

Through a Glass, Darkly

Déjà vu all over again (\*)

Is Software Engineering REALLY an Idea Whose Time Has Come and Gone?

Robert L. Glass

It's happening again! First there was business guru Nicholas Carr's 2003 Harvard Business Review article "IT Doesn't Matter," which spurred huge controversy because the implication of the title was that the field of Information Technology had no value.

Now, déjà vu, there's a new controversy brewing. One of software engineering's brightest writers, Tom DeMarco, has written an article in the July 2009 issue of IEEE Software whose title takes the position "Software Engineering: An Idea Whose Time Has Come and Gone?" In other words, his title is implying that the field of Software Engineering no longer matters.

But (listen to your mother, here!) it is important to remember the old adage "beauty is only skin deep." The title of an article is not the same as whatever beauty (or ugliness) it has underneath. In the case of both of these articles, the underlying content simply doesn't support the apparently-outrageous claim of the title.

In the case of the Carr article, the content really said that IT systems that are intended to provide **strategic advantage** don't matter, because most of the key ones have already been built, and we have not been successful in inventing any new ones more recently (he notes that most textbooks that describe strategic advantage systems use examples that are over 40 years old by now).

Similarly, the content of the DeMarco article is really about whether **metrics and control** are important on software projects, and it makes a convincing case that they are not. (It is interesting that he makes his case in a mea culpa way, since he wrote one of the earliest books on software metrics, one in which he said "You can't control what you can't measure" (that saying has been quoted many times, although typically it has been perverted into "You can't **manage** what you can't measure"), and therefore in his article he bats down two of his own pioneering efforts!)

Now I find myself in the peculiar position of agreeing with the content of both Carr and DeMarco. With respect to Carr, I think he really was onto something with his decrying of the field's continued fascination with seeking strategic advantage through IT. IT without strategic benefit is sufficiently important that we needn't see strategic advantage as the be-all basis for doing IT work. (It is interesting to note that Carr escalated the controversy surrounding his 2003 article into a 2004 book titled "Does IT Matter?" Which of course makes you wonder if the whole thing wasn't promotional activity for his book-to-be!)

Similarly, I agree with DeMarco's content. Metrics has long been low man on the management totem pole for software project managers, who find lots of other software engineering topics more valuable for their project work (various surveys over the years have born this out). And control? DeMarco's own more recent writings have pretty well skewered the importance of control. He has noted on several occasions data that says projects with little or no management control tend to do better than those with lots of control. (Do you suppose DeMarco is thinking of doing a book along these lines also?!)

I continue, however, to object to those sensationalizing titles. IT does in fact matter, heaps. And software engineering has definitely come, but I see no reason to believe it has gone already. Perhaps SE has overemphasized the importance of metrics and control, but (to revert to another motherly saying) one should not throw out the software engineering baby with its metrics and control bath water.

Now, one last picky point here. In my own book *Facts and Fallacies of Software Engineering* (Addison-Wesley, 2003) I list as the number one software engineering fallacy that I present there DeMarco's now at least somewhat infamous "You can't manage what you can't measure." (Like everyone else, I perverted what DeMarco originally said, substituting "manage" for "control," but at least I acknowledge that perversion in the book). I do a fairly thorough analysis of the saying and the reasons I see it as a fallacy in that book (along with some fairly negative things about software metrics in general) (if you want to know how come I said managers don't do metrics, for example, that survey finding is covered in the book). And my pickiness is this – DeMarco didn't cite my work in his. I would love for him to have cited me, since what I say in that Fallacy is almost exactly the same as what he is now saying. But then, I suppose, it's sort of unworthy of me to try here to say "I told you so." So pretend I didn't!

- - this is a malaprop quote from that famous baseball player and philosopher Yogi Berra (who may be the only baseball player ever to have a cartoon character (Yogi Bear) named after him!)

"Through a Glass, Darkly," is a Biblical expression for the unclear way in which we see the world around us.

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