

Summary of writings

Google Scholar: [John M. Switlik](#)

Papers: [Technology, Computing](#)

Current Work; Overview: [Taming GenAI/LLM](#). Before I retired in 2005, my writings were technical in nature dealing with applied mathematics and computation within the context of advanced computing in support of engineering. As such, they were proprietary in scope (hidden, except for an [approved Patent](#)). My only comment can be that we had professors come in all of the time and salivate when they saw what we were doing. The last decade dealt with Knowledge Based Engineering ([Wikipedia](#)), with the focus being on Knowledge Based Systems prior to that. The KBE work was done in conjunction within the R&D focus which did a lot of the modeling that is current today in advanced approaches. Earlier work dealt with a variety of databases including developing systems in the emerging world of relational approaches. There were several engineering applications; for instance, Amdahl's experiment (wafer scale) was seen up close from both the design view point and that of engineering support. The types of software that I have used over the years cover the basis, however the final decades mostly involved the use of Lisp starting with the Lisp Machines and migrating to the high-end workstations and clusters.

Education and professional view: My degrees are in Economics (School of Liberal Arts and Sciences and Graduate College – University of Arizona) with a focus on mathematics, modeling and computation. Essentially, everywhere I worked, the focus was engineering support. In the knowledge arena, we were doing decades ago what became the rage of late. Hence, I agree with Minsky (MIT) and am trying to establish what went wrong so as to get the proper discussion going and sustained. My view is hands-on autodidact and from the trenches (where truth is assessed). Hence, truth engineering was the outcome of my experiences and observations.

Early papers: A KBS paper dealt with an attempt to control trading systems with a distributed environment where an interesting message-passing scheme provided the underlying technology. Another 'paper' resulted in being awarded a Patent involved with a decision-based approach to filtering and smoothing (that rivaled and exceeded Kalman's approach). The method utilized some of the advanced techniques being applied now with regard to higher-dimensional spaces using insight driven by higher-order geometry (and topology).

Post retirement: Since 2007, there have been several modes used to present material for discussion. The following list is sequential, in time. One thing to note is that for all of the blogs, posts are edited with new material added as "Remarks." Some of these are lengthy. Since 2015, I have been using Quora to think about things, hence the blogs got little attention. I have always thought of the blog effort as creating outlines and sketches of papers or chapters for later use. Since 2022, I have appreciated the facilities of LinkedIn for publication and discussion of matters of importance.

- [Truth engineering](#) – The current motto is "Tru'eng – on truth engines and 'being/Being'" where a prime thought is that chasing essence is doomed to fail from its start. And, computation has gone down that hole too readily. A couple popular posts:
 - [Content management](#) – If you look at what's come about with the cloud, you will see lots and lots of pretty stuff, depicting shallowness. To explain what is going on, we can talk about content versus configuration. The latter might point to McLuhan, but it is more involved. The former? Like substance versus flash or any of the other ways to characterize this problem, content is the focus of an expert (in a domain, lots to discuss here). The latter can be called 'pretend' in some cases, however, given technology, we deal with a floor, where one's content might be another's configuration. That balance is where the

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interest ought to go in order to have sustainable computing and economics and other disciplines. The floor? A topic needing some attention.

