

# Who I Am ... and Why I Am So Mad

This paper serves to introduce me. I have worked on the concepts of True Value Metrics (TVM) for a very long time ... a much as twenty five years. The paper aims to establish my credentials in the subject area and to alert the reader to the appalling performance of big parts of my generation of leadership over many decades. There is an increasingly urgent need to have meaningful change to the trajectory of progress. While there is now amazing power in modern science, technology and engineering, the decision makers and leadership of society remains wedded to a clumsy dysfunctional way of operating that favors the economic elite, the political classes and the established institutions. There needs to be change ... major paradigm shift ... and part of this is a better system of metrics and ways decisions get made about allocation of scarce economic resources and how decision makers are held to account.

## Chapter 1 - Who I Am!

There have been four stages in my career: (1) my formal education phase; (2) my professional and corporate phase; (3) my consulting phase ... mainly international; (4) and my current phase focusing on True Value Metrics its potential for paradigm change

### My formal education phase

I was born in England in the first months of the Second World War. We lived in the London suburbs and I am just old enough to remember the “blitz” and the bombing of London. After the war we moved to a small provincial town in Devon where my father was the headmaster of the local secondary modern school. I went to a small private primary school (Miss Chay's) and then the local Grammar School.

When I was 13 years old I went away to an English boarding school .... Blundell's which had a fairly good academic standard and was very serious about sport, especially rugby. I should also mention that we had a world class shooting team that did very well at the Bisley competitions. I was part of a cohort of students that pushed hard and we had a record number of acceptances at Oxford and Cambridge as well as having a very good sports records. I played rugby at full back for the English Schoolboys in my final year at school.

At Cambridge I studied engineering ... the so-called Mechanical Sciences Tripos. Later on I also read economics. The engineering course was very broad and very much about the interface between reality, measurement and mathematics. In addition part of the graduation requirement was to have some factory exposure as well as doing an engineering “project” in the summer break.

*I got some factory experience as an apprentice in the Royal Ordnance Factory at Chorley in Lancashire. I stayed in the quarters that had been built during World War II to house workers involved in the war effort ... somewhat worse than basic soldiers' quarters, but somewhere to sleep. I learned a lot about the use of hand tools for metal working, as well as all the common machine tools: lathes, shapers, milling machines, brakes, etc. I developed a real appreciation of what craftsmanship is all about! The hand tool exercise was particularly tough ... using only hand tools, to make a steel cube that was square and 1” by 1” by 1” and a hole in a 1” thick piece of steel that was 1” by 1”. The goal was to have the cube “push fit” any way into the hole. I was commended for my work ... very good for a university engineer ... but my work was near D minus compared to what was expected from the mainstream craft apprentices when they earned their As.*

*My “project” was the analysis of the design and construction of a new road bridge in my home town of Okehampton in Devon. By this time I knew how to calculate stress and*

*strain in almost any structure ... but seeing this translated into physical action was an eye-opener. Maybe this was the first time I realized how big a gap there was between what gets designed and what gets built ... for very good reasons ... and also how important it is to understanding risk Around this time there had been a deadly flash flood in North Devon ... so the question about the bridge's behavior in flash flood conditions was on everyone's mind ... and in particular how to stop the bridge getting swept away when the river flow rates exceeded the basic design parameters.*

In my second summer break a year later I came to Canada via New York.

*The Cambridge Canada Club chartered two Boeing 707s from Air France to carry us from London to New York in June and back again in September. At that time the only serious international air travelers were film stars and Americans ... many of whom filled planes going East in June and going West in September. Our club members merely served as "ballast" to fill empty seats on the back-hauls! My return ticket cost me 70 pounds sterling ... and I had just \$50 to last me the three months or so that I was going to be in North America. The first night several of us rented an hotel room in New York near Times Square for under \$3 and about eight of us shared the space! Next day we took the Greyhound Bus to Montreal. I had identified a possible job with the Foundation Company of Canada to help with survey work near Schefferville on the St. James River in Labrador. I had not been fazed by the requirement to be an accomplished "white water" canoeist, but to its credit the company did not give me the job ... but instead I did get a job with a shovel and wheelbarrow on a construction site in downtown Montreal. I take credit for helping to dig the hole that now contains the iconic Place Ville Marie building in Montreal. In short order I came respect the hard work that is associated with labor ... a lesson that stays with me till now.*

*My willingness to be associated with boats and water was still in my personnel file, and I was moved to being "safety boatman" on a project in the middle of the St. Lawrence River. As a safety boatman I had a lot of waiting time. I did the double night shift from 4 pm to 8 am and this gave me a wonderful opportunity to read, and I took advantage of this. I read hundreds of books about the history of economics ... all sorts of material that was available at the Montreal public library ... much of it not in the mainstream of then current university economic teaching. Many lessons came from this including the role that frontier development and virgin resource exploitation had played in making North America wealthy.*

*After a summer of work ... and reading ... I drove a car West from Montreal to Edmonton, Alberta with another student friend, and then took a bus on to Vancouver, BC. Up to then my longest car journey had been about 300 miles in the UK, and it seemed in the Canadian West that this was the distance between gas stations. My car in the UK was a 30 year old 8 horsepower Morris ... this car was a Cadillac De Ville ... about 100 times more powerful and really great for going fast in a straight line! We drove the first 200 miles or so to Sudbury, Ontario with the handbrake on and didn't notice ... after that we essentially had no brakes!*

In Europe the idea of a ghost town really does not exist. Dense populations and small distances means a very different form of development than what happened in the history of North America.

*During my trip West I visited a great uncle and family in Rocky Mountain House, a town in Alberta about a hundred miles West of Red Deer. They family had homesteaded in 1906 or thereabouts after crossing the continent with horses and covered wagons to settle on a section of this land. Just the year before the community got a "hard top" road for the first time. Some 50 miles further west was the ghost town of Stanley in the foothills of the*

*Rockies ... a town that had once been a coal producer for the railroads, but no longer needed as the railroads converted to diesel. No market ... no resource exploitation ... no economy ... no jobs ... no people. The economy moves on.*

When I got back to Cambridge, my tutor decided that the reading work I had done over the summer would make it possible for me to take the Tripos Part II exams rather than the Part I exams, and he organized my study accordingly. I work well under pressure ... but this was a big challenge.

*I learned many things from my tutor including the powerful idea that facts can be represented by data ... and careful analysis of these data can lead to conclusions that may or may not support conventional wisdom. In my subsequent career it appears that much modern teaching avoids this so that conventional wisdom then become the facts that get taught. I will be for ever grateful to Professor Andy Roy for indulging me and encouraging thinking that was not constrained by the limits of the prevailing fashions.*

Between graduation and my first job I did a second Canada Club journey to Canada and the United States.

*This time my agenda was somewhat different. I prearranged a summer job with the Austin car company in Toronto and had plans to visit mines, iron and steel mills and heavy engineering industry in Canada and the United States. That summer I visited steel mills all over Canada and the United States and by the end of the trip had a good idea about how hard American workers worked and how productive they could be.*

At Cambridge I studied engineering and economics ... and also played a lot of college inter-mural sport, mainly cricket, rugby, squash and fives and engaged in the social activities associated with college life and the sporting community.

*The rugby team in particular also tried its had at other activities where energy was important, without too much need for finesse. In rowing, the college "rugby" boat moved a whole lot of water without moving the boat very fast, but we progressed modestly in the annual "bumps". Some of us from the rugby team also joined in the newly formed college Choral Society which had ambitions to be a serious musical component of college life and indeed recently celebrated its fiftieth anniversary ... but our contribution to an early production of Bach's Matthew Passion has been described as energetic but not particularly musical. We tried!*

While I was a student I traveled extensively in Europe as well as North America. My eyes were opened to what was possible in entrepreneurial Canada and the USA compared to the rigorous control that was the norm at that time in the UK and Europe ... but I learned something also of the complexities and tensions of Europe compared to the relative simplicity of the United States.

Perhaps the most important lesson I learned during my formal education was that learning should never end. Maybe this is a lot more true now than when I graduated around fifty years ago!

## **My professional and corporate phase**

### **Davy-United ... heavy engineering mainly for the steel industry**

My first job after graduation was with Davy-United, part of the Davy Ashmore Group based in Sheffield, England. The company was an equipment supplier for heavy industry, such as the iron and steel mill equipment. At the time, the company was working on integrated steel mill projects all around the world including India, Turkey, Mexico, and Finland as well as several big projects in England, Scotland and Wales.

*The Davy-United factory was impressive. It used some of the largest machine tools ever made ... some modern, but many dating back to "repairs" at the end of World War I. It was remarkable how big the machinery, and how much precision was used in the machining.*

Part of my management training was to rotate through all the factory departments, as well as to work with construction crews at project sites and to work at steel mills with the users of our equipment.

*I was assigned to work in the Open Hearth area of a steel mill (Consett in County Durham). I was a Cambridge graduate engineer still young enough to know it all. My task was easy ... to shovel various piles of minerals (chrome, manganese, etc) into the furnace so that the proper steel alloy would be produced. No big deal ... I am strong enough for that! In short order I had shoveled all the material into the furnace, and all my work colleagues seemed very happy and highly amused. I had no idea why ... until later that evening and the next day. Seems I really did not know what I was doing, and my left hand had been roasted. The workers knew this ... and it was a great way of alerting me to the idea that my intellectual education missed out on some important detail needed to get the job done!*

After my trip as a graduated student to Canada and the United States and the steel mills there I was shocked by the apathy in British industry that showed up as appallingly low productivity. While British workers were paid a fraction of what was being paid in North America, the British product ended up costing more than the American product. This was about productivity, and in turn the effective use of equipment.,

*During my US visit, I remember watching the operation of a cogging mill ... the first mill that an ingot goes through in the rolling process ... at the now closed Lackawanna Plant near Buffalo, New York. First the ingot was a lot bigger than was normal at the time in the UK ... maybe three times as big. Then the operators were trying to roll three ingots at the same time ... backwards and forwards through the mill. In the end the operator and the mill was getting almost ten times the production from the mill that we would be getting in the UK. Neither the union workers nor the management community in the UK were interested in pushing for production ... both groups seemed to be completely asleep and unaware of the importance of productivity. More than anything else both groups engaged in blaming the other for everything that was going wrong.*

I soon came to realize that decision making required a good understanding of both engineering and accounting ... together they would be very powerful. At Davy-United the engineers knew engineering and the accountants knew accounting ... but nobody seemed to know both. As a result some catastrophic decisions were being made setting the stage for a big bankruptcy some little time into the future. By now, I knew some engineering and I knew some economics ... but at this point I did not have any formal training in accountancy.

### **Coopers Brothers ... an accounting firm in London**

In 1962, I left Davy-United to join the accounting firm of Cooper Brothers in London as an articled clerk. Coopers was in the process of integrating with Lybrand, Ross Bros and Montgomery to become the international firm of Coopers and Lybrand, and subsequently there were mergers with parts of Deloitte and later Price Waterhouse that eventually became the monstrous firm of PriceWaterhouseCoopers.

*There was a time when a professional partnership was limited to 16 persons, and the partners had unlimited liability. When I joined Cooper Brothers & Co, it was a partnership that had this form. Today the legal structure of accounting firms is very different, with a different level of professional responsibility ... and avoidance of responsibility. It is my understanding that now PriceWaterhouseCoopers is really nothing*

*more than a “brand” ... and the legal organization of the firm is something like 1,600 individual firms each with limited liability. With a structure like this there is nothing to stop excessive risk taking and unprofessional conduct!*

My move to Cooper Brothers was very important for my subsequent career. I was very fortunate. I had seen engineering and factory work first hand ... I had seen something of productivity in Canada and the United States ... and I was now able to learn something of what accounting could do. I was articulated to Brian Maynard who was head of the firm's management consultancy practice and I believe he understood the link between factory and accounting. While most of my work was typical of any articulated clerk, that is, all aspect of auditing ... some of my work took advantage of my knowledge of engineering in areas like cost accounting, factory processes and inventory issues where this knowledge could be useful.

*It also got me assigned to working on the costing of the World Bank plan for construction of the Kariba Dam on the Zambezi River in Zambia. I was still young enough to know it all, and the fact that the World Bank experts had made huge mistakes in costing this project did not bother me a bit. My analysis was solid, and it was clear to me that the Kariba Dam was going to cost about double what was being projected by the World Bank. I did most of the work on the Kariba Dam analysis, then some more senior staff did a review, and then passed the work up to the Partners who passed it on to some senior people at the World Bank who decided that doubling the loan would be a good thing.*

I later learned that once the World Bank has decided to do a project, then, the bigger the better. I also learned that the World Bank's numerical analysis methodology made it relatively easy to fit the results to satisfy the approval criteria ... but at this juncture in my career I did not know this!

