in disbelief when, as soon as he'd walked away, the darned thing flushed all by itself-as if it had been playing possum all along! When this poor mocked soul got to the sink, it was dj vu all over again: no way to turn the thing on, until he saw the guy next to him get water simply by waving his hands under the faucet. What will they think of next?

How about newfangled highways that leave the driving to computers? Or a teddy bear that responds to noise or jostling to emit a few minutes of womb-like white noise to soothe fussy babies? We got one of these as a present when our twins were born, and it proved indispensable in helping them get to sleep.

And then there is the house being built near Seattle for Bill Gates. There, family and friends will be able to have various preferences encoded on electronic badges; walk through the place wearing one and, supposedly, video screens will display your favorite artworks and speakers will emit your kind of music. Even the lights and temperature will adjust. This might be convenient, but it's hard to think of a more effective way to reinforce human hubris than for everyone to live in such a house and then take it for granted that our environment must adapt to our comfort simply by responding to our presence.

Inevitably, when computers can sense our presence and adjust to it, the fear arises that they may somehow control us as well. Who can forget HAL 9000 in 2001: a Space Odyssey? "People won't like to be told what to do by computers," says Andrew Hunt, a speech applications specialist at Sun Microsystems. "You never hear the Star Trek computer giving orders. People will want to be in control of their computer rather than being servant to it."

There was a time, of course, when most people talked with their hands, making furniture and other products that were the result of craftsmanship. Their handiwork, as it was properly called, might even be their livelihood. I talk with my hands too, typing out my jerry-built works letter by letter in a familiar process, and worry that my voice will change when I start writing with my mouth. I try to imagine the sound of no hands tapping, but it's difficult. Who knows, after all, where any technology may

lead?

Yet when I leave off work and go into the house, I grab my boys, they grab me, and I lose any fears that our paws will atrophy, abetted by a host of what might be called offhand technologies. I see what should have been obvious, which is that, ultimately, what sets us apart is not our thumbs but our hearts and minds. Do I worry that my children will never learn to read a sundial because of the coming of the wristwatch? That their feet will lack useful calluses due to the availability of shoes? That the quill pen will be alien to them? I do not. And so of those who make it easier to communicate with the devices that make it easier to live, I can only say, fine. Let's all give them a hand. The ability to applaud, like the ability to grasp, will always be with us.

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