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From the Nano to the Macro: the Engineering and the World's Transformation

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All in this tangible world, known by humans, is probably the result of something simpler and smaller. Throughout history, discovering and analyzing the origin of every component of this world has raised humans' interest. For that reason, it is necessary to first extend the frontiers of this writing to then go deeper in this world of innovations and constant evolution. It is impossible to understand the real essence of structures, systems, processes, and knowledge only with what people can perceive with their naked eyes; humans need to go beyond the macro and the nano, beyond the visible and see through the invisible: the ideas.

People have the ability to come up with revolutionary technologies, develop and upgrade them, but only those who are aware of the importance of the ideas and have the capacity to think clearly and with imagination are the ones who will expand their mind and have the world in their hands. A lot of people who did it through history were the ones who transformed the world into what it is today; this is why it can be said that they had the world in their hands; every single part of daily life, from cooking or cleaning to communicating with other people, is possible thanks to them. In fact, if they had not contradicted the standards established for the possible, perhaps each process nowadays would be more tedious and slower. Therefore, having the world in one's hands means that within its great vastness, technologies work properly thanks to people´s work making it all around change and improve.

As it was stated previously, the world turns thanks to people's ideas. Through the centuries, human's curiosity and the desire to discover more has infinitely increased the knowledge, to the point that its limits are the only thing people cannot find. However, all of this information is very specialized, and having it all without a discipline to channel and make it more effective is very difficult because if they did not have patterns or there were no experts in specific fields of study, this knowledge could possibly be just a bunch of random ideas, disordered and floating in the universe without any sense of direction. There are ideas from the simplest and trivial to the most complex ones, and they come and go from the minds of all people; nevertheless, it is common to find exceptional people with great ideas gathered in a single area: the field of engineering.

Engineering emerged from the unavoidable interaction among people who wanted to change and innovate the world. Engineers have passed their work from one to another. That is why it is not uncommon to think that Rutherford and Thompson were Bohr's teachers, friends and mentors. Obviously, they were not engineers but scientists, so it is the same principle. Every idea started only as a glimpse of an innate engineer, and then, the engineering has been commissioned to make increasingly large. Perhaps what we now know the engineering take him much further.

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