*I remember doing another dam construction analysis at Coopers and Lybrand. In this case the World Bank was planning to build dams in Thailand. As I recall, the dams were going to be used mainly for irrigation rather than for power generation, and the whole economic scenario was different. The costs were still going to be huge but in my view totally out of scale with the surrounding economy. In this case my analysis and optimization of use of scarce resources for best value resulted in a recommendation to do the construction with far less spending on heavy construction equipment and to make much more use of abundant local labor.*

As far as I know, this thinking never went anywhere. Suddenly I had a new assignment, and I was working on an audit out of town. In retrospect, I realize that this was not the result that was expected from the analysis, and the World Bank as the client was going to get what they wanted! I never really learned that to be a financially successful consultant, the client always has to get the results they are looking for ... mea culpa!

*During my work with Coopers I worked on the audit of one of the first commercial computers built to do business computing ... at EMI just outside London. EMI, a leading electronics company had built the computer itself, and used it in one of their subsidiaries ... EMI Records, that was involved with the distribution of Beatles records. Doing a good audit was impossible ... but there were enormous lessons learned. One of the first books about the audit of computers came out of this experience (Pinkney ... An Audit Approach to Computers).*

At this time, most accounting was done manually with the assistance of “bookkeeping” machines. There was a premium on being organized, but with “organization it was possible to do amazingly fast reporting of financial performance, even though the business was very, very large.

*I recall our audit team having to complete all the UK work on the audit of the Ford operations in the UK within ten days of the year end, and then get the work to Detroit so that it could be incorporated in the consolidated financials. After this experience I have*

*been totally intolerant of organizations that produce their accounts with a huge amount of delay ... like most Government agencies and organizations like the United Nations and its agencies.*

### **H. A. Simons, engineering consultants to the pulp and paper industry**

After several years of professional accounting and audit work in the UK, I migrated to Canada and almost immediately obtained a position as a field accountant with HA Simons, consulting engineers, based in Vancouver BC, Canada. This firm was one of the largest pulp and paper mill consulting firms with projects in many countries as well as Canada. They were using a new computer to administer the money aspects of all the firm's major projects for pulp and paper mill construction oversight ... quite simple budget and expenditure control, but very powerful because it was timely and it closely integrated engineering design and costs with the procurement process and money accounting.

*By this time I was already a proponent of "lists" as a powerful management and financial control tool. The HA Simons' computer was a very good listing machine ... it added things up fast and accurately ... and printed them out. It released the staff from the drudgery of checking the routine accuracy of the list to being able to think about what we could do to improve design and project performance.*

After several months at the home office, I was posted to work with the field teams for two major projects being built in Texas by the general contractor Brown and Root.

*As the field accountant for HA Simons at the Southland Paper Mill in Houston, Texas, I developed a field cost audit technique using budgets and standard costs that made it possible to manage contract costs very precisely right from the start of a project. The budget listed every activity that made up the project with an estimated cost. The contractor provided monthly data about how much the contractor was spending and what they had done. Very early in the project when only about 2% of the money had been spent, I compared actual with the budget in detail and concluded that the contractor was consuming cost at a rate that would double the project cost to complete. I validated this by a series of field audit checks ... testing how many workers were engaged on a specific activity and running some rough numbers on what this would mean to project costs ... testing how much heavy equipment was being charged and how much was being used ... looking at the scrap that was getting dumped ... and so on. With this information, my boss, the project manager for the consultants and the owners representative was able to confront the contractors and insist that they do their work efficiently. Brown and Root had 1,400 workers on the site when my audit study was completed and they were confronted ... and only 700 afterwards. The project ended up with a 2% cost overrun ... way better than the 100% cost overrun that I was projecting when we confronted the contractors.*

HA Simons was, arguably, the best firm of engineering consultants in the pulp and paper industry at the time. One of the things that I noted was that everything they did was done with the expectation of excellence ... but with almost no reliance on slick but perhaps unproven methods. What HA Simons did was going to work. At the same time they were intelligent enough to be able to build a pulp and paper mill from greenfield site to production in half the time anyone else was doing. They did not cut corners ... but they were able to cut the time. It was very good engineering and very good planning ... without any help from computerized optimization.

*Christmas 1966, the Eastex pulp and paper mill shut down for the first time since it was built to allow for "cut-ins" to be done that would double the production of the mill. The plan was for a 60 hour shut-down ... and then back in production. About 20 hours into the work, with about 2,500 workers on the site there was a problem. Some critical power*

*cables could not be spliced and therefore there would be no power for more than half the factory. I was assigned the job of locating and shipping in enough generating capacity to power the factory and get it working on time. It was Christmas day ... but it was also America. We located generators ... located planes ... and had them flown into Houston ... then trucked to the plant location at Silsbee near Beaumont. We did not make the 60 hour deadline for starting production back up, but we only missed it by 2 hours!*

I remember these experiences when I do assignments for organizations like USAID, the World Bank or the United Nations. These organizations are an order of magnitude ... or two ... less time sensitive than my personal experience in the corporate world.

*I am not sure when the idea of “management by walking around” became part of my modus operandi ... but it might have been first articulated around the time I was working with H.A. Simons. I had seen the difference between the effective “hands on” American manager, and the ineffective English system of “management by memo”. I had seen the way good auditing worked with requirement not only to be told things, but also to see things. At H.A. Simons I watched the way the engineers knew things not only because it was on the drawing but because they also had seen them.*

### **Aerosol Techniques Inc (ATI) ... contract packaging and pioneer in aerosols**

In 1967 I moved to work with Aerosol Techniques Inc. (ATI) of Milford, Connecticut. This company was very different from HA Simons ... a different industry sector, consumer products rather than factory construction, and a very different character of company. ATI was an entrepreneurial pioneer in the aerosol industry with four manufacturing plants around the United States. Maybe as much as 90% of aerosols were produced at this time by this company. Several iconic products were “invented” by ATI ... such as RightGuard marketed by Gillette which in its first incarnation was little more than a perfume for men! ATI was a classic story of a successful entrepreneur ... and I was joining a team that was tasked with modernizing the management process and systems.

*The new young management team had great credentials ... and were pretty bright. For several years the company had grown, been very profitable and then available cash had been invested in a beautiful new factory expansion. It was a disaster ... beautiful architecture but poor production engineering. We did all we could to improve factory performance ... but it could not overcome the inherent failed design. My cost analysis showed that no amount of cost reduction would make the main new factory investment contribute to profit ... no way, no how! The most unpopular short report in the company ... and in the end it got me fired. If you cannot solve the problem ... fire the messenger!*

But I did many interesting pieces of work.

*Before the new team were recruited, the headquarters division of Aerosol Techniques had installed a mainframe computer ... at a very high cost. It did not work and was a high profile disaster! I was made responsible for the accounting of this division including fixing the computer problem. Very much against expert advice I made the computer do some very simple things ... and do them well. Essentially I made the computer do lists ... not much more. Incrementally, we added more and more so that eventually we had something not far short of a complete materials requirement planning and scheduling system, together with integrated cost and general accounting ... all running on a punched card IBM1401 with just 4K of main memory! The computer manager and systems analyst was very very good ... and we were also helped by the Harvard based Management Analysis Center (MAC) consulting firm. Several Harvard Business School cases were based on the work.*

I did a lot of other work on cost analysis and how to make products contribute to profit ... and how to

make the factories operate at least cost without lowering quality.

It was amazing how creative some people could be ... but also it was interesting to see how good cost accounting and financial analysis made it very difficult for anyone to get away with very much. From the early days of my accounting experience I have observed that listing and reconciliations are central to good financial management.

*Simple cost accounting, financial analysis and reconciliation alerted me and a big customer to a major theft that was going on ... almost a truck-load a week of high price consumer products disappearing to a warehouse that turned out to be run by organized crime. We were shipping against customer orders and getting paid ... but the warehouse did not belong to the customer. We had FBI agents based in our warehouse and inside the customer's operation and quite quickly figured out who were the culprits. We learned of the crime during a detailed budget and planning session with our customer when we were unable to reconcile our two sets of data.*

At some point when I was at ATI, I was introduced to a DuPont training program about "Observation and Perception'

*The DuPont training program on Observation and Perception was very simple and very powerful. Everyone that attended the program learned how little we really see and notice unless we work at it. We went around the factory "observing" and taking notes. The course leaders also went around the factory "filming" things that we should be seeing. We were amazed at the difference between what there was to see as "filmed" and what ... how little ... we had seen.*

*Around the same time I was made responsible for a cost control consulting initiative in the company ... the WOFAC ... Work Factor ... system. In this system random observations of activity result in some measures of how much time is unproductive all around the organization. The DuPont system of observation and the WOFAC system of work analysis were a good fit together ... and in some ways I still use the skills decades later.*

During my time with ATI I was engaged in a lot of financial analysis associated with potential acquisitions. Some of the company's success had come from its acquisitions in the past, and ATI's CEO wanted to do more. There are sometimes good reasons for mergers and acquisitions, but too often the reasons do not stand up to rigorous financial analysis.

*It is tough to acquire a company at the right price when the preliminary conversations have been wrong by a factor of ten. The good news is that the seller will not sell at anything like the right price and no damage is done. But one transaction got away without much rigorous financial analysis and ATI became the owner of a fairly well known contract packing company in the cosmetics business. At some level there was synergy ... we had similar customers and the potential to improve our sales performance was significant. The problem was that the financial pricing was based on an unusual situation where one customer and one product had contributed more than 50% of all the sales. As this product matured ... a nice way of saying the fad was over and the product was dead ... the company was left with a loss making factory and insufficient sales. I was given the task of doing a reorganization that would return this business to profitability at a sales level that was realistic. Cost and price analysis helped and some progress was made ... but it was essentially a bad deal ... and the customer synergy that had been talked up in the acquisition negotiation proved to be a complete fiction.*

## **Gulton Industries ... a high tech electronics conglomerate**

After four years with ATI, I was recruited into Gulton Industries with headquarters in Metuchen, New Jersey to help them with very urgent turnaround financial management and reorganization. Gulton was one of the very early enablers of the modern computer era. Dr. Gulton was a pioneer in the use of miniature ceramic components for electronic systems and had what could be described as “dot.com” success in the sixties. Instead of developing in his core competency and investing heavily in R&D, he built out the company with acquisitions and leverage so that by 1970 the company was a technology conglomerate and in a precarious financial condition. The company's situation was aggravated by the early 1970s economic downturn. My role was to help the company to survive. My title was “budget manager” with the task of producing very rapid profit improvement with no new investment!

*My first task was to get some semblance of budget planning in place. There were over fifty operating units each with different operating and profit performance problems ... all in the USA with the exception of two small factories in Canada. In a period of about three months detailed budgets were prepared and budget review meetings held at all the units ... and we learned a lot about the financial state of the company. It was not a pretty picture. The company was going to be out of cash and credit in weeks with nowhere to go but down! My impression was that the top managers of all the units expected to “spend their way out of trouble” investing more and more of the head-quarter's money into their profitless operations!*

My ideas about budget in the corporate environment are based on the core concept that the business is working to be profitable. The budget in this setting is not an authorization to spend, but something that facilitates optimum performance.

*As a “budget manager” I was appalled at how many people in management thought of a budget as the amount of money they should be spending. I had always thought of a business budget as part of a plan to operate as profitably as possible. If it was possible to spend less and make more profit, then that should be the decision framework. If more money needed to be spent in order to make more profit, then this should be considered, and usually this should be done. Of course this idea of “spend the budget” is even more developed in the public sector and in organizations like the UN ... but many managers in the Gulton units seemed to behave in the same way*

Other things got to me as well.

*I was horrified when a local operating management team blamed me as the corporate budget manager for the pollution going straight from their factory into the local river. It was “my budget” that made it impossible for them to use the equipment already purchased to treat effluent properly and still make a profit. As it turned out, there were bigger problems at this unit that I eventually had to address!*

By the end of the first budget cycle I was starting to know the company as well as, if not better than most of the operating managers. I was not distracted by day to day operating problems ... just totally focused on knowing the company and how the profitability could be improved.

*By now I had copies of the payroll register for all the units in the company. I had already learned that operating managers seem to think there is a cost saving when staff are moved from department to department. In reality, savings only happens when the total payroll goes down. Now I had a base point for total payroll in every unit. Now I knew a lot about the payroll anomalies that creep in when profits are easy and oversight is lax. In a period of about 12 months the total payroll went from over 20,000 to under 10,000 ... considerably more than 50% reduction, while the company's revenues dropped only about*

*10%. We cut back on difficult and unprofitable products and the associated people who had been dragging the company into financial oblivion.*

I am not sure exactly when this happened, but quite early on in my work with Gulton. I was told to reduce the cost of telephone service at the company headquarters ... a service shared with two operating divisions.

