The quasi-official German Technical Monitoring Association (TUEV) has been reported in the press to claim that people who multitask at work are more prone to make errors. These multi-taskers are also reported to be more susceptible to a variety of ailments such as headaches, depression, insomnia, nervousness, and high blood-pressure. Therefore, we can surmise from this report that multi-taskers die sooner and we can, while we're at it, damn those devils who brought this multi-tasking scourge upon us.

Well, because I work at Intel Labs, I'm guilty of being a lanyard-wearing member of the devil class. However, I'd like to suggest that before the burnings, we do some research. As a psychologist, I often give a lot of consideration to the things that people do. I spend my time not only looking at how people live their lives but also trying to imagine how the ways in which we live should influence the design of those things that we would live with. People multi-task so, then, multi-tasking is interesting but, I think, ill-understood.

I think that research needs to address what we all do when we say that we're multitasking. When we talk about multitasking, we mean dividing or shifting attention, sure, but what we probably mean is holding things in abeyance. We mean keeping plates spinning – putting important things on hold while we deal with other pressing items. And we worry. We worry that other people won't be able to do their work as well because they're holding things in abeyance. We worry that some of these plates will drop. Mostly, we worry that we won't get important things done or, at least, that these other multi-taskers won't be able to.

It's important to ask about the kinds of activities that we call multitasking. People do a lot of things that might look like multi-tasking. From the 80s, I remember reading a critique of the work in multiple intelligences which noted that all of the identified intelligences were used in activities historically performed by men, activities which earned men lots of money, while none of these intelligences underlays activities historically done by women. Did women's work not require intelligence? With multitasking, what do we include? Is multi-tasking only for activities one might do for money? That is, are we worried that employers won't get their due (as the TUEV report suggests above)? Is cooking a meal a multitasking event? When we chop vegetables as we simmer the broth and then dance to the radio as we open the wine to breathe and pour ourselves a glass...oh, you get the idea. Does that count? Do we do these kinds of activities more now than we used to? Is multi-tasking on screen somehow more complex?

Thinking about multi-tasking on screen, I'll note that when a tween has seven IMs on screen, these IM sessions are maintained relatively easily. The tween knows to attend to one of the sessions because the screen flashes in a field of similar, non-flashing windows. She shares this ease of maintenance with the plate spinner above, who knows that a specific plate needs attending to because it wobbles while other, similar, plates do not. Perhaps this property, similar to what Jeremy Bentham described as panoptic, defines a class of multitasking. Does it? With computer interface or application design, we wonder about this kind of effect. How can we build our devices and applications so that people can attend to all the things they wish to? How can

we best compensate for the limits of human attention? One question we might ask here is, within the context of these panoptic effects, how can we characterize the notoriously slippery concept of similarity? Continuing with Bentham for one more sentence, are there also synoptic effects to consider; that is, to what extent does "multitasking" with dissimilar activities improve one's execution of each? We need research on how to usefully increase the number of foci, both for similar and dissimilar activities. Along these same lines, useful research might show how best to cluster "dissimilar" things? It would be valuable to know if there are sorts of things that simply do not admit of multitasking. Returning to my variety show example, I'll note that there are probably good reasons why jugglers will juggle operating chain saws but will not juggle cats. What are the areas where multitasking is problematic? Rubbing your stomach and patting your head is hard. Walking and chewing gum is not. Can we characterize compatible activities in the education arena? Can we teach how to make activities compatible?

A brief diversion: Recent work in our lab by my colleagues Ken Anderson, Dawn Nafus, and Tye Rattenbury looked at how people use Mobile Internet Devices (aka MIDs (e.g., iPhones)). My colleagues put process loggers on these devices and looked at how people used them. They found that people would pick them up, briefly use them, and put them back down. They weren't used for role-playing games like World of Warcraft or for reading long documents. Instead, the MIDs were snacking devices. Ken, Dawn, and Tye argued that people use them in the interstices. They argued that time was plastic. Some things stretch or contract. Other may not yield. We're constantly allocating attention to what we need to, waiting for things to come up that we must do, refocusing on what's at hand. In this context of plastic time, then, MIDs found a place in the waiting times.

In the context of multi-tasking, I think that their research is interesting. Are we multi-tasking while waiting for something to happen? And would that count as multitasking? Is a student multitasking if he IMs a friend while working on a task but is stuck on the task's next step? Is a tween multitasking when they have seven IM windows active for seven different conversations?

In sum, rather than responding to the moral panic created around multi-tasking, I suggest we research how it is that people are able to orchestrate a number of separable events. We should also understand how this skill manifests in what some might call the socio-technical environment. Is multi-tasking a talent or ability that can be perfected? How? What characterizes sets of activities that allow multitasking and those that do not? We also need to know if some skills that were rarely exercised in the past are now of importance and whether these skills, new or not, can be trained.

Obviously, raising such issues is expected of a devil trying to hold the flames in abeyance. Nevertheless, I hope that investigating what people do and how they do it can occupy at least some slots in your attention, perhaps those previously assigned to exacting revenge on those who'd bring multi-tasking to your children.