

**ADDITIONAL PROCESSES IN THE DIGITAL AGE:
A sceptical View**

An in-depth study from the Turin CAPP Group

I.

First, we need to clarify and explain what is meant by Industry 4.0.

In the traditional classification, the industrial revolution coincides with the development of mechanical energy at the enterprise level (late 18th c.), the second revolution with the advent of electricity (early 20th c.) and the third revolution with the electronic connection. (the Seventies).

That said, Industry 4.0 is today's propelling and irreversible integration between machinery, objects and people made possible by the internet.

However, it is appropriate to make an initial distinction. In Europe, when speaking of this phenomenon, the focus is on the world's production of goods while in the USA, studies and insights focus on the world of services and consumer-users.

II.

Industry 4.0 requires the use of Enabling Technologies.

The enabling technologies or KET (Key Enabling Technologies) are considered fundamental for growth and employment, as they develop solutions and technological improvements through research experiences capable of revitalizing the system of production. Enabling technologies as defined by the European Commission are technologies that are *"knowledge-intensive and associated with intensive R & S, rapid innovation cycles, high investment costs and highly skilled work."*

KETs as such are systemically important because they bolster the value of the production chain system and have the ability to innovate processes, products and services in all economic sectors of human activity. Furthermore, a product based on enabling technology uses advanced manufacturing technology and increases the commercial and social value of goods or services.

Enabling technologies by their nature should be part of a greater overall picture that eventually becomes an "ecosystem".

This synergistic feature has an impact on everyday life.

And undoubtedly with an optimistic outlook, we would expect a whole series of benefits.

In particular: • Flexibility. • Speed. • Productivity. • Quality of work.

Ultimately, greater competitiveness is the Company's perspective. This is why Industry 4.0 projects are the basis of public support at present, even in the Italian context.

III.

The first tangible applications from a purely technical point of view, are known.

In particular:

- Working Smart (ambivalent experience)
- Smart Training
- Anchoring knowledge
- 3D / Tablet in production
- 3D Print & Scanner

Safety Applications

- Ecoskeletons
- AGV (automated guided vehicle)
- Heating and Illumination

But this is not the place to examine these aspects further.

What we are now witnessing is a clash between Pessimists and Optimists where, depending on the topics, groupings from one or the other intermingle. In some cases, this is due to the individual aspect being ambivalent: think of the central question of whether Industry 4.0 increases or, conversely, discourages professionalism.

An emerging theme shows that not all manifestations of the Industry 4.0 ecosystem are fully in keeping with a basic concept of the social doctrine of the Church on the subject of economic activity, namely, the need to preserve the 'business as a community of men, and to safeguard the human environment' (CA, 38-40).

In fact, the goal must be to form an entrepreneur who is particularly attentive to the needs of employees, providing them not only with an essential but, rightful salary, but also with safe and decent working conditions.

Thus part of the profits must be re-invested in the company to ensure the best accident prevention safeguards and protection of each worker's health.

Working conditions without any form of discrimination, should also be developed and guaranteed.

Getting down to basics: the capitalist but fair business will, for example, with suitable structures and organization, allow mothers and fathers to best combine the management needs

of their family *menage* with more flexible working hours and perhaps with facilities such as *nurseries* and kindergartens in close proximity to the physical workplace. This should not merely be a simple balance between family and work but a genuine harmonization of the two systems.

It is not obvious that enabling technologies can guarantee the foregoing.

IV.

What is moving ahead is the idea that everything is speedily leading to a so-called new face of Techno Nihilist Capitalism. The type of capitalism that believed blindly in the power of technology, thus weakening the ability of people to share values, namely, the things that matter beyond profitability.

The emergence of a socio-economic system geared to profit, largely making use of new technologies which are moving from "technical application to the material world" "to applying it to people".

Techno Nihilist Capitalism so called, is definitely responsible for great economic development but what is dangerous is the Exaltation of Liberty as "Freedom to" (choose from several completely interchangeable options) at the expense of "Freedom to be" at the service of the dignity of mankind.

In this perspective one must find appropriate remedial systems. In the first instance what is needed is "a strong juridical framework" that can regulate:

- an inevitable sharper control of activities.
- a potentially all-encompassing involvement.
- work at risk of de-contextualization with the erosion of inter-subjectivity spaces.

Furthermore, other points of intervention should aim to weaken the escalation of the digital gap between the different generations or at least attempt to do so.

There is no doubt that one of the main issues for our focus concerns the inevitable reduction in jobs directly linked to the introduction of new industrial systems (robotization). While we can roughly assume that half of the children who started primary school in September, yet, when they have finished their studies over the next two decades, will be doing work that is unimaginable today and therefore these "lost" jobs will, in part, be offset by new ones, *in primis* by systems intended to build the aforementioned robots: it is equally true that we cannot take for granted that the new jobs will assimilate the physiological reduction we are now witnessing.

Attention must also be paid to the new operating mode (logic of convergence, the release logic) where there is a clear impulse towards a vertical convergence (on the technical protocols) at the

expense of a horizontal convergency between persons.

The risk of forming a community only among peers, must be prevented as a priority.

As Pope Francis teaches:

“Often we are withdrawn and closed into ourselves, and we create so many inaccessible and inhospitable islands” noting that “even the most basic human relationships sometimes create realities incapable of reciprocal openings: the closed couple, the closed family, the closed group, the closed parish, the closed country; this is not God, it is our sin”.

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The Industry 4.0 Ecosystem