*The monthly bill for quite a small management staff was around \$15,000 a month ... a big amount for 1970. My first move was to get AT&T to analyze our bills and give me recommendations. They proposed WATS lines and projected a cost saving of around \$1,000 a month. From the AT&T perspective this was a good deal, because any downside for them was eliminated ... but we got practically nothing. I went through the detail of the AT&T charges and it was clear that "button phones" were very costly relative to plain dial phones and it was clear that long distance charges were out of control. We had a switchboard with two telephone operators who manually connected all long distance calls ... that is gave people an "outside line". To the horror of everyone I had all the button phones replaced with plain dial phones ... from CEO to the most junior of the management / supervision staff, and I had all external calls logged by the two operators. I was perhaps the most unpopular person around ... no friends anywhere! I backed off a little and let the CEO keep his button phone ... but nobody else. There was good reason why I was unpopular. The logs showed how much of every day the senior staff were spending on personal matters and running up huge long distance bills. There was a first month cost from AT&T for changing out the phones ... and some modest increase in overtime for the two telephone operators ... but within about three months the monthly bill settled to under \$6,000 a month from about \$15,000 a month. Many people stayed angry ... but my boss, the CFO was very happy with the outcome!*

I like technology ... the cutting edge of technology is exciting, and can be very profitable. The Gulton Microceramics unit was such a unit. It pioneered microceramic components for electronic circuits and dominated this market for several years. But technology does not stand still, and by the time I became budget manager the cutting edge of technology had moved to the early stages of large scale integrated circuits and discreet components were on their way out.

*I understood the technical and financial situation and it was easy to recommend buying a padlock and shuttering the plant immediately. I forgot the emotional implications of doing this ... and the CEO and the Board of Directors insisted there must be something else we could do. I looked at the product data ... I looked at the cost data ... I walked the factory ... I talked to everyone. Eventually I found something. It turned out this unit manufactured almost 90% of the elements used in phonographs ... record players worldwide, and these were still profitable even though every other part of the discreet component product line was not. Now we were able to reduce sales by about 95% and go from truly massive losses to a modest profit ... and in some ways saving face in the process.*

The old Gulton did not lack for technological leadership. It was a fascinating place to work, but also in danger of becoming totally extinct very quickly.

*One of the Gulton divisions made Pulse Code Modulation (PCM) communications gear that was used in the NASA Apollo program/ All the conversations from the moon were done over Gulton supplied equipment. They wanted to push into all sorts of next generation communications applications, including what was referred to as "supervisory control systems". This was an early 1970s version of what we might today refer to as the "smart grid". Using this technology it was expected that all the elements of the electric grid would be controlled remotely using signals transmitted along the electric*

*conductors. The only problem was that the R&D budget for this was way bigger than Gulton could handle ... and considerable risk that the idea would fail to translate into commercial product. I could not get behind this idea and support it ... and in the end this cost me my job. Eventually the unit chief who lost his pet project became my direct report boss, and my days in the Gulton system were numbered.*

Gulton was a big supplier to the military ... mainly the Air Force. High performance Gulton nickel cadmium batteries were used throughout the aerospace industry. They were the best technology of the day ... collaborating with SAFT of France ... and doing quite well.

*But not everything was rosy. Attempts to manufacture a rechargeable consumer product were not going well. GE seemed to be able to sell at retail a rechargeable battery that was priced at less than our direct factory costs. How could this be possible. I did everything I could to figure out ... and the more I learned the more it became apparent that there was a missing technical ... that is chemical science element ... that GE had and we did not. The Gulton CEO, to his credit, understood the issues and went about restructuring the agreements with SAFT, our French technology partner, so that the needed R&D could be done for Gulton to remain a player in the battery business. My work enabled Gulton to know exactly where it stood in terms of technology and the market ... and from this our CEO could negotiate from a position of relative power.*

As a significant supplier to the military I learned something about military contracting and the associated financial reporting.

*Fortunately I did not have any responsibility for negotiating military contracts nor the preparation of any financial reports ... but I saw enough to know that this is an area where a lot of work needs to be done to get some clarity about what is really going on. My subsequent work in other situations suggests that the issues I first saw at Gulton remain unsolved with little change contemplated.*

### **Gulton ... the Southern States subsidiary**

One of the Gulton subsidiaries, Southern States Inc, located near Atlanta, Georgia completely failed to improve its profit performance, and worse, tried to distort the accounting to hide the fact. After about 15 months this resulted in the unit controller being fired and I was given the assignment to serve as controller of the unit,

*I already knew a lot about the unit from my budget work, but further deep cost analysis showed that for this unit to improve profit performance it would require drastic management action. Firing cleaners and not using the pollution control equipment were not adequate responses. As a result, the President and three out of five Vice Presidents were removed. Almost immediately everything worked better ... engineering ... marketing ... procurement ... production ... profits! In the reorganization, in addition to being in charge of "Admin", I was also made VP of Manufacturing. The former VP Marketing took on responsibility for engineering. The two of us acted as Co-CEOs pending the recruitment of a permanent new CEO.*

Being in charge of the factory production, I had many real problems to solve. One of the biggest problems was a shortage of castings, both in-house production in our own foundry. Throughout the USA production of castings was being constrained by new safety (OSHA) and environmental (EPA) regulations. Castings were critical to our whole production cycle and our foundry was already operating at full capacity on a two shift basis. What to do?

*My proposed solution was a third shift ... which was met with fierce opposition. What else to do? No suggestions, so the third shift was implemented. Initially it appeared that the*

*critics were right ... costs were high, production was abysmal. Why? I then turned up at 2 am in the middle of the night and unannounced to find everyone doing nothing because a key machine had broken down. No maintenance ... not enough supervision. I called the maintenance manager ... 2 am ... and asked him what the problem was? Within days, with real supervision and adequate maintenance the night shift became the best of the shifts ... and really proud of what they were doing! And then the race was on ... with the other shifts trying to keep up!*

I am a big user of cost accounting, and especially standard costs. Getting costs right helps a lot.

*Another story associated with the foundry was the long time use of average cost ... cost per pound ... to do casting design. With this method engineers were encouraged to make castings lighter and lighter to "reduce costs" ... but in fact were doing exactly the opposite. The behavior of cost in a foundry depends on many factors other than the weight of metal including the shape of the casting, the quantity being made, the process needed for the specific casting, scrap rates, the type and quality of the mold and so on. These are standard process elements, and designing to reduce cost of each of these changes the dynamic ... higher production, lower costs, better castings.*

It was also at Southern States as the VP manufacturing that I applied some very basic control theory to production reporting with an amazing improvement in factory output.

*For years a routine daily production report was circulated to "management" and department supervisors to look at and discuss next day mid-morning. It showed what had been produced and that was it. Most people knew what should have been produced and could talk about why production was poor, but not much more. The meeting and review was an excuse for a cup of coffee and a conversation ... not really very much more! In my new role as VP Manufacturing, I changed the production reporting process. Half an hour after the start of the shift, every supervisor estimated the production they anticipated for the day, and at 8.30 am we had a meeting about what the production for the day was going to be. We all knew where the problems for day were located and could do something about it. The inventory people knew where there were inventory problems ... the maintenance people knew where there were equipment issues ... and by 9 am the problems were getting fixed. By the end of the day there was record production day after day after day! This was a simple application of engineering control theory ... very simple ... but very powerful!*

One more story from Southern States relates to the use of performance accounting as a management tool for front line supervision. My view is that almost everyone in a supervisory or management position can handle the relatively simply performance statistics that come out of a company accounting department. I call this scorekeeping which is quite easy. There are also the "stats" that are specific to each operating activity ... and my position is that if someone can follow the stats in a game like American football or baseball, then they can also handle the stats of their daily work. Some senior managers do not have much time for this ... but the idea has never failed me and it is critical to getting high productivity.

*The shipping department at Southern States operated a small fleet of trucks to deliver our product to customers all over the United States and sometimes into Canada. Emergency shipments were often required during the winter months when snow and ice conditions are the norm. From the departmental accounting I could easily track the aggregate performance of the shipping department and the trucks ... but getting better performance required a much more in depth understanding of the behavior of costs. It turned out that my shipping department manager followed sports with considerable interest ... and knew sports statistics. He also followed the activities of his department with similar relevant statistics. He had data that showed that a high quality Michelin tire was lower cost per*

*mile than the lower cost tires that our purchasing department (and the accountants) wanted to buy. He also was an advocate for 18 wheeler rigs that were more expensive than 14 wheeler rigs but way better for negotiating snow and ice when needed and safer. In my judgment, my shipping department manager had thought this through and he got my support for the bigger and more expensive rigs. Into the bargain, I think we served our customers better as a result!*

One lesson to take from this is the idea that there is a place for aggregate oversight and at the same time a place for detail.

*The foundry at Southern States was important to its success, but it was also a constraint because it did not have the capacity needed. The new CEO of Southern States wanted the problem to be solved, as did I, and he insisted we recruit a very well known firm of foundry consultants to make recommendations. They were expensive consultants and when they had finished they made a proposal for foundry expansion that was also expensive, and quite out of keeping with the financial situation at Gulton and this subsidiary. I found another foundry consultancy and had them make recommendations. They were less expensive as consultants and also their recommendations were more in keeping with what the company might be able to afford. There was something wrong with both the recommendations ... simply put we had an old foundry that needed to be able to produce more castings. We did not need an essentially new foundry at a huge capital cost that our product line would not support! My concerns were resolved in discussions with our old time factory manager and the maintenance manager ... people who really knew how the factory ran and what was possible. They proposed acquiring used equipment from foundry equipment auctions and installing these pieces at all the production bottlenecks ... a technique that would double production with only about 10% of the cost proposed by the high reputation consultants and be done with almost no disruption to the ongoing production. This is what we did, and it worked beautifully. The bad news is that the unit CEO did not have a big investment success ... or failure ... to take credit for and it was seen as a “cheap” initiative not in keeping with his “vision” for the future of the company!*

### **Continental Seafoods (CSF)**

Continental Seafoods Inc. (CSF) of Secaucus, New Jersey was a very different company and became a source of many different experiences. I was recruited into CSF as the Chief Financial Officer (CFO) a few months after a new President and CEO was appointed. The company was in a cash flow crisis and very unprofitable.

CSF was a subsidiary of a very large publicly traded (NYSE) food company, Ward Foods which was financially over-extended. Ward Foods acquired CSF in 1970 after a decade of good revenue and profit growth in the seafood industry ... but this ended catastrophically with the 1973 oil shock. In 1974, Ward Foods as a whole was operating at a break-even on \$1 billion of sales revenues.

CSF had trawlers based in Africa, Latin America, the Middle East and South Asia. Our sales were to Japan, Europe and the United States. We were in the worldwide shrimp business which in 1974 was in a historic slump after the oil shocks. Working with this company I experienced a lot of geography and built my international knowledge. It was a learning experience second to none.

*My first challenge was to help make sure that Continental Seafoods (CSF) would survive. I had to help make the company profitable and do it fast. While as a company we were good at what we did, producing a high quality product, and operating efficiently and ethically, the global shrimp industry was in a crisis. The market demand had slumped together with shrimp prices. The operating costs had sky-rocketed mainly because of the*

*increased fuel costs. It was a disastrous situation, and made worse because we also had a huge shrimp inventory purchased at very high prices before the oil shock in anticipation of continuing high market demand. The day I joined the company the company's liabilities were way bigger than its assets!*

*My first initiative was to ensure that we had very good records about what we were doing ... vastly improved monthly management accounts with all the critical "key items" of operational performance. Initially this was looked at as an onerous duty of little value, but this changed when the operating managers realized that the data were invaluable for objective decision making. Initially the monthly reports reflected sloppy record keeping and were not very useful, but month by month the record keeping improved and the reports started to reflect the true operational performance. After six months we had excellent financial reporting together with key items. More important, we had management information that enabled top management to focus on what mattered and solve critical problems.*

I was able to help focus the turnaround on things that would make a difference very quickly ... but with very limited resources.

I had to learn more in a short time to do an effective job as CFO for CSF than most accountants will need to learn in a lifetime. While CSF was a small company, it was complex with operations in 26 different jurisdictions around the world. There were many complex legal and business issues that affected how we were able to operate and the way the accounting and financial reporting was done. Every country had its own business laws ... and their own fishing laws, rules and regulations, etc. not to mention international rules about ownership, flagging and insurance of vessels. There were also rules about international trade, export taxes and import duties ... and rules about employment of local staff and rules for international staff ... about benefits ... about hiring and firing ... about taxes ... and remittances. There were fluctuations in market prices as well as fluctuations in currency exchange rates. There were very long supply chains for spare parts and everything else ... and getting materials through customs may or may not be quick and easy!