- [Baruch](#) – Spinoza and I go way back, as in, his influence on me when I was younger and making life choices. Same goes for Jung's thoughts as being instrumental back in the day. Both of those guys were introduced to me via print on paper in a mode that Koestler mentioned (to be discussed – involving serendipity) was important to him. Of late, as well as arguing that Freud/Jung will be important for artificial intelligence, I see Descartes/Spinoza, similarly (to be discussed).
- [7 'oops 7](#) – A few months after starting the prior blog, there were rumors of BA presenting an incomplete artifact as ready to go. Yes, as in, the media being told: oh, a few months is all that is needed; we'll take sections, pop them together, roll the thing out the door, and fly. A particular supplier that I know shipped an almost empty section that they were responsible for. These were collected and, yes, assembled with obvious mismatches (lots and lots of stuff to discuss, eventually – if I live long enough). Well, there was the shindig on 7/8/7 (as in, July 8th of 2007) where hooplas abounded, heavy media were there (big names), lots of fanfare; yet, the focus was on something that was mostly a shell (Potemkin like, if you would). It took years (okay, less than a handful, but, still, costly) to get this thing right. And, once the marketing brains got out of the way, engineers did their magic. Oh yes. The thing has a superb record. Until? Of late, some of those things that we did were taken too far. One adage: not your father's plane. Of course, many interpretations apply. Well, as things were getting settled due to engineering prowess kicking in, guess what other rumble came about? Oh gosh, the idiots of the markets screwed up again. This has been hashed several ways and, as the next blog argues, proper corrections have not been identified. So, this blog's motto is apropos: Motivated by complex systems and their issues. A couple of popular posts:
 - [Wing and body](#) - Having seen the modeling involved with this on earlier models which knowledge carried forward, I used this theme to mention '[middle out](#)' as a mode of interest. Lots and lots of knowledge work is either top-down where the brains drive things. In engineering, the result was to see designs being pushed downstream that had lots of problems which were hard to rectify. Or, things are driven bottom-up which ought to be data driven according to some views. Where do these two meet? The scientific brain was the resolving center in the past. With the computer? People. It's hell, now. Let's discuss. In general, I would point to the decline in quality that is apparent everywhere (if we look) some of it coming from modern methods that are shortcoming the process due to a belief that we know a lot (when we know little).
 - [Truth, fiction, and finance](#) - Some of this is the economic brain beating on a sibling for errant ways. But, who's perfect? Of late, I would change this to "Truth, fiction, and computing" as all of the ways of finance that have gone awry are related to misuse of computing and the underlying mathematics. This is a huge problem. CompSci has no facility to address this, yet. And, CompSci does not own truth.
- [FEDaerated](#) – Why just pick on finance? After all, it's just youngsters milking the system being allowed to do so by old men who get their pockets filled so why bother with ethics or real knowledge or anything related to maturity? Throughout, I was fairly consistent arguing for more heterodox modes. And, Marx became more real (to be discussed – not a Marxist). For me, I coined

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“ca-pital-sino” to depict the nature of the beast created by our un-insightful methods. But, then, science is no better (western unenlightenment is the key thing there). A couple of popular posts.

- [Chimera: sellers and buyers](#) – I don’t think that von Neumann and Morgenstern gave did us any favors with their work. Nash surely didn’t add what many thought. There is a crux of the matter here being ignored. This is a long post. One thing to explain is how the money just drains out of the chimera of the market so fast (see the series that includes “[Beyond your wildest dreams](#)”. There’s a lot more that needs to be explained so that we have better discussions of these important matters.
- [The real basis for capitalism, III – technology](#) – I really like Adam Smith who has been abused severely. See next blog. Too, though, it seems like I am beating on quants, however it is only that they are in the pits that are being dug to everyone’s detriment. And, some have training in scientific computing. No jealousy there, as many of my mathematical courses were by professors who were working hard problems (JPL back in the early days). Rather, the lack of ethics is pronounced, perhaps, it is becoming more visible. Who knows? In any case, this post is of the series which started with this note “[The ideological errors of capitalism III – Shell games](#)”. There is a list of related posts.
- [Thomas Gardner of Salem, MA](#) – There are a few other blogs, however one that has taken a lot of attention is this one. Its motivation? We all know of the Mayflower which had an off-course arrival and, supposedly, started New England. Except, the Virginia group was there in 1607. Too, there had been many attempts at establishing a foothold here. Thomas Gardner (?)¹ led a group that had a commercial focus (1623/24) which was a little post that one of Cape Cod with its religious focus. In short, the group started on Cape Ann and moved to what is now Salem. The idea was to ship back feedstuff. You know, the original expectations were not met, but it was not too long before regular shipments did take place. Until about 1640, there was a huge influx into that northern region. And, there are people here now who are directly descendant from those folks. Some extant now has literally thousands of those families in their genealogical tree. Why is this important? Well, I mentioned Adam Smith. Look also at Rene Descartes and Baruch Spinoza. These ones were cotemporaneous with the folks who got the English part of the settlements going. Same goes for the other groups (Dutch, Spanish, ...). We cover all of them. But, that history of the U.S. is important in today’s turmoil as allowing us to better understand the current dynamics. This applies, as well, to the experiences of the Native Americans and of those brought over as slaves. New England may have had ships involved with slave traffic; however, there is a world of difference between the upper New England thrusts that drove the U.S. to be born (lots to discuss there) and the lower part that was more plantation and swash-buckling. Bias? Nope. I’m a newbie on both sides. A couple of popular posts:
 - [Plus or minus the arrival](#) – I call this our cigarette post. We have a timeline with the reigns labelled from Thomas’ grandparents to just after his death. Spinoza wrote his Ethics around the time of Thomas’ death. As in, he was of the generation of Thomas’ children.

¹ See post “[In summary](#)” for a recap of recent finds in Sherborn, Dorset, U.K. which places the birth of the children in England with the last one being born in New England. A Thomas Gardner was here; some, such as Rev. Hubbard, say that it was the Thomas of Salem. It might have been another man who was involved with the Dorchester Company and its effort at establishing a colony. In terms of “origins” now, our research has a place to being our quest. Content related to events after 1630 are supported by documents.

