

On the History of Earned Value Management ¹

Responding to Pat Weaver's LETTER TO THE EDITOR dated 15 September 2022

LETTER TO THE EDITOR

21 October 2022

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Dear Editor,

Notwithstanding Pat's condescending and "ad hominin" personal attacks, let me set the record straight.

I am NOT "just" or "only" an academic. For 55+ years, I have been a PRACTITIONER who spent 30 years as a Union carpenter and General Contractor, who happens to have earned my MS from GWU and a Ph.D. in Project and Program Management through the Institute Superieur De Gestion Industrielle (ISGI) and Ecole Superieure De Commerce De Lille (ESC-Lille), both while working full time and going to school part-time, under the supervision of Professor Christophe Bredillet, with such luminaries as J. Rodney Turner, Ralf Mueller, and Lynn Crawford as my dissertation review committee. This was no "degree mill." I have also long been mentored by "big names" such as R. Max Wideman and the late Russ Archibald, who earned his honorary Ph.D. from ESC-Lille on the same day I did.

For 55+ years as a serial entrepreneur, I have "initiated, planned, executed, controlled and closed" many hundreds if not thousands of projects where my own money was on the line both as a Union CONTRACTOR (profit centers) and as a PROPERTY OWNER/DEVELOPER (cost or investment centers) using projects as an "asset delivery system" to "create, acquire, update, expand, repair, maintain and eventually dispose of" my PERSONAL and ORGANIZATIONAL ASSETS.

Having established my bona fides as both an academic and as a practitioner, here is my response to Pat's letter.

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CONSENSUS is NOT CONSISTENT with the “Scientific Method”

In the world of science, there is no such thing as CONSENSUS. (For a long time “consensus” was that the world was FLAT and, more recently, that mRNA vaccines were “safe” and could stop Covid 19, and we know what that “consensus” has done to us!!)

Italian scientist Giordano Bruno was burned at the stake for teaching, among other heretical ideas, Copernicus’ heliocentric view of the Universe. <https://www.famous-trials.com/bruno/261-home>

Likewise, Galileo was "declared guilty of “vehement suspicion of heresy” by the Catholic Church for his teachings as well.

<https://plato.stanford.edu/entries/galileo/#GaliChur>

The scientific method requires that theories or hypotheses meet 5 tests or criteria: <https://sciencing.com/five-characteristics-scientific-method-10010518.html>

1) Empirical Observation

The scientific method is empirical. That is, it relies on direct observation of the world and **disdains hypotheses that run counter to observable fact**. This contrasts with methods that rely on pure reason (including that proposed by Plato) and with methods **that rely on emotional or other subjective factors**.

2) Replicable Experiments

Scientific experiments are replicable. That is, if another person duplicates the experiment, he or she will get the same results. **Scientists are supposed to publish enough of their method so that another person with appropriate training could replicate the results**. This contrasts with methods that rely on experiences that are unique to a particular individual or a small group of individuals.

3) Provisional Results

Results obtained through the scientific method are **provisional; they are (or ought to be) open to question and debate**. **If new data arise that contradict a theory, that theory must be modified**. For example, the phlogiston theory of fire and combustion was rejected when the evidence against it arose.

4) Objective Approach

The scientific method is objective. It **relies on facts and on the world as it is rather than on beliefs, wishes, or desires**. Scientists attempt (with varying degrees of success) to **remove their biases when making observations**.

5) Systematic Observation

Strictly speaking, the scientific method is systematic; that is, **it relies on carefully planned studies** rather than on random or haphazard observation. Nevertheless, science can begin from some random observation. Isaac Asimov said that the most exciting phrase to hear in science is not “Eureka!” but “That’s funny.” **After the scientist notices something funny, he or she proceeds to investigate it systematically.**

The published work of Gillette and Dana (1909) meets those 5 criteria, providing sufficient evidence that EVM most likely originated with the Guilds of the 16th Century and evolved on the factory floors of the 18th Century Industrial Revolution as a “pay for performance” or “incentive payment system” that is still in use today by any CONTRACTOR who “prices, costs, bids, and bills” for his/her services based on a “Unit in Place” method. This includes not only construction but many of the medical, legal, and other professions today. (We price our training courses on a “per head” basis and bill accordingly.)