The CSF operational staff were very good ... they were able to do amazing things as soon as they knew that they had the support of the head-office team.

*As I flew into Liberia on my first visit to our operations in West Africa I could see most of our fishing vessels at the dock. It was late Saturday afternoon and I was met at the airport, and then taken to the best hotel in town ... and checked into the best suite. I was advised that I would be pickup on Monday morning to come to the office! I had different plants! Sunday morning ... I took a taxi to the port, found the CSF office and announced myself! After the initial shock, I get a tour of the operation ... see the vessels tied up at the dock and the walked through the shore facilities ... production plant, cold store, maintenance workshops, spare parts stores, etc. By lunch time I have a pretty good idea of what is going on and what problems they have. It was very clear that the old head office had been a big part of creating the current operating problems ... the spare parts inventory was on the books at a very big number ... but none of the spares were useful to keep the current vessels running. Most of the spares were old, and were only useful for vessels long since discarded ... but the old headquarters management had not allowed any write-offs of this obsolete stock because of the impact it would have on the reported profit. That Sunday afternoon a list was made of the spares needed to get the vessels back in service ... almost \$500,000 of spares ... and it was telexed to the home office. By Thursday most of the spares arrived at the airport in Liberia and were immediately cleared customs and then used on vessel repair. By the weekend all the vessels were back to fishing again. My estimate is that the profit contribution to cover the cost of these spares was made back in about 10 days!*

Incentives are very important ... but they need to be done well. They were part of every payroll system that I had ever work with. I believe in incentives ... but they need to be well designed.

*At CSF, we put in an incentive program for the skippers and engineers on our trawlers to encourage them to be as productive as possible ... that is land as much shrimp as possible. In general it went well, but in El Salvador this initiative went terribly wrong. There were two main shrimp resources ... a highly abundant but commercially valueless "titi" shrimp and a number of different species of really excellent commercial shrimp. Our incentive scheme did not specify clearly enough that we only wanted the commercially valuable shrimp ... and in the first month we had a huge landing of the commercially useless "titi" shrimp. We had "goofed" and the skippers and engineers had responded in a way that was totally justified. We had red faces and had to work ourselves out of this mess. Obviously the situation could not remain because there would be no company. It was tough to get an arrangement that worked for everyone ... but it was done. On balance our incentive programs were one of the things that made our company very strong operationally even in difficult areas.*

Honesty is important ... especially amongst those that handle money and have fiscal trust and responsibility.

*Good accountants have the skill to see things and connect the dots ... they sense that things are right or wrong., Maybe it is something learned in the practice of auditing. Whatever it is it is very important. I have no idea how I learned about it ... but one of our accountants in a developing country was taking a personal "cut" from the payroll of most if not all the junior staff. These staff were not "literate" and were in no position to argue and make problems .... but the accountant saw opportunity and took it. Somehow I learned about it ... I am not sure how ... but I think it was part of my practice of "management by walking around" and the practical application of my "observation and perception" training. This staff accountant was removed from his job immediately ... minutes after the issues came to light.*

Haste makes waste ... and this is particularly true in many remote parts of the world where time matters much less. Many business people from Europe and North America are always in a hurry, and sometimes do not "get it" that they will spend a huge amount to get the sort of haste that would be normal in their home countries. Invest some time to make friends, and the pushy business person might be surprised at what can be accomplished.

*I think back on what my old company was able to accomplish in Nigeria at one of its most difficult times. We were "squeaky clean" in terms of bribery and corruption ... but we still got things done, perhaps faster than many of the "big spending" international companies. Over time we built a network of friends and professionals that were able to sort out what was good for our company and what was good for their country. We had very competent Nigerian staff who we held to very high standards of professional and technical excellence ... and in return we got very good performance. It was not always easy ... but our friends made all sorts of things possible in extremely difficult circumstances.*

Financial controllership is not about stopping fund flows, but making sure that funds are used in the best possible way so that operational managers can do excellent work ... not to get in their way!

## **My consulting phase ... mainly international**

My personal experiences in Nigeria has been very positive. This is not true for many ... and I am very

much aware of the nastiness that prevails in some quarters.

*A number of my Nigerian friends have died in violent events in the country. Some of my expatriate friends have been beaten up by Nigerian thugs. I am aware that this has been happening for years and continues today. In my view we must not let violent thugs win. When the Gowon coup took place in 1975 and we were instructed by the American State Department to evacuate Nigeria, I made representation to the US Ambassador in Nigeria that he should be preparing to give us protection, not to remove us from the country. We had commercial and development work to do ... and we did not expect thugs in politics to derail a perfectly good project. I believe Ambassador Easom understood perfectly what I was saying. As it turned out we never left, and we just got on with our work.*

*It was during this work that I started to see the stark reality of poverty around the world, the crisis of failing development and the dark underbelly of international business and globalization. I was shocked when I was faced with dead children in the street in Nigeria outside Western House ... at the time the most prestigious office building in Lagos. Nigeria had fabulous oil wealth .. but horrendous poverty. It was a wake up call and I started to question the fundamental structure of global economics, corporate enterprise and the systems of international development assistance.*

After almost 20 years of professional work and corporate employment I started a small consultancy firm based in the USA with a focus on management and international operations. This resulted in some interesting long term associations with some private companies, and with public sector organizations like the World Bank and the United Nations Development Programme (UNDP). I did surprisingly little in the domestic US market but had a strong did more and more work in the international area.

*My plan was to engage mainly in corporate consultancy in the United States, but I quickly found that my nationality (British) was not an advantage in marketing independent consultancy into this market. This was the time when the English were associated with "the English sickness" of exceptional corporate inefficiency ... but it turned out that I could take advantage of my international credentials.*

This led to both corporate and public sector assignments in the international area. I did my first consulting assignment with the World Bank in 1978 and many more assignments over the years.

My financial success has been modest. On the other hand my experienced could not have been better. I have had the opportunity during my career to work on assignments in more than fifty countries round the world ... and at different levels of the economy from refugee camps and rural communities to national level planning and oversight. Some of my work has been very practical ... some quite intellectual. Almost none of my work has been academic ... which has its advantages and drawbacks. I have worked with some of the best people in the world, and a few great organizations, but and mostly I have been working with systems and socio-economic conditions that appall me.

*I probably made a strategic mistake years ago by not aligning myself with a major "name" firm. As an independent firm I was limited to the possibilities of my "brand" and could not piggy-back on or more well known name. The upside to what I chose to do was that I have never been constrained in my thinking about solutions to problems ... I have never been constrained to doing things the way the firm had always done them.*

Right from the very first time I worked as a consultant for the World Bank in 1978 I have been appalled at the state of the management process in government and the official relief and development assistance (ORDA) community. Compared to what I had been doing in the private corporate sector, these organizations were both out-of-date and, in my view" going in the wrong direction.

I learned very early in my career that management information was a powerful tool for decision making and achieving high performance, whatever the endeavor. I was completely unprepared for the way big

government and large bureaucratic organizations function. It was a shock ... and it raised the question why I had never learned this during my years of education and subsequent corporate career. More important, of course, was the question of what should be done to change this. What I chose to do was to work on the problem “inside” the various assignments that I got to do for UNDP, the World Bank and others ... and this is what I was able to do with some degree of success.

Very early on I was critical of the World Bank methodology and over time my initial conclusions were validated. The World Bank employs thousands of people with very good education and academic credentials. Probably more economists work for the World Bank than any other institution in the world ... but there are very few cost and management accountants in positions of any authority. From my observations, I would expect that the number of people in the ranks of the World Bank staff that have experience at “making payroll” are near zero. Over time the Bank staff have become more and more academic and less and less practical as the old “colonial expert” retired and got replaced by a young academic “PhD”.

This change would have been good if there were measures to assess what was going on with development performance. As an independent observer of development my assessment was that the development accomplishments were near zero at a huge cost. As an accountant, and non-PhD to boot ... my simple conclusions that there would be a lot more performance if we merely understood where the money was going was ridiculed ... my views were discounted and I was eventually almost totally excluded from the World Bank circle of consultants.

From my perspective they try to obtain a lot of material for their reports, that reflect what they are thinking, without doing enough to improve understanding. The World Bank has amazing staff, but the World Bank system ensures that very little of their capacity is ever going to be used effectively.

*On one occasion I was working on a cashew nut appraisal project in India, one of the world's experts on tree crops pleaded with the mission leader to slow down so that the team would have a chance to write notes about all the things that we had learned in a series of field interviews. The outcome was negative. The mission itinerary was completely rigid and was not under any circumstances going to be changed. In retrospect, I realized that the World Bank had already decided what it was going to do ... what it would write and I should have understood that the mission was of little importance beyond satisfying a procedural requirement.*

The World Bank already knew what they wanted to know,. The decisions had already been made, and all we were doing was providing the appearance of analysis. We had a very powerful team in terms of industry experience, including, frankly, myself ... but what did it matter what we learned when the name of the game was nothing more than window dressing.

There might have been a time when I was impressed with World Bank projections of market prices ... but that changed quite early in my relationship with them. The role of price projections in any investment program is important, and in World Bank projects seemingly almost always wrong. This has had terrible consequences for developing country economic performance.

*On one assignment, I remember one of the experts on world markets asking this critical question during the field work: “What other projects like this one the World Bank planning on financing in other parts of the world?” Without any hesitation, and with great confidence, the mission leader started to list off the other big projects that the World Bank was planning. “Brazil, Tanzania, Mozambique and also some countries in West Africa were being considered”. Instantly, the market consultant picked up an envelope, sketched lightly the price history over the past few years as a graph, then sketched the price projection being made by the World Bank which was trending nicely upwards at about 10% per annum, and then passionately drew in what he thought the world market would be as a result of the World Bank interventions that had just been*

*described. The angry line headed steeply down and then he lectured the team on basic economics of supply and demand and how the World Bank had ignored economics 101 in their commodity price projections.*

I have spent a good number of years in my professional life agonizing over market prices and trying to help my employer or client make the right decisions about where market prices were going to be in the future. It has been a critical part of my work, and while I was never clairvoyant I was good at understanding the many different factors that go into determining market price movements. When the company's performance depends on getting pricing right, one takes the matter seriously.

*When I was advising a company about its market projections in the shrimp industry in connection with IFC financing, my work suggested an acceptable outcome whether the market was very favorable, middling or somewhat unfavorable. The IFC took their own projections and concluded that my shrimp price scenarios were way too pessimistic. My view was that the computer models they were using were just plain wrong ... and I thought it was very clear. Of course, I was not IFC and I was overruled. Subsequently, I was proved right. Fortunately all the company's planning was on my more conservative perspective and we did just fine.*

In agriculture, the World Bank seems to be wrong about prices almost every time I work with them.

*I recall doing work in West Africa in the early 1980s. All the World Bank projections for agricultural prices were showing upward price moves. With the higher prices projects had a favorable outcome as long as inputs were stable. The reality was that the higher prices were not going to happen, but the inputs were likely to increase rather than being stable. An outsider cannot win ... the World Bank projections had to be treated as right ... even though experience suggested some other projection would make more sense.*

During the 1980s I did work for other ORDA organizations besides the World Bank and IFC. I did work through UNDP on various aspects of the refugee crisis in Africa. In 1982 the refugee crisis in Africa had a high profile and the UN organized the International Conference on Assistance to Refugees in Africa (ICARA). It was sufficiently serious a problem that a second conference was organized two years later (ICARA II) and the refugee problem continued to grow for another decade, dropping from view as a crisis simply because a bigger crisis of famine grabbed the headlines. The crisis of famine in the Horn of Africa and then throughout the Sahel was a very visible symptom of failed development and the failing economics of post colonial independence.

During my work with famine disaster and refugee crisis situations I learned that most field staff were very committed to their work and willing to put themselves in harms way if necessary. Most went the extra mile without a thought, but sadly, some of the staff were using or abusing the system for their own gain. In my view the systems were not good enough to identify and control abuse and the whole system was at considerable risk.

Over the years I have done a lot of work in West Africa ... almost every country from Mauritania to Cameroon. It is sad that the leadership in the area has been so deeply flawed and the potential wealth of the region not used effectively to improve the quality of life of the general population. My first exposure to the situation in West Africa was in the 1970s, and I have stayed in touch over the years with a number of modest consulting assignments. My work as the CFO of Continental Seafoods (CSF) with several operations located in West Africa was the starting point ... and I stayed in touch with the fisheries sector for many years after leaving CSF.

Over the years I have done assignments for UNFP, UNIDO, UNHCR, IFAD, FAO, UNCTC and the World Bank and IFC in West Africa. In general these were small assignments that had little potential to have much impact though I did my best to have practical conclusions that could be used to improve things.

