

FACULTY AS CYBORGS

I want to begin this presentation by, first, explaining that I most emphatically am not, somehow, "anti-technology", but I am likely to come across that way, because I think that in discussions of this sort, both sides are often engaged in separate soliloquies, and I would like to supply some balance.

The second thing that I want to do is to explain the whimsical title of this talk. As most of you probably already know, a cyborg is an entity that is part computer-driven machine and part organic.

Cyborgs are actually rather pervasive in our society. They are present in our pop culture as terminators, for example. They are present in our political culture in California, they elected one as governor. And, I would like to submit, that they are present in our educational culture, as well. Indeed, our interactions with each other are increasingly mediated by technology. In a very real sense, we have all become cyborgs, and there is nothing inherently wrong with that. The trick is to identify and maintain a proper balance between the cybernetic and the organic.

Do you remember the comic strip character, Pogo; you know, that little alligator that lived out in the swamp? (In Florida, he has tenure, by the way.) Anyhow, as Pogo once so tellingly remarked: "We have met the enemy and they is us."

Dr. Perry has observed that "technology is here to stay". I feel obligated to reply, with absolutely no pejorative intent, "So what?" Its not what's here to stay that's important; its where do we go from here and how do we get there? You can overlay a mediocre instructor with as much technological support as you can find, and do you know what you'll get? You'll get a glitzy mediocre instructor! Surely, that isn't where we want to go. As an administrator, I occasionally find myself in a position where an instructor resigns with short notice and I have to delegate the responsibility for teaching a course to somebody else, also on short notice. My experience has been that the faculty that I approach have divided themselves into two groups. There are those who respond to my request with something like "Oh sure Paul, I will do you this favor and help you out of this spot, but I am really rusty on this subject; I'll need some time to brush up on the material." The other group says something like "Oh sure, Paul, I will do you this favor and help you out of this spot, but first I will have to learn to use PowerPoint." I have consistently obtained much better results from the first group, because that group puts their passion into their students and their teaching; the second group puts their passion into the technology. When members of the first group interact with each other, they talk about their teaching and their students; when the members of the second group interact, they talk about gadgets. Actually, I like having both groups to call upon. Even one of my most technologically oriented faculty once remarked to me that "technology doesn't make me a better teacher; it makes me better able to teach."

By no means am I condemning the use of technology to enhance teaching effectiveness. Consider this, not so long ago, we would hire a brand new graduate and put them to work immediately as a teacher with

absolutely no training at all. We would just toss them into the deep end of the pool and see if they would sink or swim. We are not nearly so likely to follow this course of action these days, because we have to teach new people how to use the gadgets. Training programs and workshops for the use of teaching technology are commonplace. By attending to the use of our technology, we also attend to the skills inherent in teaching, whether we intended to do so or not.

I interviewed a dozen or so of our faculty, mostly classroom or lab teachers, about the technological enhancement that they routinely use. To put this in context, all our faculty and all our students have computers and email accounts, and our institution is strongly supportive of computer technology. Our law school bills itself as the most wired law school in the nation, but I'm not entirely sure they're talking about technology. Nearly all those faculty interviewed use power point, and most use it extensively. Curiously, in response to student demand, most of them also make it a point to give their students printouts of all the power point slides, making it very unclear what the advantage of power point is in the first place. Nearly all the instructors used web links for further sources of information for the students, and most of them encouraged interaction through email. Most of the lab instructors made extensive use of video demonstrations. Many faculty, especially those that teach disease courses, put their slides (yes! 35-mm slides) on a CD which they give to the students.

This survey didn't yield many surprises, but their descriptions of what impelled them to adopt various technologies did. Most faculty employed the most commonly used enhancements simply because they did not want to be perceived as being behind the curve. Some faculty claimed that they used a particular technology because nothing else was available. For example, one of them insisted that there was no 35-mm projector in the classroom where she was assigned -there was only a set up for power point. Students generate pressure for some forms of technological enhancement. For example, students may claim that they "need" access to faculty "24/7", to use the current idiom, and one way to achieve this is to have office hours by email. One faculty put an interesting twist on the use of email as a substitute for asking questions in class (or disrupting the class, as one wag put it) -"When I take questions by email, I can take time to look up the answer myself if I *don't* know it already or I can give a more thorough answer complete with literature citations

There is a common underlying theme for much of the impetus toward technological enhancement. Much of what we do is undertaken to help us deal with the problems inherent in teaching large classes. The teaching we do in clinic is, arguably, the most important thing we do. If it doesn't "take" in clinic none of the rest of what we do counts for much. Yet, in clinic, where we are surrounded by modern diagnostic technology, we employ very little technological enhancement for teaching. Why? Because we don't have to; we employ one-on-one encounters instead.

