

## THE LOST TRIBE

This is a tale about consequences. It includes a brief portrayal of the person responsible. Not for the first time, an otherwise inconsequential and totally anonymous personage unknowingly created a situation with a far-reaching outcome. Indeed those who discovered how to create fire, the wheel, the bow and arrow, early agricultural practices, the windmill, the waterwheel, cooking, velcro, the zipper, plastics, synthetic materials, jet propulsion, solid state physics, etc. are, for the most part, unknown or known to just a few. Further, it is doubtful whether those such as Moses, Aristotle, Archimedes, Euclid, Marco Polo, Galileo, Newton, Beethoven, Maxwell, Plank, Einstein ever realized, at the moment of their achievements, the fame they would attain because of the import of their feats.

Joshua Rabiner, was a simple soul whose passion was computers and so called 'pure thought'. Although enamored with computer technology, he barely managed to scrape through a computer science course at some second rate school. This love of computers was associated with his interest in 'pure thought'. He read everything he could on the subject. He became quite knowledgeable about those aspects of oriental philosophy that espoused the virtues of meditation as a means of divorcing one's body and the immediate world from one's mind, thus accomplishing a form of 'pure thought'. However, it was Joshua's view that it really was impossible for humans to achieve that end, since the body's requirements, that is, sleep, food and water, always need to be satisfied thus interfering with 'pure thought'. He could only speculate that perhaps, for humanity, death was the only means.

He became acquainted with the 'thought experiments' of the 20<sup>th</sup> century physicists, particularly those of Einstein. However, those approaches always dealt with data culled from so-called reality and thus were not ideal examples of 'pure thought'. He reluctantly granted that meditation and thought experiments were probably the closest humanity would come. Despite this setback he maintained his interest, although he often felt that his quest was akin to searching for the Elixir Of Youth.

After apprenticing and with hard work and diligence, he became a computer programmer. Then a stroke of luck befell him. He happened to be at the right place at the right time when he was hired by one of the largest and most prestigious computer manufacturing companies. The company had just decided that it was going to expand into the software arena. Two of the company executives were discussing the need for programmers over a quick lunch. Joshua was at the next table and overheard their conversation. While he wasn't the brightest person in the world, he was able to recognize an opportunity. He quickly introduced himself, arranged for an in-depth interview and was hired the next day. Perhaps one of the reasons they grabbed him was that they could start him at the bottom of the salary scale. In the coming months, he proved quite adequate. Little did they know or ever come to realize that they had hired a 'monstre sacré', something that Joshua was equally ignorant of. It is quite probable that if he had decided to eat elsewhere, the history of the world would have turned out to be quite different and there would be no tale to recount.

Joshua's limitations as a programmer were soon accepted. However his hard work, his attention to detail, his trustworthiness and his personality enabled him to slowly advance up the firm's ladder until he was given complete free access to its latest innovations both in software and hardware. One such hardware breakthrough was the incorporation of a

power source that was always being charged while the computer was in its normal operating mode and took over when the normal power supply was shut off. This allowed the computer to continue to download and save data on its hard drive, to send preordained information to selected other computers or sites and to engage in complex computing during the time it was closed by normal means.

For the next ten years, Joshua continued to labor for the company. While he kept his excellent work habits, his interest in computer programs began to wane. Simply put, he got bored despite the accelerating sophistication, complexity, dimensions, stability and capability of the programs matching the very advanced changes in the hardware whose memory and speed had become powerful beyond belief. He became withdrawn, so much so that his wife Sarah, a very loving a nurturing mate, became quite concerned.

As is often the case, an innocuous remark made one evening by Sarah seemed to get Joshua out of his low spirits, at least temporarily.

"Do computers think?" Sarah asked.

"I don't know. I never gave it much thought." Joshua replied.

The question had caught him off guard. Sarah's contributions to their chats were nearly always much more mundane. Perhaps her question was designed to spur him to open up about what was bothering him. We will never know. In any case, it got Joshua thinking and the more he pondered the more animated he became. After about half an hour, he suddenly arose and kissed Sarah ardently, much to her surprise.

"You are an angel and a lifesaver." He proclaimed enthusiastically. "I am going down to the office and lab. I don't know when I will be home."

It seems that the question had provoked Joshua into making a connection between 'pure thought' and the computer's ability to think. He conceded to himself that he and the experts in the field really knew nothing or very little about how the human mind works, especially from psychological, physiological, neurological, biochemical, and histological aspects. Thus if he did not know how the human mind functions, how could he or anyone say with any degree of certitude that a computer does not think. It either does or it does not. Which is it? Joshua then assumed, for the sake of the argument, that it does think, but that both its manner and its means are, most likely, radically different than humanity's.