*In 1982, myself and a small team did a modest piece of work in Liberia for the World Bank in which we were requested to confirm that cooperatives being run by a World Bank project had produced the anticipated results from Phase I of a project. Our consulting team could not provide this confirmation based on any of the facts we knew. It was clear that the project run cooperatives were being used simply to channel project resources to a group of elite functionaries. On the other hand a group of true farmer cooperatives were doing very well, but were not part of the project. That was what the analysis showed, and that is what went into the report.*

Our group was paid our in-progress fees, but not the final fee associated with delivery of the report. Nobody would sign off unless we would change the conclusions of the report.

*The World Bank was faced with a conditionality of their own making. Phase II of the project was conditional on a report showing that Phase I had been successful. How did this get resolved? The World Bank changed the conditionality for Phase II and went ahead ignoring our findings.*

From what I have observed most World Bank evaluation consultancies would not have found this problem ... and if they had, might not have had the commitment to financial rigor that comes from training as a Chartered Accountant. Many accounting related questions are handled by people with no relevant experience, and in my case I had senior level audit and investigation experience from early in my career and it was very obvious that there were problems.

*In this Liberia assignment, I did not take kindly to the fact that the staff of the government Cooperative Audit Office were instructed not to talk to me. When I eventually was able to see the audit working files for all the cooperatives, it was good to find that the government audit staff had done very good audit investigations for almost all the government operated cooperatives (with World Bank funding) but infuriating to find that nobody was going to see this work. The big cooperatives were nothing more than financial shells being used to siphon off project fund and high level government officials intended to keep it this way.*

The data showed that the little cooperatives being run by farmers themselves were doing quite well though small and struggling along with little or no external help.

*I tried to see the key government official in charge of all of this, but he was suddenly taken sick and was not able to discuss any of these findings with me. The World Bank official back in Washington was "on mission" when these findings came to light and nobody was available to take this up or give us guidance. The saga continued. To get our group to change our conclusions, a government accounting adviser in Monrovia was sent to me to explain the government position on the big cooperatives, and to explain to me that I did not know what I was doing ... that I was not competent to draw these conclusions. This did not work out as planned for the government. They sent the local Coopers and Lybrand partner in charge to do this ... and it clearly an embarrassment when it turned out that I was somewhat more senior than he was, considerably more experienced and had trained in the same office he had.*

As far as I am concerned the government, Coopers and Lybrand and the World Bank should all be ashamed of the way they conducted themselves. Our little consulting team was right. The World Bank was wrong. A few years later the World Bank realized that their loans in Liberia were a serious mistake, but by then it was really too late. They had funded a monster. They had made loans and created debts that were not going to be repaid. Sadly the Liberian people still needed support for economic development ... but that did not matter. Liberia became one of very few countries that defaulted on its World Bank loans, and as a result the World Bank retreated and pulled out of Liberia leaving a huge development vacuum which was one of the issues that destabilized the country and arguably contributed to the subsequent civil

war.

I did work with World Bank on and off for many years. They did not much like the fact that my work often resulted in quite serious criticism of what they were doing. One of the exceptions was my analysis of their work in developing the coffee sector in Burundi.

*I was brought in because of my reputation for “not liking things”. The project team felt that what they were doing was very good, and my analysis would be credible and could be used to justify movement to full scale implementation. They were right. They were doing a very good job, and the analysis confirmed this. I did some analysis at an interim stage and then later did some further review to confirm that the results were as good as we projected. In fact they were better. Sadly the Rwanda and Burundi situation unraveled and Burundi never got to see the benefit that had been created by this very good World Bank initiative. The new coffee auction in Burundi looked as if it would realize perhaps more than twice the revenue that had been previously achieved using a government controlled parastatal export organization.*

More typical was some work I did with the World Bank in Yemen ... both the People's Democratic Republic of Yemen (PDRY) and the Yemen Arab Republic (YAR) prior to their consolidation.

*In the PDRY, my analysis of the fisheries sector showed how the international development community had made a modest mistake with a small investment in a fish meal processing plant, and had then tried to solve the problem by involving the idea of “efficiency of scale”. While this often works with land based factory processes, any process involving fishery resources has a very different set of behaviors that must be taken into consideration. I have no idea who at the World Bank made the decisions that resulted in the scaling up of the fish meal operations ... but when I carried out my review it was an unmitigated fisheries disaster. Of course, there may have been other factors in play that nobody is meant to talk about ... such as the expensive new fishing port being built with World Bank funding that also served as an ideal landing place for military equipment being shipped in from any of the world's military suppliers and useful for area destabilization.*

*In the YAR a big World Bank financed shrimp fisheries project located at Hodieida was in trouble. Continental Seafoods had done the fisheries resources assessment in the area a few years previously and made very clear recommendations about what was possible in terms of developing a commercial shrimp fishery. Between the Government and the World Bank they had chosen to do something that was maybe ten times bigger than what we had recommended. Our team of experts in the field understood the issues, and we recommended that the project be terminated as quickly as possible. Telephone calls to Washington and to another donor in Europe confirmed that this recommendation would be supported but ... surprise, surprise ... within a few weeks everything went back to where it had been before the evaluation mission. The only beneficiary from the project were the suppliers of equipment and several key players in the government and the project who were (almost certainly) getting substantial commissions . At the time I knew a lot about prices of fisheries equipment, and everything on this project was unseemly expensive!*

I am perfectly aware that there is value in effective coordination ... but it is no easy to get coordination among organizations that do the same work in the same space and are competing. The problem is compounded when there is little or no useful data and management information to facilitate performance assessment.

*Sometime in the 1980s I was working on a UNDP assignment in the Cote d'Ivoire about government organization and management. The World Bank and the UNDP had agreed*

*in New York and Washington that the UNDP work and the World Bank work should be coordinated. Our team was working in Abidjan for several weeks before the World Bank team arrived. They came in on a Thursday and we immediately had a big meeting with government, with UNDP and with the World Bank team. It was confirmed that we would coordinate and the work would be done together. At the meeting I asked the World Bank team leader if they had any thoughts about the direction of their analysis and was told that they were coming with a completely clean slate and no preconceived ideas. Interesting. They did not solicit any ideas from our team. I tried to meet on Friday, and then through the weekend, and on Monday and then on Tuesday. Just before they flew out on Wednesday after less than a week in the country, we were invited to attend the wrap-up meeting. By now the World Bank team leader had 142 items that they had identified as needing to be in the government program.*

The World Bank handled this in a way that reflects nothing good ... arrogance ... sloppiness ... superficiality ... misrepresentation. Worse, it is a method of working that cannot produce good results.

I have seen enough of how the ORDA system works to know that something very different is needed. I have worked in high performing corporate environments and have a good idea of what is possible. I have worked with research and development engineers who are not phased by the scientific impossibility, they just want to solve the impossible, and in fact keep doing so. I have worked with strong rough people who know how to build things and get things done ... sometimes referred to as the salt of the earth. I know that it is possible to put together an organization that makes development a success.

Over a period many years I did considerable work with the World Bank, but as time went on, it became clear that almost nothing that I was recommending was being accepted. Eventually my candidacy for consulting assignments ended. In the bigger scheme of things this was probably a good thing. The work I did over these years matters hardly at all. I might just as well never have existed. I did my work, presented my reports, and tried to make the recommendations stick. The brutal fact is that it did not really matter what the report said, because nobody was going to make any use of the work anyway. I was part of a process, but my role in the process was merely a supporting actor with really no part in the main plot.

It was not until years later that I read John Perkin's book "The Confessions of an Economic Hit Man" and realized how much I did not "fit" with what the powerful wanted.

More recently my understanding of my experience with the UN system has been clarified with another book called "Backstabbing for Beginners: My Crash Course in International Diplomacy" by Michael Soussan that describes how the UN functioned in its management of the large Food for Oil program with Iraq after the first Gulf War. As the Sunday Times (London) book review put it:

*" ... Yet even to cynics of multinational aid this book will come as a revelation. If you had thought the UN to be a dysfunctional, disorganized and dishonest organization worth much less than the sum of its parts, think again: Soussan's story shows that it's much worse than that."*

Putting it simply, I had been right in my concerns about the performance of the established institutions, but had no platform to give my concerns any meaning.

I was also unprepared for the impact deregulation in the USA would have on business in the 1980s. I understand the concept of "laissez faire" but do not interpret this to allow for a business world where "anything goes". The fact of gross fraud and misbehavior on the part of many people and organizations in this period was a great disappointment ... and the fact that similar behavior still continues in various guises is deeply troubling. There is much evidence that there has been significant manipulation and fraud in achieving high profits in the deregulated environment of the past thirty years.

I did a lot of background research about many aspects of corporate strategy ... some of which was published in a series of reports by International Resource Development (IRD) in Connecticut. The

Directions Intelligence series looked at strategy from the perspective of individual companies ... companies like IBM, AT&T, ITT, P&G, 3M, Exxon and about 30 others of similar stature. Another IRD series addressed various aspects of disruptive technology and corporate practice ... multi-client market research. I contributed to some of these including work on such matters as The PC Aftermarket, Medical Technology, Leasing, Aquaculture and others.

## **My consulting phase ... mainly international**

After almost 20 years of professional work and corporate employment I started a small consultancy firm. I became an independent consultant based in the USA with a focus on management and international initiatives. This led to some long term associations with some interesting companies, and with the World Bank and the United Nations Development Programme (UNDP) ... and eventually other work associated with the official relief and development assistance (ORDA) sector. I had some success in domestic US consultancy but did more and more work in the international area.

I did my first consulting assignment with the World Bank in 1978 and many more assignments over the years. From the outset, it was a deep shock to see the state of management information in the official relief and development assistance (ORDA) community and in government compared to what was being done in the private corporate sector. By this time I was an enthusiast for management as a tool for achieving high performance, whatever the endeavor. I was completely unprepared for the way government and large bureaucratic organizations actually function. It was a shock.

I was also unprepared for the impact deregulation in the USA would have on business in the 1980s. I understand the concept of "laissez faire" but do not interpret this to allow for a business world where "anything goes". The fact of gross fraud and misbehavior on the part of many people and organizations in this period was a great disappointment ... and the fact that similar behavior still continues in various guises is deeply troubling. There is much evidence that there has been significant manipulation and fraud in achieving high profits in the deregulated environment of the past thirty years.

Though my financial success has been modest ... I have had the opportunity over the years to work with assignments in more than fifty countries round the world ... I have worked at different levels of the economy from refugee camps and rural communities to national level planning and oversight. Some of my work has been very practical ... some quite academic!

I am not impressed with the World Bank methodology. From my perspective they try to obtain a lot of material for their reports, that reflect what they are thinking, without doing enough to improve understanding.

*On one occasion I was working on a cashew nut appraisal project in India, one of the world's experts on tree crops pleaded with the mission leader to slow down so that the team would have a chance to write notes about all the things that we had learned in a series of field interviews. The outcome was negative. The mission itinerary was completely rigid and was not under any circumstances going to be changed. In retrospect, I realized that the World Bank had already decided what it was going to do ... what it would write and I should have understood that the mission was of little importance beyond satisfying a procedural requirement.*

The World Bank already knew what they wanted to know. The decisions had already been made, and all we were doing was providing the appearance of analysis. We had a very powerful team in terms of industry experience, including, frankly, myself ... but what did it matter what we learned when the name of the game was nothing more than window dressing.

There might have been a time when I was impressed with World Bank projections of market prices ... but that changed quite early in my relationship with them. The role of price projections in any investment program is important, and in World Bank projects seemingly almost always wrong. This has had terrible

consequences for developing country economic performance.

*On one assignment, I remember one of the experts on world markets asking this critical question during the field work: "What other projects like this one the World Bank planning on financing in other parts of the world?" Without any hesitation, and with great confidence, the mission leader started to list off the other big projects that the World Bank was planning. "Brazil, Tanzania, Mozambique and also some countries in West Africa were being considered". Instantly, the market consultant picked up an envelope, sketched lightly the price history over the past few years as a graph, then sketched the price projection being made by the World Bank which was trending nicely upwards at about 10% per annum, and then passionately drew in what he thought the world market would be as a result of the World Bank interventions that had just been described. The angry line headed steeply down and then he lectured the team on basic economics of supply and demand and how the World Bank had ignored economics 101 in their commodity price projections.*

I have spent a good number of years in my professional life agonizing over market prices and trying to help my company make the right decisions about where market prices were going to be in the future. It was a critical part of my work, and while I was not clairvoyant I was good at understanding the many different factors that go into determining a market price. When the company's performance depends on getting pricing right, one takes the matter seriously.

