The Genius is in the Details

December 4, 2006

As best as we can tell, the human brain works by mastering a specific thing and then "giving it a name", wrapping the whole thing up into a bundle and pushing it down a level, so that things can then be built with it as a component. You see this all over the place — it's how science works, it's how you program, it's even how people deal with their friends ("let's do the mall again").

So it would seem natural to think that smart people would work on a very high level, dealing not in details but in huge abstractions. They would have turned everything into a component, no longer worrying about its details, and built things out of the results.

Bizarrely, this seems entirely untrue. The smartest people I know disdain abstractions, preferring to speak in concrete specifics. Take Paul Buchheit, the genius behind Gmail. When he talks about building web applications, he doesn't think about high-level things like the underlying semantic structure of the data — instead he talks about the little "heads" that read data off of the hard disk and how fast they can move.

Another friend, also incredibly bright, doesn't refer to other people that way. He doesn't say "oh, he's an expert in X" or "he's really smart about X"; instead he says "he's thought a lot about X" — breaking down the abstractions of expertise and intelligence into something much more concrete: spending time thinking about something.

At first glance these seem like mistakes. Why should a brilliant web app programmer be thinking about hard disk heads? Isn't that something someone else should take care of? And why is my smart friend only concerned with how much time someone has spent on something? Aren't there other factors involved?

But if you look the other direction, you see the same pattern. Clueless business guys love speaking in big abstractions, talking about "information superhighways" that act as "more efficient content delivery systems" that will "monetize the genre" by "disintermediating the legacy players". These guys are speaking exactly as you would expect smart people to — thinking at a high level, working with the big ideas — yet the things they say are so incredibly stupid that they either don't mean anything or mean something that's actually impossible.

So what's going on here? As we noted at the beginning, the brain works by mastering the details and *then* giving them a name. But the business guys took the easy way out: they just mastered the names. If you asked them exactly how a content delivery system worked, they wouldn't be able to tell you. They know only the high-level thing, with none of the details.

And it's the details that make it so interesting — and so powerful. Anyone can master the names of big concepts and combine them like so many puzzle pieces; it's knowing how they work that takes time. And the smart people have made that investment. So perhaps it's just natural that they want to stay it a little closer to it than most.