**A fish can’t judge the water — [Research & Response]**

*There are these two young fish swimming along and they happen to meet an older fish swimming the other way, who nods at them and says "Morning, boys. How's the water?" And the two young fish swim on for a bit, and then eventually one of them looks over at the other and goes "What the hell is water?"*

What this thought-provoking and meaningful story provides might be a way of thinking that in direction of returning to essence. It could point to the objects like living environment and lifestyle that we are accustomed to, or a relatively fixed way of thinking and so on. Do we think deeply in truth? Can we question the recognized life or way of thinking, and be conscious / alert constantly?

On this topic, I suppose First Principles Thinking – an effective strategy often mentioned and used by Elon Musk might be worth discussing. ‘First principles thinking is the act of boiling a process down to the fundamental parts that you know are true and building up from there. It might be the single best approach to learn how to think’ (Liu, 2020). It differs from the common way of thinking and attempts to overcome ‘The Human Tendency for Imitation’ (Liu, 2020), considering and raising questions from the most essential level of things. As Elon Musk mentioned, people often ‘live life by analogy’ (Liu, 2020), we do this because it looks like other things that have been done, or like the things that other people are doing. What looks like innovation is often an iteration of previous forms rather than ‘an improvement of the core function’ (Liu, 2020). That is to say, the conventional way of thinking is more likely to bring a kind of ‘Improved Innovation’, while the First Principles Thinking may generate ‘Ground-breaking Innovation’.

**Doubt the current environment - what is outside of the specific ‘Track/Orbit’ we are in?**

Femke Snelting relates the story to discuss people's lives and the environment built by digital technology and software systems. Digital technology, media and software systems have gradually penetrated into every part of people's daily life, becoming a lifestyle that we depend on and even as a significant part of us. Fortunately, I could still recall my childhood in the pure natural environment. At that time, I would often hold a bouquet instead of a smart phone or walk for a long time to go shopping instead of placing orders through software at home etc. When I try to adapt to the environment and pursue to achieve goals in this particular 'Track', all these things will disappear, and the recovery of memory comes from questioning the present environment.

However, Elon Musk’s questioning of the present environment is to foresee the future. At the beginning, he started his business around the Internet field, exploring and practicing to get his career developed. When the Internet industry became increasingly prevalent and more people joined in this field, he suddenly turned to invest in research on electric vehicles, solar energy, then aerospace and other scientific/technological fields. In fact, he should be able to achieve stable development and considerable income in the initial Internet field, but he has not settled for the specific ‘Track’ or limited by the surrounding environment and trends. Musk has always reflected and considered from the essence of technology and science. From his point of view, the excavation and exploration of sustainable energy sources such as electric vehicles and solar energy might be beneficial to people's living environment and human future. It is difficult for most of people to step out of their familiar ‘Track’, but Musk never stopped reflecting and questioning, nor did he stop his curiosity and enthusiasm for exploring things outside the ‘Track’. Although such behaviors have been regarded as ridiculous or unreasonable by some people, but it has been proved that his practice in different areas has gained progress and success, especially achieved ‘Ground-breaking Innovation’. Rene Descartes (Liu, 2020), the French philosopher and scientist, “systematically doubt everything he could possibly doubt until he was left with what he saw as purely indubitable truths.” (This is called *Cartesian Doubt* at present) Although such method of questioning is demanding for most people, can we have this kind of awareness, or try to think ‘one or two levels deeper’ (Liu, 2020)?

**The products of modern science themselves and the way we use**

*We practice software until we in-corporate its choreography. We make it disappear in the background. A seamless experience. We become one with our extensions…(Snelting, 2006)*

In the book <Understanding Media>, Marshall McLuhan examines how language, technology and speech shape human behavior (M. EASA, 2019). One of the most important opinions is that ‘The media is the extension of man’. For example, ‘the camera is an extension of the eyes, the phone is an extension of the mouth and ears, etc. ‘‘the technology adds itself on to what we already are’’ (M. EASA, 2019). However, electronic media (Qiu, 2020) /technology can replace almost any organ, and even become an extension of our eyes, ears, hands and other organs at the same time, and there might be consciousness in the future. While we are constantly improving technology products, in fact, technology/media are also choregraphs our lives. There may be a vague boundary between the two, or we may not be aware of the transformation and occurrence of such process. ‘If there is a kind of wheel that can replace the feet at any time and is more efficient, then the feet are no longer needed’ (Qiu, 2020).

Most of people agrees that ‘The products of modern science are not in themselves good or bad; it is the way they are used that determines their value’. McLuhan believes that there is no level on which this argument holds weight (M. EASA, 2019). Is it worth thinking about science and technology themselves? Should the influence of continuous update and application of technology on people's lives should be explored as well?

*Two researchers from Chile and the UK used modeling to see how rates of resource consumption, namely in terms of deforestation, affects the ability of global human society to sustain itself. By their workings, there’s just a 10 percent chance that human civilization will be able to make it through the next 20 to 40 years without a catastrophic collapse (Hale, 2020).*

‘One of the most remarkable skills of humans is their ability to adapt and innovate’ (Hale, 2020). Therefore, facing this problem, many people may think that this problem can be solved as long as enough advanced technology and science can be developed and applied to the nature field. ‘However, the report argues that the “consumption of the natural resources, in particular the forests, is in competition with our technological level. In other words, the more technology progresses, the more we are likely to destroy forests unless a profound paradigm shift occurs” (Hale, 2020). In such case, blindly embracing digital civilization may lead to new problems circularly and lead us to fall into a ‘Whirlpool’. The key thing more likely to be reflecting and considering about technology and science itself.

‘The best solution is not where everyone is already looking’ (Liu, 2020).

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