*When I was advising a company about its market projections in the shrimp industry in connection with IFC financing, my work suggested an acceptable outcome whether the market was very favorable, middling or somewhat unfavorable. The IFC took their own projections and concluded that my shrimp price scenarios were way too pessimistic. My view was that the computer models they were using were just plain wrong ... and I thought it was very clear. Of course, I was not IFC and I was overruled. Subsequently, I was proved right. Fortunately all the company's planning was on my more conservative perspective and we did just fine.*

In agriculture, the World Bank seems to be wrong about prices almost every time I work with them.

*I recall doing work in West Africa in the early 1980s. All the World Bank projections for agricultural prices were showing upward price moves. With the higher prices projects had a favorable outcome as long as inputs were stable. The reality was that the higher prices were not going to happen, but the inputs were likely to increase rather than being stable. An outsider cannot win ... the World Bank projections had to be treated as right ... even though experience suggested some other projection would make more sense.*

For a time I did a lot of work with World Bank ... but they did not like the fact that my work usually resulted in quite serious criticism of what they were doing. One of the exceptions was work in developing the coffee sector in Burundi by the World Bank.

*I was brought in because of my reputation for "not liking things". The project team felt that what they were doing was very good, and my analysis would be credible and could be used to justify movement to full scale implementation. They were right. They were doing a very good job, and the analysis confirmed this. I did some analysis at an interim stage and then later did some further review to confirm that the results were as good as we projected. In fact they were better. Sadly the Rwanda and Burundi situation unraveled and Burundi never got to see the benefit that had been created by this very good World Bank initiative. The new coffee auction in Burundi looked as if it would realize perhaps more than twice the revenue that had been previously achieved using a government controlled parastatal export organization.*

During the 1980s I did work for other ORDA organizations besides the World Bank and IFC. I did work through UNDP on various aspects of the refugee crisis in Africa. In 1982 the refugee crisis in Africa had a high profile and the UN organized the International Conference on Assistance to Refugees in Africa (ICARA). It was sufficiently serious a problem that a second conference was organized two years later (ICARA II) and the refugee problem continued to grow for another decade, dropping from view as a crisis simply because a bigger crisis of famine grabbed the headlines. The crisis of famine in the Horn of Africa and then throughout the Sahel was a very visible symptom of failed development and the failing economics of post colonial independence.

During my work with famine disaster and refugee crisis situations I learned that most field staff were very committed to their work and willing to put themselves in harms way if necessary. Most went the extra mile without a thought, but sadly, some of the staff were using or abusing the system for their own gain. My view of this was that the system was not good enough to identify and control this and the whole system was at considerable risk.

My experience in Liberia is typical. After almost 10 years of working in various capacities in and around Liberia starting with my CSF fishing experience and later doing various consulting assignments, I had some experience and understanding of its social and economic situation going back into the Tolbert era. I had to work around the Doe coup to keep our staff safe

... and later did work with the Doe government and the IFC on trying to unwind some of the nationalizations that had taken place after the coup.

*In 1982, myself and a small team did a modest piece of work in Liberia for the World Bank in which we were requested to confirm that cooperatives being run by a World Bank project had produced the anticipated results from Phase I of a project. Our consulting team could not provide this confirmation based on any of the facts we knew. It was clear that the project run cooperatives were being used simply to channel project resources to a group of elite functionaries. On the other hand a group of true farmer cooperatives were doing very well, but were not part of the project. That was what the analysis showed, and that is what went into the report.*

Our group was paid our in-progress fees, but not the final fee associated with delivery of the report. Nobody would sign off unless we would change the conclusions of the report.

*The World Bank was faced with a conditionality of their own making. Phase II of the project was conditional on a report showing that Phase I had been successful. How did this get resolved? The World Bank changed the conditionality for Phase II and went ahead ignoring our findings.*

From what I have observed most World Bank evaluation consultancies would not have found this problem ... and if they had, might not have had the commitment to financial rigor that comes from training as a Chartered Accountant. Many accounting related questions are handled by people with no relevant experience, and in my case I had senior level audit and investigation experience from early in my career and it was very obvious that there were problems.

*I did not take kindly to the fact that the staff of the government Cooperative Audit Office were instructed not to talk to me. When I eventually was able to see their audit working files for all the cooperatives, it was good to see that the government audit staff had done very good audit investigations for almost all the government operated cooperatives (with World Bank funding) but infuriating to find that nobody was going to see this work. The cooperatives were nothing more than financial shells being used to siphon off project funds.*

I found out that the little cooperatives being run by farmers themselves were doing well though small and struggling with little external help.

I tried to see the key government official in charge of all of this, but he was suddenly taken sick and was not able to discuss any of these findings with me. The World Bank official back in Washington was “on mission” when these findings came to light and nobody was available to take this up or give us guidance. The saga continued.

*To get our group to change our conclusions, a government accounting adviser in Monrovia was sent to me to explain the government position on the big cooperatives, and to explain to me that I did not know what I was doing ... that I was not competent to draw these conclusions. This did not work out as planned for the government. They sent the local Coopers and Lybrand partner in charge to do this ... and it clearly an embarrassment when it turned out that I was somewhat more senior than he was, considerably more experienced and had trained in the same office he had.*

As far as I am concerned the government, Coopers and Lybrand and the World Bank should all be ashamed of the way they conducted themselves. Our little consulting team was right. The World Bank was wrong. A few years later the World Bank realized that their loans in Liberia were a serious mistake, but by then it was really too late. They had funded a monster. They had made loans and created debts that were not going to be repaid. Sadly the Liberian people still needed support for economic development ... but that did not matter. The World Bank retreated and pulled out of Liberia leaving a huge development vacuum which was one of the issues that destabilized the country.

*Years later I was working on a UNDP assignment in the Cote d'Ivoire about government organization and management. The World Bank and the UNDP had agreed in New York and Washington that our work and the World Bank work should be coordinated. Our team was working in Abidjan for several weeks. The World Bank team arrived, I think it was on a Thursday, we had a big meeting with government, with UNDP and with the World Bank team, and it was confirmed that we would coordinate and the work would be done together. I asked the team leader if the World Bank had any thoughts about the direction of their analysis and was told that they were coming with a completely clean slate and no preconceived ideas. Interesting. I tried to meet on Friday, and through the weekend, and on Monday and then on Tuesday, just before they flew out on Wednesday, we were invited to attend the wrap-up meeting. By now the World Bank team leader had 142 items that they had identified as needing to be in the government program. The World Bank handled this in a way that reflects nothing good ... arrogance ... sloppiness ... superficiality ... misrepresentation. Worse, it is a method of working that cannot produce good results.*

I have seen enough of how the ORDA system works to know that something different is needed. I have worked in high performing corporate environments and have a good idea of what is possible. I have worked with research and development engineers who are not phased by the scientific impossibility, they just want to solve the impossible, and in fact keep doing so. I have worked with strong rough people who know how to build things and get things done ... sometimes referred to as the salt of the earth. I know that it is possible to put together an organization that makes development a success.

## Chapter 2 – Amazing Technology

Modern science, technology and engineering is amazingly powerful and many things can now be done that were impossible just a few years ago. But in spite of this, the performance of society in terms of quality of life seems to be seriously off-track.

With modern information technology and data processing we should be in the middle of an information of knowledge age with associated metrics, but we are not. The metrics are the same old same old that served reasonably during the build up of industrial economies but no longer serves us very well. There is no attempt here to describe the technology and how it is changing, even though this is a fascinating and important story.

### **Moore's Law and All That!**

Rapid changes ... huge power

The technology is changing very rapidly. TVM is committed to the best possible use of technology in association with data that are designed to be useful for better decision making for society.

In many ways the performance of TVM is independent of technology ... but the rapid pace of computer science innovation suggests that the basic data model for TVM will be superceded in due course by something based on better use of technology that cannot be envisioned at this stage.

Technology has changed a lot in the last fifty years ... and a lot in the last five years. Technology is changing fast ... very fast ... and accelerating. Rapid changes in technology are changing the economics of some parts of our society, but not always in a useful way. The possibilities of technology are not yet being well used for the benefit of society as a whole, and especially, not for the benefit of those that are at the bottom of the pyramid (BoP).

### **Productivity ... facilitating paradigm shift**

Knowledge ... technology ... application of science in appropriate ways results in productivity ... and productivity makes it possible to have a surplus producing society or community.

Throughout history technology has always been the primary limiting factor in making sustainable progress ... or to put it another way, development of technology has made it possible to do better things ... pump water, deploy the wheel, grow more food, access more power (steam, nuclear, electricity, communicate widely, etc). The acceleration in the progress of technological innovation in the last few decades makes it possible for all of society to have access to the good things of life ... but the social and economic system does not allow this to happen.

TVM is about data much more than about technology. The ideas of TVM were applicable when paper was the storage medium, and the same ideas still have application in a fast moving digital age. TVM was designed to be independent of technology ... the data are a logical framework that does not need technology ... but these data become a million times more powerful when matched with the capabilities of technology.

### **Computational power ... unproductive data**

Data collection workbooks are used so that data collection is very efficient using the relational model, and for efficient data acquisition using mobile phone SMS data transmission. Technology for data collection is advancing into the 21st century ... but the mindset about using data for important things remains in the stone age! People change slowly! There are many possibilities for the use of technology to help with data collection ... and what is used should be what is most cost effective. The best technology from the

technical standpoint is usually not the most cost effective.

Over the past 50 years there have been, inter alia, manual systems, mainframe computers, personal computers, client server systems, Internet based systems and mobile cell phone systems. Analog has changed to digital. Character based communication systems (typewriters and telex) have been supplemented by images and audio and video. The technology has increased in capability and the cost has decreased amazingly ... and the opportunity to do amazing things exists for us. We are constrained by our vision, our imagination and our organization.

Chip technology has made all sorts of things possible. Computational power has increased exponentially for many years and the potential is a long way from being fully utilized.

Moore's Law talks about computational power doubling every 18 months and costs halving every 18 months. This idea now goes back almost 30 years ... the impact on information processing is staggering.

Stationary centralized computational systems have given way to distributed systems ... to the Internet and to mobile systems. The power has gone up and the costs have come down.

If the cost to power relationship has improved by a factor of 1 million over the past 40 years ... how come a data centric profession like accountancy are not a million times more useful? Why has so little of the potential been used for public good?

It really is a disgrace that with so much computational power, society has progressed to such a limited extent.

## **Codd and the Relational Construct**

Around 1978 technology was gaining momentum. I have seen the start of Large Scale Integration (LSI) early in the 1970s and by this time Very Large Scale Integration (VLSI) was becoming possible. Computational power was increasing at an accelerating rate along the Moore's Law trajectory.

Codd and the relational construct came into play around this time, making it possible to connect data and computational power together in ways that would facilitate much more efficient use of data for analysis and decision making. It was said at this time that the relational construct would completely change the way "accounting" was done, and in some ways this has been true.

Oracle and SAS are big success stories in the corporate world ... two corporate organizations that have built on the Codd relational construct to create a very big business ... and there are many others that embrace the relational construct to make data useful.

*In my own case, I have pushed for the relational database to be a tool for management in the ORDA arena. Towards the end of the 1980s I had made some progress developing the Burgess Database System for Development Analysis (BDSDA) ... alternatively referred to as the DataBase System for Development Analysis (DBSDA). This was a relational database system that ran on FoxPro and enabled rapid organization and analysis of data about socio-economic development.*

*I used elements of the BDSDA framework in the work I did in connection with the First Development Plan for Namibia after its Independence in 1990. This plan detailed more than 800 projects that were a priority for the new government, and the UN donor pledging conference that used this work had pledges made totally more than \$700 million ... for a country with a population at the time of around 1.3 million people.*

*I had high hopes that my BDSDA initiative could be merged into Development Cooperation Report (DCR) program that was managed by the United Nations Development Programme (UNDP). It is my understanding that in 1978, the UNDP had been tasked by the UN General Assembly with the preparation of a Development*

*Cooperation Reports for each of its member countries. Over the years the preparation of the DCR progressed through various spreadsheet iterations to a FoxPro database version (the Development Cooperation Analysis System – DCAS) and by 1990 was becoming a very useful source of development project information in many countries. I helped out on the preparation of the DCR in several countries and also used them as the starting point for many studies that I did over the years.*

*But something happened. Around this time the DCR and DCAS initiatives started to die a quite rapid death. I am not sure what it was ... but the work on these systems was sidelined and then seemed to completely disappear. My guess is that there was push-back from both donors and beneficiary countries because these data were beginning to be detailed enough and accurate enough to show way too much ... both the “leakage” at the beneficiary level and the “inappropriateness” of many of the donor programs. My guess is that there was conditionality on the part of donors regarding the 1990 funding round for UNDP which had a high level of support from many of the beneficiary countries ... not to mention considerable internal support within UNDP who were as uncomfortable as every one else with meaningful data about fund flows and development performance.*

There is power in good data data ... and the corollary is that when there are no good data, the associated performance has serious problems.

