



["Will Google kill L'Oreal"? Response to the article published in Le Monde on September 1, 2014:](#)

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The answer is NO ... provided...

Indeed, Google alone, even with Calico, cannot kill L'Oreal or any other cosmetics or health company if these start to think "outside the box" and quickly understand that the mechanisms of life do not "obey" to Google's ultra-powerful algorithms that can decrypt very complicated systems but not complex ones.

Sorry Mr. Descartes, but the mechanisms of life are complex, non-linear and integrative and therefore non-Cartesian. This unfortunately classic confusion between complicated and complex systems is the source of failure for most programs aiming to model living systems.

What is complex as opposed to complicated? a) Building from scratch an Airbus A380 or b) build a predictive model that tells a mother how to have her young child eat a plate of spaghetti without splashing sauce all over his shirt? [Answers on pages 2 and 3 of the Presentation given on March 4th 2014 at the Centrale-Santé* and Essec Santé* conference](#) (*: two leading health Think Tanks in France)

I warmly invite you to [download the presentations](#) of this exceptional conference from the website of Central-Santé (www.centrale-sante.net). They give the keys to understand the current difficult state of biomedical research and find possible solutions. [Download Centrale-health presentation in English](#)

Never forget that in the gold rush, it is the vendors of 'picks', ie: the sellers of tools to do the work, who made a fortune and not the gold diggers.

However, there are solutions. But they require a drastic overhaul of current mainstream thinking and thinking outside the box. The staggering power of computers and machines will never replace human ingenuity, ability to marvel and invent.

If we compare life sciences to the building sector, it would never occur to anyone to begin by calling upon the best engineers and tools in the world to simulate the resistance of the walls before having defined and described what is to be built and in which context. This role performed by architects is sorely lacking in the life sciences. We call these individuals, who practice integrative heuristic approaches, "integrator biologists".

It is the alliance between them and Google that should scare the cosmetics and health industries.

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