



To: Billy Vaughn Koen
From: Howard Duhon, P.E.
Subject: Discussion of The Method

Dear Billy,

I've just finished reading one of the books you wrote under the title *Discussion of The Method*. I've lent it to a colleague and will read it again as soon as I get it back.

Actually I didn't finish reading it the first time. I skipped a lot of the crap in the middle. One of my heuristics is to stop when the answer is obvious. That makes me a pretty poor math student, but a very effective and efficient engineer.

I found the book that I read to be incredible. I've installed it in the number two spot on my alltime favorite book list. (Number one on the list is *The Origin of Consciousness in the Breakdown of the Bicameral Mind* by Julian Jaynes. The ordering of all others changes over time.)

I am amazed that I didn't even know what engineering is until now; after practicing it for nearly 30 years. I'm writing to thank you for that and especially to thank you for two particular insights that your book sparked so far. The explanation of these insights is a bit long-winded – please be patient.

I am a process engineer. For the past decade I've specialized in oil and gas processing systems on offshore platforms (topsides process design). A remarkably interesting phenomenon has occurred in that industry over the past 15 years. The sota of that field has gone from largely simple back-of-the-envelope calculation methods done by hand (and only done once), to sophisticated methods, guided by experts, performed by computer (and performed multiple times on the same project). This paradigm shift has resulted in incredible (and incredibly interesting) interface problems as more and more people know more and more about their specialty and less and less about big picture. Precisely the picture you paint in the final chapter. Even when an individual engineer on a team knows a great deal about what other teams do, the very fact that we've created teams results in turf battles and mis-communication. The practice of engineering is now much more a social event than a technical one. Perhaps it has always been that way and I just wasn't paying attention.

I have long been an amateur student of the field of decision making. As an amateur not confined to any particular specialty area I believe that I've developed an understanding of decision making that is more useful than any of the experts advancing the field. In recent years I've turned my attention primarily towards attacking the problem of interfaces between teams. This is a relatively complex problem with organizational structure issues,

social issues, knowledge issues, etc. Certainly, one of the solutions has to be cross-training. I have long planned to develop a series of courses aimed at teaching people from diverse areas what they need to know about other areas. My first attempt at that has been to develop a course on topsides process design for non-topsides people (subsea, flowlines, subsurface, etc.) and for topsides people in other specialties (control, electrical, etc.). I have failed at this effort largely because it has never been clear to me what these people need to know about what I do.

Insight No. 1: It is now fairly clear to me what it is they need to know (or at least what I can effectively teach them). They need to know the very simplest heuristics that I could apply to develop a first approximation of a topsides design. That seems like a manageable goal.

Insight No. 2: We haven't created multiple teams of specialists because the work has become more difficult. We've created teams of specialists because our sota's have become more complex. By scaling back to simpler sota's we could return to an organization with fewer interfaces. (But then my mission to become an interface manager and grow wealthy would be seriously jeopardized.)

I travel a great deal for work. I'd like very much to visit with you to discuss mutual interests when I'm in the Austin area if you are agreeable.

Thanks again for a wonderful reading experience.

Sincerely,

Howard Duhon, P.E.
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