## **Using the Power of IT**

The power of modern information technology (IT) is a million times more than fifty years ago ... yet the available metrics about socio-economic performance are not much different. This power is not at all well used for the benefit of society as a whole. This is a disgrace.

*I have seen too much the power of IT being used to compensate for the lack of data or to compensate for the sloppiness of the data. Modern computation and statistics may be able to help sort out messy data, but it would be so much better to have better data to start with. I first became aware of this problem in the 1970s with the processing of fisheries data ... much improved mathematics created by a team led by John Gulland FRS at FAO and increasingly suspect data from the field about the resources.*

Rather than using the power of IT to compensate for weak data, I would like to see good data and good use of IT. In combination good data and powerful IT could have a huge impact on socio-economic performance and the Quality of Life

My work to develop the system of True Value Metrics (TVM) aims to be something of a paradigm change in the way socio-economic data are collected and the analysis is done. For all practical purposes the only economic and social metrics that are widely used are those that relate to money and wealth. TVM is a paradigm change in that it works in terms of value as well as money.

There have already been some big changes in social interaction because of IT. IT has enabled social networks of various types including Facebook. Before this IT enabled the Internet and the World Wide Web ... and then Portals ... and then Search. These applications of IT and others have changed the landscape of data and knowledge ... and the change is not over yet by a long shot. We have come a long way from the International Telex to modern text messages and Twitter ... but we have hardly scratched the surface of what is possible

So far there has been private use ... and that includes military and national security use ... of powerful IT to collect and process important data, but little of this technology has yet been deployed for public benefit in the context of Quality of Life.

What is accessible to the public through Google search is huge ... but disorganized . What Facebook does for friends is amazing, but essentially only for entertainment. These IT applications and others like them

have enormous capacity to overload the user ... and in the end ... society moves backwards! Both these application areas are being increasingly exploited for profit benefit ... maybe they can also be exploited for social benefit?

I want TVM to be different from much of what has been done so far. Specifically TVM aims to use more data to produce better information about things that are very important without massive data overload ... to facilitate better decisions and to help track decisions so that there can be follow up to get the best possible performance. People already do much of this already in the field of sport, but we do hardly any of this for the communities we live in. When we start to monitor and measure decisions about our quality of life, then there will be progress ... just as sporting performance gets better and better, so also can the performance of society get better and better.

## **Internet ... WWW ... social networks ... cloud computing**

While TVM is built on concepts that were applicable for pre-computer accountancy, the architecture of the data also works for an electronic environment and Internet accessible data and analysis. As Internet technology has evolved, the need for and use of “broadband” has increased, and most applications now require broadband access for the Internet to be an efficient tool. This has the effect of making the Internet a limiting factor for the universal deployment of TVM. The combination of Internet and other technology driven tools now makes data centric programs cost effective.

The idea that platforms like Facebook and Twitter can emerge in the Internet space over a period of a few short years and engage hundreds of millions of people is cause for some optimism. At the same time it is worth noting that many thousands of similar initiatives have failed doing things that are quite similar.

The idea of the social network is relatively simple ... it is about friends and being in contact with ones friends in a very simple and convenient way. It is flexible and the interaction with friends is subject to few constraints ... a good feature most of the time, but not all of the time. The Internet with PC access was the initial driver of the social network phenomenon, but the paradigm has already shifted to the mobile platform so that virtual network connections may now take place any time almost anywhere.

Facebook was originally populated by friends in the university setting ... this then expanded to other younger people, the “millenials”, those born after the Internet and the mobile phone became commonplace. Now older people are engaging with Facebook as well as corporate enterprises, entertainment stars, political figures and everyone else seeking recognition in some form or other.

TVM is joining in with a Facebook presence ... a Twitter network ... blogs ... and branding. Without these TVM will be just another idea that does not achieve very much. With these modern tools of communication, it is possible that TVM can make more progress in improving socio-economic metrics in two years than the economics and accounting professions have done in two hundred years! This is not a preposterous claim about TVM ... but a realistic claim about the potential of modern technology for promulgating ideas and information.

## **Mobile technology**

Mobile technology is doing to PCs today what PCs did to mainframes thirty years ago ... maybe faster and with more impact for society. It took a long time for PCs to move beyond the relatively affluent to a larger and poorer segment of society ... but the mobile phone has done that way faster than anyone really expected. Mobile phones are everywhere, in surprisingly remote areas with connection to everywhere.

The modern mobile phone has hundreds of times more computing power than the big mainframe computer I helped install in the 1960s and I believe more computing power than was used to fly the Apollo Moon Missions. I worked for the company that did the communications technology for that program ... and yes, it used computers ... but very weak and clumsy by modern standards!

Data is now working on top of the basic mobile infrastructure ... and at very modest cost. The price being charged for the service is not always modest ... in fact some of the price plans for mobile services are very high.

Whether mobile phone service providers will operate in a manner that is pro-profit mainly or pro-society is not at all clear. The issue has not yet become a widely reported confrontation between the people that invested in building the infrastructure and the people who have a responsibility for regulating the industry and industry oversight.

Technology has developed from a simple filing cabinet ... through punched cards and paper tape ... to magnetic tape and discs ... to hard disks and solid state storage devices ... and now to huge web accessible data-stores that are unimaginably large!

Technology is not the problem ... facilitating its cost effective use is the challenge.

And all sorts of other technologies

The pace of technological innovation shows no sign of abating ... and if we can bridge the divide between what is being done with data and what could be done with data it is amazing to contemplate!

### **Low cost data acquisition and accessible data**

Specialized PDAs (personal digital assistants) have been used for a number of years (since around 1995) to reduce the burden of paper based data in mobile situations. Organizations like Federal Express and UPS were early adopters of this specialized technology, and it has been adopted for many applications where accuracy and speed are important (for example inventory control). The use of a PDA is cost effective when labor costs are high and the use of data has a high value. PDAs are rarely low enough in cost to be of advantage in low wage settings ... but they have been deployed by AID agencies using grant funding even though the sustainability of their use is near zero.

Mobile phone technology has produced a paradigm shift in communication. The deployment of cellphone technology has been very rapid, and a very good example of a low cost technology producing a very high value ... and marketed in ways that have made the service affordable to customers in a broad range of economic circumstances. Mobile phones have both data and analog capabilities, and this enables both text or data transmission and image capture and transmission. It is unclear how much of these technologies can be deployed immediately, but it is clear that rapid change is happening.

Internet ... cloud computing ... accessible data ... are all now possible in ways that were not available as recently as 2007. What is possible now is impressive, and we should prepare for even better data in the future. There are all sorts of technology initiatives that are progressing and perhaps suited to the TVM approach to data acquisition and management. These include:

# Chapter 3 - Why I Am So Mad!

To put it politely ... I am really disappointed at my generation of leadership. There was a huge amount of optimism in my generation of students ... but very little of what should have been possible has been accomplished. Yes ... some progress ... but relative to what should have been achieved rather modest ... more accurately, pretty pathetic! There are a whole host of things that make me so mad! These are a few ... in no particular order.

## **The misuse of scientific knowledge**

Scientific knowledge has moved ahead at an impressive rate ... but scientific knowledge has been used more to make money and empower the powerful than to progress quality of life for the population at large. Science can be used to generate power or to build bombs ... to progress military objectives. Science can be used to improve health for all or merely to improve health for the wealthy and generate business profits. Scientists have done amazing research and pushed the frontiers of knowledge ... but much of the world's society is not seeing much of this because the only way science gets applied is when it will make someone money. Quality of life is about more than money ... but that is the way allocation of resources is done.

## **Huge computational capacity ... pathetic social information**

The ability to compute is millions of times greater than when I started my career, but the data about society and the way decision making is done is still in the stone age. This is ridiculous and could be very different if there was any leadership interest in have better information in the public space. Much data that could be in the public space is maintained for proprietary use and for profit when it would be more valuable to have it accessible to the public.

## **The political class ... politics and politicians**

I am mad as hell at the political class, at politics and politicians. While I am impressed with what scientists have accomplished in the field of scientific discovery, I am appalled at the accomplishments of the political class. Politicians have had a big role in facilitating the cavalier behavior of the corporate sector and have done much to enable irresponsible economic activity. They are a big part of corruption which is probably at an all time high. They dance around the big issues letting them go on for years including big issues like the illegal trade in drugs, human trafficking, money laundering and tax evasion. The political class is central to much of the global violence that has killed and maimed millions in the last two decades.

## **Modern education**

I am mad as hell at educators and modern education. Over the years education has changed ... but the way it has changed is unsatisfactory. Some education serves the student well, but a lot does not. My father was an educator, the head of a secondary modern school in the UK. He approached education from the view that education should help the student be as good as they can be ... every student should have the chance to make full use of their talents. This meant that students needed real skills for the available jobs ... not merely certificates about their educational progress ... and educators needed to understand the society where the students were going to work. Education is not only about knowledge ... it is about matching knowledge with needs ... and modern education is not doing what it needs to do to get a secure and prosperous future for the students now passing through the system. I am mad as hell at the business schools where students have been taught in depth about financial calculations involving money and profit, and almost nothing about the dynamic of society, quality of life and how allocation of resources and

investment choices can improve quality of life. Simply put, I am not sure many educators understand the purpose of education.

## **The high cost of healthcare**

I am mad as hell about the high cost of healthcare. I am pro-profit and high but reasonable remuneration. There is something seriously wrong with the business model that has been allowed to take over the health sector. This business model enables very high profits and remuneration in some parts of the sector, and high costs that get reimbursed by some intermediary that in turn is able to get payment from either the government or some health insurance pool. The general public has no way of following the money through the multi-level labyrinth of organizations and programs to understand what is sensible and what is not. In the end, there are some big winners and a whole population of ordinary people who fund it.

## **Hate ... vengeance**

I am mad as hell about hate and vengeance. For some reason hate and vengeance and violence are seen as solutions when in fact they serve only to perpetuate a vicious cycle of mayhem. Surely we can do better than this ... but the fact that hate and vengeance are so prevalent raises questions about what it is that we are doing as parents, as educators and in leadership that creates so much hate and vengeance. Hate and vengeance grow when these are seen as the only options. Too many in powerful positions pay no attention to what their success has done to those who are disenfranchised.

## **Power derived use of force**

Power that is derived from military force, that is from the mouth of a gun has no legitimacy in a civil ... civilized world. I am mad as hell about military centric development. Many business people are making huge profits from the manufacture and sale of weaponry ... and taking no responsibility whatsoever for the mayhem that weaponry causes. Many people in power retain their positions because they have control of an army and are in a position to force their will on the people and maintain their hold on power. I respect the military. There are times ... relatively few ... when the military are needed, but their use in the political space is wrong. The proliferation of conventional arms around the world in the last fifty years is obscene ... producers and arms dealers should be held to account way more than they have been in the past.

## **Poverty, hunger, drought and pestilence**

I am mad as hell about the prevalence of poverty and hunger ... the impact of drought and pestilence. Some things that get done in modern society are incredibly efficient ... but what we are doing about poverty and hunger, drought and pestilence is incredibly inefficient. There is “failed development” on a large scale, and little being done to change the process. The established institutions ... Governments, World Bank, UN, bilateral aid agencies and NGOs ... need shaking up so that huge needs get addressed. Bureaucracy and academia have taken over the official relief and development assistance community and performance has gone nowhere. Fund flows continue and the people who are in control of the process benefit as long as the poverty, hunger, drought and pestilence persist and as long as there are no performance data to expose the scam.

## **An inordinate focus on stars**

Most people work hard and get relatively modest remuneration for what they do. Some corporate “stars” get huge remuneration and an inordinate amount of “kudos” while others who are almost as good in terms of talent struggle for their whole lives. The money focus society encourages the star syndrome ... diverting media and available resources from a much bigger community of people that could do for society all sorts of value adding activities but never get the support and attention they deserve.

## **Metrics that highlight all the wrong things**

I am mad as hell about the present state of corporate, governmental, and NGO metrics. The state of broad socio-economic metrics is a disgrace. Nothing in modern metrics addresses issues around quality of life in a meaningful way. Everything is about money ... and even modern money accounting is a mess. Metrics about corporate profit, GDP growth and stock market prices are ubiquitous not they are not enough. There may be a whole range of correlations between these things ... but none have much bearing on the core issue of how quality of life is moving and where it is going to be in a few years time.

