The Swarm

By Professor Jan Willem de Graaf

Professor of Brain and Technology, Saxion University of Applied Sciences, Deventer, Netherlands

ometimes religion and science are mentioned in one breath; both provide an explanatory framework for phenomena like uncertainty, chance or fate. In the meantime, science, or rather technology, has become a world religion. It's a world religion, because technology connects: religion comes from the Latin "Relegere" (literally re-assemble, connect).

But the great advantage of science over religion - in principle science is value-free - also seems to be its greatest weakness. Technology, supported by constantly new (or at least refreshed) scientific insights, has conquered the world, increased the scale enormously and forged one comprehensive humanity from various tribes, peoples and religions. Digital and data technology are now turning individuals into one human swarm, like a bee swarm colonizing the entire planet, ruthlessly in a worth-free (worthless) gesture. What's up with that?

Inventions are no longer the work of one woman, such as the mathematician Ada Lovelace (1815-1852), who designed the very first computer program for an analytical machine, which still had to be built, or one man, such as the philosopher and mathematician Charles Babbage (1791-1871) who invented the first programmable calculator on which Lady Lovelace's programmed punched cards could run. Where history is often read as the succession of mainly great men and a single big woman, contemporary inventions are increasingly emerging results of whole teams, who are connected (digitally) by knowledge platforms to work on new ideas and solutions. Plan-do-check-act instead of individual brilliance, semantic web engineering instead of individual mastery.

Brilliant masters - individuals pur sang like Ada Lovelace and Charles Babbage - are outdated. Modern knowledge systems, such as design thinking (human centred design), PDCA system, the semantic web and knowledge forum are designed to exploit the wisdom of the crowd. Mechanical leadership from command and control is also outdated. Modern leadership, on the other hand, focuses on transformation, from the individual level to the system as a whole - the entire "beehive" - to which each individual contributes and is subordinate.

So technology has connected us worldwide. But from a greater distance, there is a huge difference between a humanity that fears a God (ancient religion) and a humanity that thinks itself to be a deity (science / technology). This goes beyond the difference between being driven by ideology (conservative - Christian - political parties) and being driven by neoliberal / free market-oriented thinking. In practice, there is no difference, they amount to the same thing: value-free future technology. The ancient religions sought God or gods and therefore had direction. Science operates as a swarm (modern humanity): the essence is in the swarm, which is held together rationally, but is not in itself rationally. After all we destroy our environment/planet, "we dance into the fire", or in Bowie terms, "we're putting out the fire with gasoline"!

Watching swarms means meeting contradictions: extremely strong coordination (no collisions, the swarm as a whole behaves as one individual) and at the same time arbitrariness and directionlessness. In the Dutch online magazine *de Correspondent* I read that the Corona crisis initially offered a great opportunity to replace a brutal economic principle with a more sustainable and fairer variant. But instead, with the help of government funds around the world, the environmentally damaging economic engine has been further fuelled and we are already at a "peak" in environmental pollution emissions. The swarm is ruled by economy. Science is value-free. Economy is value-less, which means "worthless". As an atheist, I find it hard to write this down, but perhaps religion is more promising than science, in helping to give humans a more sustainable place in the ecology of the planet ...