

# ERGONOMIC COMPUTER ISSUES

*This Activity was giving me a little bit of trouble – I wasn't able to find any inspiration that really captured the core issues of how ergonomics affect computer use. Fortunately, I'm friends with a manager in a large IT firm. Since he deals with this sort of thing daily for a living, I decided to speak with him on how ergonomics affects his industry, around which computer use is central.*

*He covers five points, in order of importance – Keyboards, Chairs, Monitors, Mice, and Cubicles. Throughout the discussion, he repeatedly addressed the point that ergonomics is more than just avoiding repetitive strain injuries – it's about removing the barriers between the mind and the computer. Contrast this with Interface, which is all about removing the barrier between the mind and the work that one wants to do.*

*I thought it best to provide his words directly instead of translating them – he's quite succinct and doesn't need editing. The transcript has only been edited for clarity. My work in this was primarily in asking the questions when looking for more information. I go by the screen name of Savant, while he goes by the screen name of Jester.*

Savant: Jester, you work with computer goobs all day. What's the #1 ergonomic issue that you think the industry needs to address right now?

Jester: Keyboards.

Jester: Keyboards are a silly invention foisted on us by the 1950s that for some reason we're still enslaved by.

Savant: are you a fan of the good ole IBM Model M?

Jester: Ideally? Thought control. More realistically, voice control.

Savant: <http://www.mikecase.net/ModelM/Whats-The-Best-Keyboard-Ever.html>

Jester: It was fine for the time, but now? No. There are much better keyboards now. But the whole concept of a keyboard is at least 20 years out of date.

Jester: At the VERY least, we should have dumped the QWERTY layout ten years ago.

Jester: But we've got 4-year-olds learning how to type based on a system that was chosen so that little metal levers wouldn't hit each other if you typed too fast.

Jester: It's amazingly amazing to me how much productivity we lose from keyboards. And I'm not even talking about RSI.

Jester: I'm talking about people who instant message each other rather than \*picking up the fucking phone and having the same convo in 1/5th the time\*.

Savant: Just from slowness and the mental disconnect, I assume?

Savant: aheh, yeah.

Jester: Kind of ironic, given our current method of communications, but there it is. ;)

Savant: Also? "Amazingly amazing" is AMAZING

Savant: There's a French company out there that has apparently banned email at the workplace, and wants everything done by their internal IM system and phone calls for that reason.

Jester: Can't tell you how many times in my job someone offers to build me a presentation about something, I say "No, just tell me what you're doing. You don't need slides for that" and they look at me like I'm a mutant from Planet X.

Savant: goodness, I *\*loathe\** Powerpoint. What an awful idea. Used to be that slides were reserved for *\*important\** stuff. Now they just use them to re-iterate the things already coming out of their mouths.

Jester: Build presentation: three days. Tell me what it is you're doing: 35 minutes.

Jester: And again, people just accept this. Why? Because every moron can type, but not every person can think and work their mouths at the same time.

Jester: So, they're an ergonomic disaster, AND they're a productivity disaster.

Savant: I'll work it back to the original question, though - is this an *\*ergonomic\** issue for you, or more of just an HCI issue?

Jester: It's an ergonomic issue for me because it's a bottleneck.

Jester: Every thought from people's brains go through their KBs.

Jester: Ergonomics isn't just "sit in the proper way and look in such and such direction." Ergonomics -- to me -- is the science of getting one's body out of the way so that one's brain can do information-related work.

Jester: Though if your professor disagrees, tell me so I can judge him or her irrelevant.

Savant: Huh. My professor's been remarkably open-minded so far, so I doubt he will. He'd just use the term "Interface" instead of "ergonomics" and say they're highly related, though. I imagine.

Savant: I broke the field of HCI down into Ergonomics, Interface, and Intelligence in one of my earlier projects, and I'm using that as a unifying theme.

Jester: *::nods::* Everything about ergonomics is about increasing productivity by reducing the impact of one's body on one's ability to do work.

*\* Savant nods, that's how I've been taking it.*

Jester: Within that framework, keyboards are #1, #2, and #3. They limit productivity through RSI, through being a bottleneck, and through being a filter that virtually all productivity happens now.

Savant: And you figure Keyboards are the big impediment. I wonder how much keyboard use filters our thinking - like how language filters our thinking.

Savant: ::notes for later project::

Jester: Anyway, keyboards are #1. Chairs are #2. It's also fairly amazing to me how little companies spend on the #1 piece of office equipment their employees will be using, and how bad chair design is in general.

Savant: uggghh. I have a slipped disk because of #2.

Jester: We're practically still sitting on stone cinder blocks for how good the chairs are compared to the rest of what we use.

Jester: The chair I'm sitting in right now is a thousand dollar marvel of modern technology that I hunted for six months to find.

Savant: Chair design affects RSI as well, obviously. My own chair cost me \$250, and it feels woefully inadequate.

Jester: The chair I sit in at the office was put together in Pakistan by underfed children.

Savant: I'm surprised you don't bring in one of your own

Jester: I would, if I didn't work on a customer site.

Savant: aha, that'd do it.

Savant: #3, if my guess is correct, is probably monitor size/positioning. Affecting how the head and spine are oriented while working.

Jester: That's #2. #3 is the fact that 90% of information workers are still using a single really bad 4:3 monitor, and probably 50% of them are using them on laptops. I'm literally three times more productive with a pair of monitors, and it goes to four or five if one or both is widescreen.

Jester: ::grins:: Yep.

Savant: ding ding ding

Savant: I have had to describe to a few people why I have four monitors and why I like it that way. They don't realize how much time and brainpower window-flipping costs.

Jester: Exactly.

Jester: Don't have to explain that one.

Jester: #4 is mice. Don't get me wrong, mice are fun. But they're also now almost 40 years old. Why must I have three hands to work my computer? I do not understand.

Jester: I don't have three hands. I don't plan on getting a third hand any time in the future.

Jester: But apparently I need one to operate a computer.

Savant: you need a ball keyboard for one handed typing I guess.

Savant:

[http://upload.wikimedia.org/wikipedia/commons/1/1a/Writing\\_ball\\_keyboard.jpg](http://upload.wikimedia.org/wikipedia/commons/1/1a/Writing_ball_keyboard.jpg)

Jester: Dilbert did a classic bit where one of the office workers was replaced by a monkey, who could operate the mouse with his tail. It was an evolutionary advantage. ;)

Savant: I wonder how efficient voice activation would be, though. Like you said, most people can't think on their feet while speaking. It'd cut a lot of people out form efficient computer use

Jester: The ThinkPad Trackpoint was supposed to get us away from needing three hands to operate a computer. They made desktop versions. I had several of them.

Jester: Only stopped using them because IBM never made a USB version.

Jester: Lenovo has only recently picked up the patent and started producing them, but Lenovo's keyboards aren't very good.

Jester: <http://www.mikecase.net/ModelM/Black-Model-M-Trackpoint.jpg>

Jester: ^-- These. I had many of these. I collected them.

Savant: ahaaa, a Model M Trackpoint. That's \*awesome\*

Jester: Note the thumb-operated mouse keys.

Jester: Which brings me to #5: cubes. Cubes are good in moderation, where you have four cubes facing each other so that a team that size can interact.

Jester: But I personally feel that the current open office environment is a DISASTER for productivity.

Jester: The industry is quite literally losing dollars to save pennies with this move.

Jester: Sigh. FML. All I want is an inexpensive illuminated keyboard that doesn't need to have 38 drivers installed in order to light up.

Jester: Apparently, this is too much to ask.

Jester: Back a little later.

Savant: Thanks for the help.