## **The idea that consumption is a measure of economic performance**

In a society where there are chronic shortages, the idea that more consumption is progress has merit ... but for the past 50 years or more, the United States and most industrial countries passed that point, yet they still use more and more consumption as a relevant metric for better. This is just plain stupid. When a person is hungry ... some more food is a positive, but when a person has enough food, more food is not particularly important. The same for most other things. Progress is better and better quality of life.

## **Concentration of power**

Concentration of power has never been a good thing for society. Anti trust and anti monopoly legislation has recognized this in the dim and distant past, but the profile of concentration of power is worse now than any time in history ... and likely to get worse. There needs to be balance between producers and consumers, and I would argue it is consumers ... people ... who are more important in the equation than simply the big corporate interests. A market economy is a good idea and it works unless there is excessive concentration of economic power. Modern corporate business organizations have a level of concentration of power that is dangerous. There is also too much concentration of power in business, in education, in government, in healthcare. Transparency and accountability are very difficult when the organization is very big ... and big then becomes a cover for all sorts of anti-social behavior.

## **Waste ... value destruction**

While there is over-abundance in rich countries, this should not give anyone the right to waste perfectly good things. There are far too many people in the world that are short of good things, and waste is just plain wrong. Too many of the systems of metrics ignore the waste component of modern society ... and due course we will be buried in waste. Rather we should be working on building processes so that there is a minimum of waste and value destruction.

## **Obscenely high levels of remuneration and reward**

People who work deserve reasonable remuneration ... and there should be incentives so that people who work hard and are productive get rewarded. In the period since 1980 remuneration and reward for some job categories has become excessive while for others remuneration and reward has deteriorated. I would happily debate anyone who gets multi-million dollar remuneration about its reasonableness ... based on the underlying value proposition associated with the work. I cannot for the life of me understand how anyone deserves annual remuneration that goes beyond a million dollars ... and then has the nerve to want to pay little or no tax on the remuneration. If all the world's problems had been solved it would be one thing ... but there is an enormous amount that needs to be done and not enough funding available to do it.

## **Low wages ... hard work**

I am mad as hell about low wages being paid for hard work ... and equally mad at high wages being paid for little work. I do not like the sweat shop business model that has proved so profitable since the

beginning of the industrial revolution ... and has been a big profit driver during the globalization of the last two decades. Unions that were a force for good in getting fair wages and reasonable conditions for workers have done way too little in recent years to improve wages and working conditions on a global scale. Worse, they are part of the problem of high cost unsustainable activities in the public sector that are now causing grief in many parts of Europe and in cities and states in the United States. Unions, like all the other parts of society need to be working for the benefit of society as well as the narrow interests of their members. Society needs good paying jobs that are value adding for society ... jobs that pay well with decent working conditions. Everyone should have the opportunity to work, to be paid and to be contributing to society.

### **Rule of law ... abuse of law!**

I like rule of law ... law that puts order into society and sidelines the forces that lead to anarchy. Natural law ... and that included a lot of traditional law ... does this very well, including making equity and fairness as big part of the outcome. This contrasts with a lot of modern law ... law that has been created not because of the wishes of the people as a whole, but by powerful special interests of all sorts. Surprisingly little modern law seems to be completely “pro populo” when looked at in its entirety ... the loopholes too often being bigger than the law. Much of the modern value inequity that has emerged in the past century has its origins in some aspect of “law” that facilitated abuse.

### **Bureaucratic inefficiency ... incompetence**

Bureaucratic inefficiency is a terrible problem, way more serious than most people realize. The trouble is that a very large part of modern society and modern employment is associated with bureaucratic activity. In the factory era, this used to be referred to as “unproductive overhead”, and it is exactly that in most cases. Some bureaucracy serves only to get in the way of a high performance happy society. Some bureaucracy makes it possible for all sorts of people to get paid for work that is mandated by bureaucratic rules and regulations that no sane society should require. Some bureaucrats are great people struggling in a morass of silly rules and regulations ... some bureaucrats are incompetent and saved from exposure by the same morass of silly rules and regulations. Bureaucracy is to a large extent value destruction in high gear.

# Chapter 4 - What Now?

I want to do something useful ... something practical ... that builds on what I know and what I believe could be a paradigm changer for the use of global resources. I used data and management information systems very effectively for decision making and performance improvement in the corporate setting ... and had some modest success using data to drive decision making in the international relief and development arena. What can be done to replicate the success in a broader setting now that we have amazing information and communications technology and a surprisingly ubiquitous infrastructure that enables data almost everywhere.

## Getting beyond disillusionment

My near total disillusionment with leadership and especially the Official Development Assistance (ODA) community including the World Bank, the United Nations and leading bilateral agencies took a long time to emerge ... about 30 years. I did my first assignment as an independent consultants with the World Bank in 1978, and only moved into my present modus operandi quite recently.

I have got to the time in my life where I do not have to be too concerned about the next step in my career. For all practical purposes my career is behind me. It is very liberating ... and gives me an opportunity to analyze with total independence and objectivity.

*Actually this might be better said that I can now work with complete subjectivity ... doing analysis in the way I think the analysis should be done.*

When I was a student at Cambridge and training during my early career I had access to some very experienced and thoughtful people who impressed me a lot. Over time I found more and more people with considerable power who used their education, training and experience to “game” the system in a variety of ways for their own personal benefit.

As a professional trained Chartered Accountant from the UK ... and from an era when the accountancy profession was expected to stand up to abuse in financial reporting, I was unhappy about what I was seeing ... but could not see a way to do very much about it. My modest efforts in the mid-1989s to get a professional dialog about these matters going got no traction, and alienated professional colleagues more than I ever expected.

In the late 1980s it was becoming apparent that consultancy was more important than audit to the profit performance of the accountancy profession ... and to the remuneration of the top people in the profession. This was obviously a situation fraught with professional peril ... but who really wants to address it when the financial impact of “doing the right thing” was clearly highly detrimental to professional profit. It came as no surprise that Enron reported almost exactly what they wanted to report without effective review by Anderson, and the other big audit firms are all faced with similar decisions because that is the way the audit business is structured.

Also in the 1980s, my use of the “C” word ... corruption ... around the World Bank was as unpopular as cancer. For an accountant who had some competence in “following the money” it was pretty clear that this was a huge problem and needed to be addressed. Eventually a senior World Bank staff member left the Bank and started an organization called Transparency International and quite quickly the subject of corruption moved onto the conference agenda for discussion.

Right from the start I had misgivings about the approach being used to address corruption. Surely the way to stop corruption is to be action oriented with but investigators, prosecutors and enforcement with teeth to put a stop to it rather than comfortable dialog in a plush conference setting to discuss the subject.

*Quite recently I asked a World Bank officer who was on a panel at Columbia University about the ongoing problems with corruption and it was interesting how he handled my question ... referring to the World Bank procurement policies that do not allow corruption. In a follow up remark I made the observation that there has been policy bans in procurement for decades, and they don't work! In the meantime the World Bank never does anything to strengthen accounting and financial controls so that corruption is more difficult or even impossible.*

Bottom line ... almost 20 years after the start of Transparency International the reports suggest that the scale of corruption is at record levels in the past three years.

## **Which brings me back to accounting and metrics**

Being an accountant has never made me popular ... but it has gained me respect ... and worse.

As I see it, the big opportunity is to combine the power of simple accounting, with the amazing power of modern information and communications technology with some new ideas about money and value.

*When I put the right metrics into the corporate setting, everyone in the company pulled together to produce amazing operational performance. Some people did not like the accountant for doing it ... it sorted out the producers from those that were not ... but for most people it was pure win. Surely the same thing can be done for society.*

This concept is being pulled together as True Value Metrics.

The genius of accountancy has always been its inherent simplicity and its use of the double entry construct. The use of both “balance sheet” and “profit and loss accounts” in a coherent integrated set is a very powerful mechanism to achieve financial control and to have integrity in the data and the reporting.

What will happen if we can use the same construct for value as well as money. In the corporate world the money accounting makes it possible to account for and report on profit. In society ... in the community we should be able to do the same thing for value.

But how? Everyone knows that value is subjective and difficult, maybe impossible to quantify. Yes ... value is subjective and difficult, but not impossible to quantify. In fact it is relatively easy to quantify using another concept from corporate accountancy ... the idea of standard costs. All we have to do is to quantify things using a standard value ... and see what emerges from that exercise.

There is good news from the field of ICT ... there is almost no constraint on the amount of data that may be processed ... though it does need to be organized and logical. Everything can have a standard value ... just as everything that gets bought and sold has a money price. Better yet, the standard value does not have to be the same on a specific item in all locations ... if an American thinks of something as value “x” and a European thinks of the same thing as having value “y” ... there is an interesting fact about different perceptions of value ... which in itself is might be interesting or even important.

There is more good news from the field of accountancy and financial reporting. In accountancy ALL the financial transactions of the organization are recorded and organized in a very basic way into “accounts”. Each period ... usually a month ... and then at the end of a year ... all of these transactions are added up with sub-totals for each account and financial reports are prepared based on these sub-totals. Instead of looking at thousands or millions of transactions, corporate executives and managers only have to look at a rather small set of numbers that show the performance of the enterprise.

If we can do this with money transactions in the corporate setting, why can't we do the same thing with value in society. Maybe in some settings it will be possible ... but not all the time and not any time soon.

In the meantime there is another concept from accountancy that can be used. Because balance sheet accounts and the profit and loss accounts are an integrated set of accounts, it becomes possible to use a

process once called “incomplete records” to prepare reports that are meaningful where some elements are missing. For example it is possible to deduce the progress of an entity over time merely by looking at the change in balance sheet accounts from one time to another.

In True Value Metrics, the “State” of the community at a point in time is represented by the value balance sheet at that time. The “Progress” of the community over time is represented by the change in the value balance sheet from one time to another.

In order to know about the performance of the community in terms of what is was that caused the changes, then there is the need for more data ... data that is like the profit and loss account data in money accounting.

Finally True Value Metrics wants to address the issue of organization centric analysis and reporting which dominates money accounting and instead use the community as the reporting entity. Again the construct for this has its origin in corporate accountancy ... the rules of consolidation and the idea of consolidating statements that show how a complex business organization aggregates its performance. A community perspective for the process of value adding ... or value destruction ... and which organizations are producing value or not.

## **Writing up the True Value Metrics methodology**

Some effort has already gone into writing up the True Value Metrics methodology ... an eight chapter book of about 200 pages on the Basic Concepts of True Value Metrics is almost ready for publication.

This will be supplemented by a Workbook on how to use the True Value Metrics methodology in practice.

It has taken several hundred years for money accountancy to progress to its current form. True Value Metrics will not emerge in a fully mature form instantly ... but hopefully quite fast. In some ways progress will be accelerated by adoption of the “Open Knowledge” approach which allows everyone to help improve the system.

## **Building the Standard Value database**

The “Open Knowledge” approach is being used to build the standard value database. Using web based data collection, any individual with opinions about standard value is able to contribute to the accumulated knowledge. They have their own standard value set ... which in turn builds a standard value set for a community ... and in turn for a nation ... and in turn for a global average. Each community makes decisions based on its standard value profile.

## **Applying the True Value Metrics process to pilot communities**

During the next few years more and more communities will apply the True Value Metrics process and in the course of implementation everything is going to be subject to change. Everything I have learned will be incorporated in the methodology, but I am comfortable with the idea that the methodology is not going to be based on my ideas but on the best ideas. The goal is to have metrics about community and social performance that have the ability to get universal respect and to be easy to compile and easy to use.

In the next few months there will be small pilot programs in various different types of communities: remote rural communities in Africa; communities doing post-earthquake rebuilding in Haiti; suburban communities in the USA; urban communities in the USA; rural communities in the USA.

## **Applying the True Value Metrics process in pilot organizations**

All of the concepts of True Value Metrics are equally applicable in an organization as they are in a community. Many organizations have a Chief Financial Officer (CFO) who is charged with the money accountancy and financial reporting and relatively clear rules. Many companies have introduced

Corporate Social Responsibility (CSR) or are doing Sustainability Reporting using one of the emerging global reporting standards. True Value Metrics needs to become a way that these initiatives gain more credibility and recognition.

### **Building a web presence ... building “brand”**

A web presence for True Value Metrics will emerge. It is emerging already in a modest way, but this will accelerate.

### **Using web presence to build a network**

I have always tried to respect other people's time ... but at some point I have to ask for help and get a lot of other people involved. This time is approaching. The True Value Metrics methodology is advanced enough to be useful in its present form and a network of like-minded people can move this from where it is now to where it could be with better brains behind it. The web presence will incorporate ways for a network of True Value Metrics enthusiasts to collaborate.

### **Using web presence to handle data flows**

The role of “cloud” computing in managing data is rapidly emerging ... and in due course the whole of the True Value Metrics data management should be part of this.