The industrial revolution was a process of modernisation and automation which began in the late 18th century, through which mankind finally found true and lasting happiness. By developing a mechanised society which promoted rapid growth and placed an emphasis on material goods, people were at last able to conquer the various psychological and spiritual maladies and feelings of existential despair which characterise the human condition, to emerge as they are today: whole, satisfied, well adjusted creatures, at one with both the natural world and their fellow men. The myriad of technological innovations developed in the early 20th century by Henry Ford and Thomas Edison, among others, not only made life infinitely less frantic and more enriching, but also ushered in a new, simpler epoch which made people look back on the pre-industrial days and feel glad they never had to live in such alienating chaos. Today, human beings thank the inventors of the endlessly churning assembly line, the idly buzzing fluorescent light, the crowded mass-transit vehicle, and the glowing, cacophonous television screen for making the world a warmer, kinder, happier and more human place in which to live."

"How are you affected by the requirements of efficiency which place value on the product, rather than the process; on the future, rather than the present; and on the present moment which is getting shorter and shorter as we speed faster and faster into the future? What are we speeding towards? Are we saving time? Saving it up for what?"

"An anaesthetist should never feel hurried." – Agatha Hodgins, first nurse anaesthetist and chief anaesthetist at Lakeside Hospital in Cleveland, Ohio (1914).

After spending nearly seven years in private practice in South Africa, I moved to the USA to work at a “non-profit” academic hospital. My chief reason for so doing was that I felt that my role in private practice assumed more and more that of being a living lubricant for the cogs of a conveyor belt that brought fabulous wealth, by the standards of most South Africans, to a number of our practice’s important “customers” and my colleagues. And my role became less and less that of an anesthesiologist. However, with hindsight, in many respects, I have moved from one conveyor belt and industrial process, to another.

It has become imperative for us to explore the impact and ethical implications of the current intensifying and widespread industrialisation of health care in general, and therefore of anaesthesiology, in particular.

At first glance, the industrial process places considerable emphasis on three interrelated foci of concern: standardisation, efficiency and the production quota. But it is the slippery concept of efficiency which has been elevated to a mantra and which has taken on a life of its own. Through the industrial process and the development of “scientific” management, it has developed from being an obscure philosophical concept or one that is useful to describe the workings of a waterwheel, to something that is far more powerful. This development is an important, if not the most important, element, to consider in relation to the quality of our working lives as anaesthesiologists.

I will examine the same phenomenon through the lens of patient safety and of individual resilience in the face of “burnout” in two other presentations at this congress. Here, I will restrict it to our perspective as workers faced with systems and forces which often transform our experience of work into a “rat race”: stultifying, repetitive, relentless, dehumanising, and often devoid of any meaningful purpose.

Three “cultural co-morbidities” in society determine the conditions of our work environment as anaesthesiologists and also condition our responses and the ideas that we bring to the workplace. These are industrial autism,
machine fetishism, and the pseudoscience and ideology of “scientific” management (“Taylorism”). All three have relevance to the present-day “magic” that is associated with “efficiency”.

There is no understanding with “industrial autism” that exponential growth and economic expansion cannot continue indefinitely. Compound interest eventually outstrips the rate of all processes in the universe. For example, “This medical school requires an annual growth rate of 8% in order to be viable”.

There is no comprehension with “machine fetishism” that the magical efficiency of a gadget is owing to the appropriation of (someone else’s) time and space during its development, manufacture and transport in a zero-sum world. It also changes the world in ways that counterbalance any immediate gain in time and efficiency. It often takes considerable time to save time. The motor car is a good example. Similarly, “efficiency” appears to be a magical principle when decontextualised and viewed in isolation.

At the turn of the century, Frederick Winslow Taylor introduced “scientific” management. He separated thinking from “doing” in the workplace, and took the division of labour to its logical extreme. He created a hierarchy that separated workers from specialised management. The management class, equipped with expert knowledge, has decision-making authority over routinised human workers. It is also known primarily for its belief in “the one best way” of performing a task or making a system work. Following “Taylorism”, managed medicine was subject to the uncontested “input-output”, cost-benefit analysis in search of the “one best way” of achieving results. It forms a contrasting attitude to one expressed by an author who is skeptical of “Taylorism”: “No amount of specialisation, no division of labour, no super-computerised recordkeeping can substitute for the whole person care of a patient by a single doctor”.

We increasingly find ourselves in situations in which everything is justified merely in the name of efficiency, without any need to define or explain it. It is a pervasive value which assumes a cardinal role in the evaluation of ourselves and others.

Just listen to yourself and colleagues throughout the day and during meetings:

• “Do not promise our surgeons first start on their cases the next day. Something may make it impossible and it will tarnish our reputation in respect of efficiency and organisation”.
• “Efficiency is everybody’s responsibility.” (As an opening slide on turnover times between operating room cases).
• A section in a textbook on anaesthesia procedures and techniques, entitled Efficiency-ville.
• “Turnover time between cases should not be longer than 20 minutes in the real world.” (The viewpoint of some surgeons).