GIVEN there is no shortage of historical evidence that the most POPULAR view shared by the majority turns out **NOT** to be the **CORRECT** view, whether this meets “PMI” or “AACE” “approval,” I could care less. I only care about having stayed in business for 50+ years in a highly competitive, low-margin global marketplace. (“The proof of the pudding lies in the eating”- William Camden's [Remaines of a Greater Worke Concerning Britaine](#), 1605)

We have been using and teaching EVM as described by Gillette and Dana for 50+ years now, and based on Australia’s KPMG-AIPM-IPMA research, <https://home.kpmg/au/en/home/insights/2020/08/australian-project-delivery-performance-survey-2020.html> I don’t see any indications that PMI or AACE, both of whom are influential players in the Australian markets, have much EMPIRICAL EVIDENCE to support MANY of the practices they advocate and endorse including the use of EVM, other than “that is how the US DoD does it this way” or because some “influential voice(s)” (a.k.a. “control freaks” or “knowledge gatekeepers”) advocate it. (Like Industrial Psychologist Elliott Friedson, I see the only difference between the trade unions and professional societies “lies in the latter’s sanctimoniousness.”)

So, GIVEN there is EMPIRICAL EVIDENCE indicating that what PMI, AACE et al advocate is NOT WORKING:

- 1) <https://home.kpmg/au/en/home/insights/2020/08/australian-project-delivery-performance-survey-2020.html>
- 2) https://www.academia.edu/3365343/Over_Budget_Over_Time_Over_and_Over_Again_Managing_Major_Projects
- 3) <https://www.slideshare.net/NASAPMC/glennbutts-mega-projects-estimates>

4) <https://www.sdexec.com/sourcing-procurement/news/11624930/ey-ernst-young-oil-and-gas-megaproject-overruns-to-cost-industry-more-than-500-billion>

and GIVEN there is EMPIRICAL EVIDENCE that what I advocate and teach HAS WORKED for at least 120 years and probably closer to 600 years:

4) <https://pmworldlibrary.net/wp-content/uploads/2013/01/PMWJ2-Sep2012-WIBIKSANA-EVM-Adapted-for-UndergroundMining-StudentPaper.pdf>

5) https://books.google.com.sg/books/about/Cost_Keeping_and_Management_Engineering.html?id=zO-ADudj-R8C&redir_esc=y

6) <https://pmworldlibrary.net/wp-content/uploads/2022/09/pmwi121-Sep2022-Giammalvo-origins-and-history-of-evm-a-contractors-perspective.pdf>

this is what I conclude.

To summarize, consistent with the 5 attributes of the scientific method, I have:

- 1) Provided **OBSERVABLE FACTS** indicating that what PMI and AACE are advocating is NOT working, at least for the private sector. (I'm not convinced it works for the DoD either, based on the fact the USA is \$31 TRILLION dollars in debt)
- 2) Provided **EMPIRICAL EVIDENCE** that what Gillette and Dana advocated in 1909 did and continues to work not only in construction but also in many other professions, who “cost, price, bid and bill” based on the “Unit in Place” method.
- 3) Provided everyone with “**enough of my method so that another person with appropriate training could replicate the results.**”

THEREFORE, I can only urge others, consistent with the Scientific Method, to conduct a pilot project using what Gillette and Dana advocated 120 years ago, updated to take advantage of modern tools & techniques (i.e., Excel or if you prefer, MSP, P6, Spider et al) and see if you can or cannot duplicate the results we have achieved. QED.

To conclude, I can only offer these “words of wisdom” coming from one of my heroes and role models, and that is the late comedian George Carlin, who was a truly GENUINE person and not afraid to challenge anyone and everyone with his “commons sense” wisdom.

Especially today, we need MORE of this kind of thinking, not less. I, for one, am not interested in winning any “popularity” contests, only in helping project management in becoming a more efficient, effective asset delivery system.

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