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This is a whence post which is an open problem. Many who came over here know of their history over the pond. Many do not, for various reasons. At any time, more information might pop up, such as town records being digitized and indexed. On the other hand, every line of descent that one might use has related families that can be of interest. Lack of info does not prevent huge imaginations to be created with respect to the ancient beings (dinosaurs, say).

- [Old planters, Beverly](#) – By doing this type of work, we can lift details that can be of interest. Like, how many know that a team in Maine (1607) built a ship that eventually sailed back to England? In those early times, most stayed here. Many went back. So, we have things like Prince William and Prince Charles being descendant of early Americans. Too, we have extant artifacts from those times. Anne Bradstreet wrote of the difficulties. Say, arriving in 1630 with the fleet of John Winthrop and finding that an [English wigwam](#) would be her abode. Whereas, she describes all of the rhetoric (hype) that they heard about before they sailed. Good houses, streets, etc. All along, people had written about their experiences. By now, there has been a lot of restoration done with respect to material held by a family. In one case, a manuscript was written in 1680, transported to various persons, endured the turmoil of the Revolution (including the burning of the house of the Governor), and finally got printed almost 200 years later. The [Thomas Gardner Society, Inc](#) supporting my current work in this area has the goal of bringing the Cape Ann folks, and their collateral families, back to awareness. At the same time, how one might accommodate curating for sustainability is a necessity. Plus, in the long thread of the U.S., families who were there through it all, what lessons learned might be latent. In the background are the issues of technology through time, across the world. Hence, we have a focus across the waters, to boot.
- [Quora \(Q\)](#) – I started to write on Q in July of 2015 which brings in a whole new level of context beyond what I saw with the blog. Q's influence on people (including myself) needs to be looked at further. My output in the blog space seriously diminished after I went to Q. But, I kept the material due to its potential as outlines for further discussions in the sense of a true multi-disciplinary study. In particular, the Psychether Space will be the main framework for discussing technical issues related to open themes that have been problematic but seeming of little importance. We will look at the importance and discuss ways/means for having psychether be an active part of the scenarios related to applied computing/mathematics and humans.
- [Linkedin \(Ln\)](#) – I started on Ln in 2008 while discussing options with a recruiter. As I have said, I did not accept offers of roles/positions so that I could stay independent. I started to use Ln more regularly as ML started to claim AI stature and brag of offering a way to AGI. Nope. Not so. I used **AI**n't. Then, with GenAI/LLM (which we can call GLM – grand linear model) coming to fore in November of 2022 (I did not become aware until February 1 of 2023), I have started to do regular posts, some articles, and comments.

Truth engineering: Besides TGS, Inc., my focus is on truth engineering. There have been references to the themes throughout the past couple of decades. Two huge factors need attention. One factor is that the concept comes out of my work over the years and relates closely with computation. I was fortunate to be on the 'bleeding edge' of computing during my career once I got familiar with the discipline beyond my

Summary of writings

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Papers: [Technology, Computing](#)

exposure via economic modeling. Also, everywhere I worked, hard problems always came up that defied easy solution. I was able to help teams resolve issues (perhaps, the nebulous nature of economics and econometrics allowed me to be flexible – as in, no duty to any discipline). As computing's influence grew within companies, the problem set became more complex. BTW, the cloud does not solutions give; its main detriment is removing people who might know when creativity is required. Or, if you would, doing this type of 'peanut buttering' is more harmful than it looks. The other factor is that close analysis seems to point to truth engineering (its rise is worth discussing) as being resident in my brain. Or, how I look at problems and approach solutions. However, at looking, again, at Spinoza's Ethics, I can see that a system can be defined. It would involve types of human interaction that are not normal, albeit mathematics has gone toward having proof approaches that are interactive (human in the loop). It turns out that truth engineering and TGS, Inc.'s views go hand in hand. That is, people need to be brought back into the equation, even to the extent of them knowing the impact that their ancestry has on their cognitive modes. Yes. Epigenetics? Well, it's more than that as I will mention that memes were mis-understood from the beginning. Dawkins proposed this concept, somewhat, on a lark. The particular mode of meme focus that is popular now with the young and on the web is shortsighted.