• “Is there anything I could do to help you to be more efficient for the sake of our orthopaedic patients after hours?” [A nervous dean of a medical school or the CEO of a hospital after orthopaedic surgeons (the chief source of revenue at the hospital) complained of having to wait too long to operate on non-life-threatening injuries during busy after-hour call periods].
• An anaesthesiology resident seriously contemplates having a bandolier made which he can wear when he enters private practice. He would then be able to have a number of important drugs and syringes on his person for quick access.

Efficiency has become the analytical, political and linguistic water that surrounds us. We consider it, almost as a reflex, to be synonymous with “good” and “better”, but it has also acquired a scientific and technological aura and is associated with business and wealth. Lastly, it has become a hegemonic code of conduct all on its own. All of this renders it completely immune to serious thoughts about, let alone critical questioning, of it.

The powerful appeal to efficiency by administrators, managers, and especially surgical colleagues, needs to be unmasked and shown for what it is: strategic and political, rather than scientific or based on common sense. We need to adopt an anthropological perspective of our profession.

The cult of efficiency promotes a “quantoid world view”, i.e. comprising only factors which can be counted. If the social climate at work or people’s enthusiasm for work cannot be calculated on a spreadsheet, these factors then have no importance, even if it is argued that they are key to producing meaningful work, patient safety and preventing burnout.

The following insights could help to devise a toolkit to deconstruct efficiency:

• A system that is maximally efficient always runs close to breaking point, since it lacks critical redundancy.
• Dynamic and continuous performance adjustment and variability are necessary whenever situations or working conditions are underspecified, as in clinical anaesthesiology. There is a constant, learned and necessary trade-off between efficiency and thoroughness. The only exceptions are situations in which extremely predictable and regular conditions prevail, i.e. choreography, liturgy, the industrial conditions at the beginning of the 20th century and the changing of the guard at Buckingham Palace; but not anaesthesiology.
• Efficiency and thoroughness are relative, rather than absolute, terms. Efficiency can only materialise when it coagulates in a medium of thoroughness. I can allow myself to be efficient because others are thorough. I am efficient today because I, or somebody else, was thorough yesterday (on my behalf), and I will be efficient tomorrow only if I, or somebody else, is thorough today (on my behalf), and so on. Efficiency-thoroughness trade-
off (the ETTO principle), when implemented in the short term, leads to a requirement for thoroughness-efficiency trade-off (TETO) in the long term.

- "A bit of history might have set things straight long ago. It might have helped us all to know that efficiency was appropriated a century ago to serve a particular set of social objectives, i.e. to modernise industry and increase output; to train and discipline a workforce; to rid the farm, government, church and school of their backward ways; and to squelch politics in favour of the scientific. We can debate the objectives and the means, but with scrutiny, we cannot ignore the fact that efficiency, as practised, for all its scientific pretensions, is deeply political."
- “Efficiency ratios are neither self-evident, nor is their increase unambiguously good. Every choice of a ratio reflects a choice of values, a politics."
- Efficiencies always require a not-so-trivial qualifier viz, “all things are equal”. Think of fuel efficiency. Again, this is of very little value in an underspecified work field such as anaesthesiology.
- Pure efficiency only exists on paper. In the real world, some people gain, while others remain the same or lose.
- An appeal to efficiency is deeply bound with a desire to make the world conform to an intellectual understanding of it. It is also at the root of a wide gap between work as imagined or designed, and work that is actually carried out.

How does the “rat race” and its constitutive cult of efficiency relate to the practice of anaesthesiology ethically? "In the absence of a medical ethics that is affirmed and put into practice every day by physicians, there will be no more physicians, and therefore no more patients. We will revert to the marketplace, entrepreneurial, self-interested world of practitioners preying on the sick."

A good anaesthesiologist is not an efficient mechanic or a successful merchant, but a professional who is committed to a vulnerable individual’s best interest.

Some scholars, such as Jacques Ellul, held quite a gloomy view of a world that is constantly geared to accomplishment tied to a hegemonic principle of efficiency and a technological world outlook. He recognised that yet another gadget cannot save us. Neither will ethical professionalism, social movements, and new forms of politics or academic scholarship. A drastically new way of thought and action is needed.

Other avenues for us may be unmasking efficiency ratios as managerial rhetoric, a new “structure of attention” which is similar to James Reason’s “error wisdom” in the face of intractable systems, mindful practice, “tacit ethics of the moment”, as well as new virtue ethics.

Running the “rat race” can make us abandon the components of virtue ethics which date from the invention of the concept of medicine as a profession. These components are:

- Commitment to scientific and clinical competence.
- Commitment to protect the patient’s health-related interests.
- Passing on medicine as a public trust, not a merchant guild.

To what are these components succumbing? To fatigue, disillusionment or greed? Or a combination of them?

Bibliography