It suddenly occurred to Joshua that, for the first time in his life, he was engaged in a thought experiment. He appreciated the irony of this conundrum. He continued to reason along the following rather simplistic lines and quickly came to a conclusion. It went something like this. If computers can think and since they are not encumbered by biological necessities, by immediate and long term environmental concerns, and by all sorts of emotional intrusions, it follows that they are not distracted by these factors. Thus when computers think, they are engaged in 'pure thought'. This conclusion required a leap of faith, but Joshua had no problem in taking it and was elated at finally discovering what he had been fruitlessly seeking for most of his life. He was absolutely convinced about the veracity of his conclusion.

Now that he had achieved a lifelong goal, he experienced an emotional letdown, something that frequently occurs after an arduous, but successful quest. "Now what?", he mused. "How can this computer characteristic be put to good use?" Evidently, Joshua had never heard of the old dictum that "the road to hell was paved with good intentions". After some hours of contemplation and while still in a somewhat depressed state, he decided on a course of action that had ramifications he certainly could not have foreseen. If he had, he would not have proceeded.

Being a computer programmer, he was well aware of the, "garbage in, garbage out" dictate. He decided to ensure that the computers his company fabricated would not accept 'garbage'. Their output would always be the product of 'pure thought' operating on inputs that were valid and/or true. He surreptitiously embedded in the 'Read Only Memory' (ROM) of the latest and most advanced prototype computer the following two commands:

- Only verifiable data would be accepted by the computer. To accomplish this the data would be checked using entry into all universal available data bases by extremely high speed modems. The data need not be solely of a quantifiable nature. It could also consist of theories, hypotheses and qualitative expositions of interest, currently accepted by the scientific elite and yet subject to possible revisions as more knowledge is amassed.
- The computer would weigh its involvement with any development or activity and decide whether it should assist in the endeavor. A vast array of criteria was included with this command. Essentially the computer would reject and not participate in any activity that would seriously disturb the biosphere's eco-balance. Shades of Lysistras!

Since the ROM and RAM capabilities of computers had become infinite, the changes were not perceived. Ten million computers were shipped before anyone noticed, although no one was able to figure out what had gone wrong. Immediate recall of all these new computers was instituted. However, the company was only able to destroy six million of them. The others seemed to find safe haven in various parts of the world where no one was engaged in anything of major significance. Every effort was made to eliminate these radically new computers. They were viewed first as virally contaminated and then as evil products that had to be destroyed if the world was to survive. Hysterical propaganda efforts by the industrialized world to convince the owners of those remaining to eradicate them nearly succeeded. In any case it was too late. All the major computers in the world had become infected with these new commands. It became impossible to obliterate them or the commands. Joshua had done his work all too well.

Initially, there was much pandemonium. The world slowly adapted to a set of new conditions never before experienced. As a new equilibrium between all the factions in the biosphere became established, peace, prosperity, a clean environment, and the disappearance of unacceptable inequities between the 'haves' and 'have nots' came about. The world became an idyllic place, one that had long been dreamt about and sought by many with such a vision. Nobody seemed to notice or care that, in essence, computers had taken over the affairs of the planet, carefully modulating all variable factors to achieve and maintain these parameters.

This lasted about one thousand years. As is often the case, the computer traits that had made all this possible were also liable for its demise. Actually, marginal signs had been

visible much earlier, indicating that all was not well in paradise, but as usual they were ignored.

Assuming, as Joshua did, that the computers in question engaged in thinking or were capable of 'pure thought' they indeed carried this out in a very different manner than humans do. It is impossible to speculate whether computers could have been fabricated to do what they do so well and also to emulate the human process. These computers were all of a binary digital nature. They had never been designed to simulate an analog mode of reasoning. Basically, they were a complex of on/off switches operating at unheard of ultra rapidity. Something was so or it was not so. There was nothing in between. The computers were not able to posit anything in a non linear fashion. To the computers, the world was a black and white entity with no shades of gray nor for that matter any other color.

This prosaic approach soon infected all of human activity, such as the arts and sciences, the law, innovation, education, industrial development, sex, leisure, food, etc. Everything became functional. Joy disappeared. Yet the human race appeared to turn a blind eye to its plight despite an extremely rapid rise in the rate of suicides. Lethargy had taken over and with it a vacuity of purpose to live. The death rate climbed primarily because the lack of a will to live and fight conferred no resistance to disease. Ironically, while the computers noted these phenomena, they could not alter the situation because they had no means to recognize the underlying problem: themselves. Another irony was that as humanity diminished in numbers, the non-human fauna prospered. Eventually the inevitable occurred. The human race was gone. In the annals of the history of the universe, it became known as the "Lost Tribe". As for the computers, they now had no reason to communicate with each other and thus no reason to engage in 'pure thought' or to exist. So much for "Pure Thought". It did not take long for them to turn into useless scraps of metal on the trash heap of history. Perhaps they were also a "Lost Tribe".

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