A lesson from Auschwitz

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Recently I had the privilege to accompany a group of school children on a trip to Auschwitz and Birkenau. By the end of the war some 6 million Jews and many millions of Poles, gypsies, prisoners of war, homosexuals, mentally and physically handicapped individuals, and Jehovah's Witnesses had been murdered. The visit was a time of humble reflection and the placing of things in context. The historical account of human suffering is sickeningly shocking but alongside this is the realisation of the evil brilliance not mindless thuggery that orchestrated the "Final Solution".

The Scientific Management Principles (1911) of F W Taylor promote efficiency in an industrial process. Such principles appear central to the attempted extermination of a race using the abhorrent industrial processes at Auschwitz and Birkenau. For example, testimony of engineer Fritz Sander (March 7, 1946) states, "This [crematorium] was to be built on the conveyor belt principle. That is to say, the corpses must be brought to the incineration furnaces without interruption. When the corpses are pushed into the furnaces, they fall onto a grate and then slide into the furnace and are incinerated. The corpses serve at the same time as fuel for heating of the furnaces."

So what has this to do with computing? What if these events were taking place today? Technological Determinism argues that technology is the force which shapes society. Computing power would therefore be a major force in activating the "Final Solution". Michael Porter's Value Chain Analysis (1985) is one way to consider the impact of this force. Here are just a few examples. These examples are based on computer application systems that exist today and which are proven and accepted.

Inbound Logistics: the receiving and warehousing of raw materials, and their distribution to the industrial process as they are required. Computerised transportation scheduling can minimise cost and ensure timely delivery to the points of industrial process. Humans are the raw material of this particular industrial process. Scheduling would enable enormous numbers of humans to be moved across occupied Europe in an efficient and timely manner. The effective flow of raw materials is a key factor in computerised industrial processes such as just-in-time manufacturing. The arrival of humans could be controlled by calculating transportation routes and speed so that there was a steady flow which did not overwhelm the camps or the industrial process. Rerouting and readjustment of speed could be triggered by "production data" being electronically communicated from the camps and industrial process.

Operations: the processes of transforming inputs into finished products and services. Computerised process control is a method for maximising throughput, minimising disruption and facilitating non-stop processing. The input flows of both human and chemical raw materials of the gas chambers could be fully automated to increase throughput. Once dead, humans need to be moved. The use of robotic devices would enable mounds of corpses to be loaded on to computerised conveyor belts which would route bodies to the next available furnace. This process would be endless.

Automatically controlling the flow of corpses would open the possibility of secondary processes that are alternatives to cremation. For example, the element phosphorus is relatively rare in nature yet it is of vital importance to life. Bone meal is often used as a supplement for calcium and phosphorus through, for example, fertilizers. What would stop the "Final Solution" having two outcomes cremation and fertilizer manufacture?

Outbound Logistics: the warehousing and distribution of finished goods. The sorting of personal possessions, reuse of personal possessions and the recycling of materials could be facilitated by computerised warehouse control systems and goods delivery systems.

The Infrastructure: organisational structure and control systems. The annihilation of sectors of the population can only succeed if it is founded on meticulous record keeping which identifies and tracks every member of a given sector. This is a manual impossibility but with computers is alarmingly easy. The linking of biometric identity tagging with genetic/dna birth records provides the means to identify anyone. An individual's identification and location in computerised form enables inbound logistics and operations to identify and use all desired humans. Some could be redirected to slave labour camps before becoming the raw material of the "Final Solution" industrial process.

This column might be shocking to many readers. That is its intention. It seems that if the Holocaust had occurred in our technologically-advanced modern world there is a very good chance that it would have completely succeeded. If ever there was an example to convince us, as custodians of the most powerful technology yet devised, of our responsibilities and obligations to humankind, this is it. To the narrow-minded technologist, who seems intent on viewing the world as a computer playground where anything is possible and everything is acceptable, it is time to act with professional responsibility. Remember, "All that is necessary for the triumph of evil is that good men do nothing" (sometimes attributed to Edmund Burke).

Please send your views on ethical and social responsibility issues and cases of ethical dilemmas to:

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