Current work (Stack from 2023):

- **(April 2025):** Lately, we revisited a book from 1986 in which the author summarized his view of mathematics and its use after the first few decades of computing. The outlook of the book fits quite well with what we have seen the past two years where we witness the accumulated impact of the lessening of the knowledge and the use of meaning. After a few posts have covered the basis, we will update our view. In the meantime, two posts apply, which are the start of a series of discussions: [Descartes' Dream](#); [Taming GenAI/LLM](#).
- **(February 2025):** Kant will be the focus in 2025 which again started out with a bang. Mainly, we can use his *Logic* and *Prolegomena* which are summaries of the important material with respect to [STEM and MSET+](#) and the overview that have been lost. Too, those two works reference his major works. Further, this year, we have seen [Stargate with Oracle](#) teaming up with OpenAI under the auspices of the U.S. and DeepSeek which is GenAI without the hugely expensive waste of resources that could very well be used elsewhere offered freely by China. I have a new focus, too: buckets-of-bits have serious limits (we will use Kant for explanation). Too, people have way more capabilities than have been allowed to emerge in human ways prior to now, with the potential offered by computing and its associates providing new means never thought of to now beyond Sci Fi's playing with ideas via words. We can challenge academia to fill in missing pieces that they have ignored, categorically, everywhere in their focus on top-down dominance of truth, with mathematics being of special interest in this regard. Brouwer's thoughts will reign beyond category theory. Too, Brouwer's misinterpretations of Kant will be discussed as they represent a common, limiting theme. A new age, in many senses, is what we are experiencing finally after a quarter of the 21st Century has gone down the pike. Tone? We mentioned von Neumann for several reasons, however there are others to bring to attention. One necessary step? We must attempt to agree that machine learning, even at its ultimate best, does not offer artificial intelligence (AI) via our current configurations. Too, we need a serious model change. Perhaps, we can say that we can get some notions of what smarts are about, but empiricism has missed many boats. It is time to correct that. Quasi-empirical modes and means, ala Wigner's inception

Summary of writings

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Papers: [Technology, Computing](#)

of the discussion, are going to be largely in vogue with understanding coming back into favor with intuition guiding judgment as is the way of maturity, another neglected subject.

- **(September 2024):** A brief recap is in order. Spinoza→Kant→von Neumann? Yes, the parallels astound. But, others on the list to discuss in terms of computing's new look: Noether; van der Warden; Artin; Zariski; ... I will be using computational geometry as a basis for discussion. ...
- **(July 2024):** Since March, I have been involved in a new project which will be described at some point. Right now, this opportunity is allowing me to sweep through computing, especially as it has evolved the past two decades, to establish what platform would be best for going further both in the sense of the project and in my research. About the latter, my focus will be how qualitative methods will help balance the quantitative approach of machine learning as we see it now, which is unbalanced. Looking back at the history of machine learning, many other approaches were in use and still are. In particular, my experience with Lisp and knowledge systems will be the main framework where computational mathematics provides domain guidance. ...
- **(March 2024):** This year (2024) has started with a few interesting twists. Government responses are showing up. This took a while to develop. But there are signs of maturity, in general, which will be discussed. The GenAI crowd seemed to have doubled down in their efforts at spawning chaos, but sufficient minds seem, at the same time, to be waking up. One thing to note is that quantitative modes are way out of balance; how do we bring back qualitative methods that make sense? Well, we know how. I am writing about KBE which is a good example from the late 1980s and early 1990s which continued into the 2000s. At the same time, there have been many cases in the past that are not readily recoverable. Hence, they get lost. One is the Einstein debate with the physics crowd. It applies directly to what we need to look at. Then, there have been many attempts at social efforts such as taming the wild nature of the markets. Turns out that the computer is going to help here. Models and operational use of these has become too numeric in focus. We will describe that. As this approach is necessary; after all, how can one doubt the benefits of mathematics done right? On the other hand, who is discussing anything related to the philosophy and psychology of mathematics? Or, science, for that matter? ...
- **(2023):** ChatGPT came on the scene in November of 2022 (thereabouts). I did not pay attention to this, except for cursory interest, until February of 2023 when asked by a cohort about the thing. My work of the past decade matches up well with the issues related to this event which has the characteristics of the young (unwise) mind of those who, unfortunately, have more control over computational issues than warranted. All to be discussed. Larry L. Walker, for whom I worked at the [Knowledge Systems Center \(KSC\)](#) of Sperry Univac, and I started to discuss what was wrong in general about the push for ML/DL (whatever configuration) as being AI (which I have noted as **AI n't** – see my profile on Quora). In doing this recap, we went through the KSC experience as led by Larry and my participation. I will argue that Lisp represents a 'baby thrown out' which needs to be recovered. However, first I will go over the KBE experience at Boeing and its motivation for truth engineering as a necessity (nod to IntelliCorp's work) plus discuss in details one part of the work that was going on two decades ago. After that, I worked alone to set the framework for the balancing of advanced computing modes with human talents as we go along. The time is now.