



20Qs: 4. WHAT is truly NOVEL? 5. HOW is Novelty Engineered? 6. WHY are (some) things Worthwhile?

4. (N)OVELTY: there is (positive) natural attraction of most humans to “new things”. But most are FADS. Over 3+ decades, we’ve seen “fashions” come & go (discredited by poor production), impoverishing many buyers **Despite such failures, “contraptions” still pervade activities in technical (& economic & social) spheres.** Ranging from fakes in (“modern”) art, to financial “engineers”, to political & economics charlatans, such diseases **infect even proverbially stolid “techies”, whose affinity for “gizmos” quickly leads to creative rationales** Just as “politics is the natural resort of scoundrels”, gizmos are a natural playground of those avoiding problems-- **WHICH IS FINE FOR CHILDRENS’ TOYS, BUT NOT FOR REAL ISSUES, WHETHER RECOGNISED OR NOT.** **MANY have bypassed vast reserves of O&G, but “hills are green far away & elephants are easy targets”** THIS BEHAVIOR, PARTLY DUE TO “ESCAPISM”, HAS FAILED TO DRIVE ANY REAL GREAT ENGINEERING

5. (E)NGINEERING: one of the most abused words on earth (after “Technology”) DOES have a meaning. Derived from Greek (via Latin), it implies “making (the truly useful) happen”: we added the words in parentheses in order to exclude vast lists of activities that are cloaked in auras of practicality but are just quick-fix, even deceit **Just as sportsmen range from Popeye to Pele, so do “engineers” (WHOSE PRODUCTS REVEAL THAT).** Whenever performance is “buried” (by politics in communism, by overburden in petroleum), failures can flourish. **Despite 2 decades of (our) efforts to instrument & document, even known data is badly misinterpreted:** MORE DATA IS COLLECTED, BUT WITHOUT VALID INTERPRETATION (often deliberate misrepresentation). **Data are gold mines of Information. WE convert to Knowledge & Application & remove “blocking filters”** (“Vested interests” premise businesses on OLD interpretations & carefully protect franchises with disinformation: as Hollywood thrives on distorted reality, software provided by service-companies seeks/paints “pretty pictures”) **ENOUGH INFORMATION MUST BE AVAILABLE, SO WE CAN DIFFERENTIATE WHAT’S WORTHWHILE.**

5. (W)ORTHWHILE: the most difficult word to (force people to) define, it is ultimately the most important. Most know stories about politicians, allowing predictable problems before reacting (“best way to get most credit”) but vast time, money & opportunity are wasted, remedying poorly rationalized (even “precisely-wrong”) activities. **Even allowing for opportunism, industry is still far from worthwhile solutions to many critical problems.** You’ve read enough about PTs (pseudo-tools) in our previous writings, but there are many “symbiotic” problems: **PTs could not succeed without general desire for “problem-justification”, for which they provide cover.** Like new paint jobs on crumbling structures, “tools” are used to dress up pathetic strategies --yes, “painters” profit **Until we accept lack of (true) progress in our industry, activities will keep “slip-slidin’ away” (to the past).** “If your tool is hammer (or paint-brush), everything looks like nails (or paint-jobs)”; automation just makes it worse

“The bit still turns to the right”. Wells deviate (on purpose now) but performance stagnates: innovation?

“Still no real permeability tools” (MRI, then what)? Best permeability tool still is proper frac/slug analysis

“Our models are complex, like nature”: ok but what about input data (GIGO, as in old weather-forecasts)?

“Simple models are inadequate”: but we know farmers who managed well with basic (real-time) analysis

“If a tool is questionable, add more”: we know NO (non-Hollywood) team that won with rosters of failures

MEANWHILE, (OTHER) TEAMS ARE QUIETLY PREPARING TO REPLACE (MAJOR) “LAND SQUATTERS”: (their) tools are BASIC INTELLIGENCE, RELEVANT DATA, CONTINUOUS REEVALUATION & OPPORTUNISM **WHAT WILL BE OUR ROLE IN ALL OF THIS? TO ACCELERATE THE PROCESS & ASSIST SELECTIVELY.** Normalizing this industry will have tremendous impact on many other facets of our business & political structures. **We’ve avoided discussing activities outside O&G but they can play key roles, depending on performance** in our industry (we’ve written papers, over 20+years on this topic, BUT....one thing at a time and “DO IT RIGHT”!) **We’re just starting our “(LIGHTINGUP) (THE) (NEW) (ENE)(RGY) INDUSTRY” marathon, so stay tuned**