Many faculty commented negatively about what they perceived to be coercive pressures to adopt technological enhancement. To illustrate, permit me to quote from three widely read publications.

>From the Chronicle of Higher Education: "Technology is here to stay and everyone will have to learn how to juggle doing a good job today with creating learning options for the future."

AND

>From our own J.O.E.: " a hesitation to try something new, inadequate lecture room lighting, and time constraints give many optometric educators an excuse to cling to their carousel of slides and shiny plastic overheads."

AND

A description of the book PowerPoint for Dummies by the author, himself -"...the book written especially for those who are forced to use PowerPoint at gunpoint and want to learn just enough to save their necks."

Pejorative attitudes such as this do nothing to convince anybody of the value of technology. It plays well only for those who already "believe" but aren't quite sure if they are on the right track. Many people claim that they are tired of being pushed to adopt technologies that don't really want, but what they are really protesting is a lack of balance between the cybernetic and organic elements of our cyborg selves. I would declare that if extensive technological enhancement was worth a bucket of warm spit, you wouldn't have to pitch it like this -it would sell itself; but it doesn't, does it? Now then, that remark was highly pejorative itself, wasn't it? Tell me, how did it feel? It didn't feel good, did it? And it didn't really convince any of you techies in the audience to abandon your gadgets, did it?

So why did I say it? I said it to make the point that we should work very hard, as educators, to avoid dividing ourselves into two camps: traditionalists and progressives -or whatever mutually antagonistic terms we choose to apply. The most important single thing that any educator can learn, probably, is to recognize their own particular skills and exploit them -whatever they are. We are all cyborgs, the difference among us rests in the degree of emphasis placed on the mechanistic elements vs the organic ones.

Students, themselves, generate pressure to adopt certain technologies. For example, they seek "24/7" email access to the instructor, and this can be very helpful. But it rarely generates more sophisticated questions or interactions. It just makes it more convenient to ask them -an asset to be sure. Students often pressure faculty to put all the handouts on a CD. That's a matter of great convenience, clearly, and it saves the school a lot of printing costs. But what is the difference between a student having a passive relationship with printed notes or notes on a CD.

Many of us tend to take it for granted that our students come to us with both an extensive repertoire of computer skills as well as a receptive attitude toward technological enhancement. But don't count on it! There is a considerable asymmetry in computer facility between faculty and students. The truth is that our entering students are not nearly as "computer savvy" as we like to think they are. Our entering students often don't know how to use a spread- sheet, or run a graphics program efficiently, for example. It is an unusual student that can set up and maintain a web site, and when we come across one who can, we incorrectly assume that they can all do it. Well, they can't. I would ask you all to do a thought experiment. Suppose that you have just provided your students with a set of CDs containing 2000 pictures of ocular disease -every one that you covered in class. Now, in order for that collection to be of any real practical use in a clinic setting where the doctor wants to compare something she just observed with her BIG with one of these CD images, you need a search program. You can't just start thumbing through the collection one

image at a time. Suppose further, that you tell that computer savvy class that they have the additional assignment of preparing -by the next day -a computer search program that will efficiently allow them to search this entire collection using no more than, say, seven queries. Tell the truth, folks, how many of them will complete the assignment on time?

My point is this: in order to effectively use the range of teaching technology available to us, we have to make sure that everybody is on board. We have to recognize the limits that our students bring to the table; more importantly, we have to take measures to assure that our students actually use technological enhancement to their advantage. Just because its there doesn't automatically mean that it does them any good.

Permit me to draw an analogy. There lives among us an elite group of teachers not protected by tenure -in fact, sooner or later, most of them get fired -a group that gets to choose their own TAs, a group that gets to expel underachievers without threat of litigation, a group supported by a technological budget that dwarfs the budget for the rest of the entire academic community .We don't call these teachers lucky, we call them coach. Examine how a coach operates. He monitors everything that his students (players) do -up close and personal, and these players are advanced to the next level of training/achievement at the precise moment that they are first ready to do so. This is an almost unimaginably harsh environment where student and teacher, alike, are judged exclusively on their performance and slackers are, to put it bluntly, whacked. In spite of all that, if you have ever watched a practice session, you cannot fail to be impressed by the eagerness of players to please their coach. Are your students eager to please you? How can you tell -did they send you an email?

A compulsion to please can be one of the most powerful tools that a teacher has, but in order for it to work, we must avoid insulating ourselves from our students with a wall of technology. The coach has to have a personality. Cyborgs don't.

