

Human and organisational factors in companies: on three separate tracks?

As part of the strategic analysis of the “Methods, tools and practical approaches to human and organisational factors implemented in the industrial sector” initiated by FonCSI in early 2017, René Amalberti, Director of the Foundation, brings us an *Tribune* which aims to demonstrate that human and organisational factors (HOF) are present in different forms in multiple approaches and departments (HR, HSE and product) within companies. A companywide approach to HOF versus a fragmented organisation... the debate is open.

Relying on common sense, we would gladly read the term “human factors” with the sympathetic and compassionate eyes of fellow humans, as an echo of other expressions or closely-related words such as “human”, “human solidarity”, “human imperfection and intelligence”, “*errare humanum est*”, but also “humanities”, “humanism” and “human suffering in the workplace”.

“The industrial sector is pragmatic and has been taking human factors into consideration [...] primarily for its own benefit and incidentally for that of its employees”

From the outset, the industrial sector has viewed it with more pragmatism: a combination of dreaded problems – since humans and their behaviours lack the rationality of machines – and a necessary evil that must be managed with special attention – since, given the different tasks they perform, humans are still essential to industrial success and will be for a long while yet.

In this context, the industrial sector is pragmatic and has been taking human factors into consideration for more than 100 years, primarily for its own benefit and incidentally for that of its employees, resulting in a win-win situation for all concerned.

Nothing new... for almost a century

By reviewing a little history, it is easy to see the successive revolutions in industrial thinking about human factors, as well as the constant pragmatism and the fact that there is not really anything new on the horizon.

Unquestionably, the first foothold dates back to the beginning of the 20th century: Taylor was no doubt the industrial sector’s first specialist in human factors. In a world which paid no attention to harsh working conditions, Taylor revolutionised current thinking by proposing the industrial era’s first “win-win” solution in terms of human factors: to study the physical fatigue associated with physical tasks, teach movements that reduce fatigue, and organise the work in such a way as to make these movements possible. The result was increased productivity with fewer injuries and less fatigue. This is the ancestor of the HSE vision.

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The second significant event dates back to the period between 1915 and 1920, namely the emergence of selection and training. These methods were inspired by the dubious rise in the USA of the eugenics of racial differences. Simplistic at first and used to mass-train the military, they centred on manual skills gathered through selective immigration. Then, selection and training became more sophisticated, more scientific, and invaded all spheres of the human factor, particularly the professional skills sphere from the 1950s onwards.

The third significant event dates back to the end of the 1930s, when Elton Mayo developed two major concepts in human factors on productivity. These completed Taylor's ideas at that time:

- The importance of conditions at the work station (lighting, accessibility, tools, etc.);
- And the importance of employee motivation and recognition (Hawthorne effect).

The fourth and final significant event began, in the USA, with the construction of combat planes in the 1940s, and influenced ergonomic design and the prevention of human errors.

With these four pillars – worker protection for optimised production, professional skills and selection, the social organisation of work, and ergonomic product design – practically everything had already been said in the 1950s about the importance of human factors for industrial productivity.

All the industrial sector needed now was a fifth pillar: the one that is most dreaded and seen as a lot less rational, connected with human moods and emotions, medical frailty and the ensuing absenteeism, group effects, the corporatist dimension of employees, and power struggles.

Balkanised human and organisational factors

Since the 1950s, the details of the contents of each of the five pillars have altered a lot as a result of changes in scale, times and technologies: work which has become more intel-

lectual than physical, the gradual incompatibility of the Taylorian model, the computer revolution and facilities controlled via intermediary artefacts, ever-increasing requirements from regulatory authorities, new social organisations in companies, globalisation, contracting, subsidiaries, size, and global consequences of industries and their risks (nuclear, chemical, transport).

But essentially, these five pillars of human factors have not changed in the last decades. The macro-content of what we call human and organisational factors (HOF) is still the same.

What has changed significantly, however, is the distribution, within the company, of the internal power associated with these five pillars of HOF, as awareness of their importance has grown. This distribution of power has fragmented or "balkanised" HOF in different departments within the company which are often in competition with each other when it comes to resources and objectives:

1) HR has the power associated with selection, personnel recruitment, the social climate and skills;

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- 2) production has the power associated with optimising the quality of the products or services;
- 3) and HSE holds sway over safety, human errors, accidents resulting in personal injury, and accidents affecting facilities.

This fragmentation into three separate tracks, three departments – HR, HSE and product – reflects the importance of HOF, but it also suggests the loss of a unique, systemic vision and coherence in this area, the loss of unified skill and a single organisational structure.

Yet, in a context where industrial reorganisations are increasingly common, the challenge of executive committees is to initiate a general, companywide approach with HOF values that are shared by all divisions. For this, the fragmented departments with power over HOF must go back to sharing a unique and coherent vision.

This sharp-end reality where the fragmentation and corporate values of HOF are in opposition is symptomatic of the recurring difficulties in this area.

“Do not look for a single network of HOF resources in large companies. Look for several.”

What is the impact on the organisation of HOF in companies?

Do not look for a single network of HOF resources in large companies. Look for several. That is essential in order to analyse the subject correctly.

The three departments – HR, HSE and product – each have their own organisations and resources dedicated to HOF, and their positioning of these specialised resources can be centralised (often the case in HR) or distributed (often in HSE). The departments operate completely independently of one another and do not consult each other at all.

The HR function needs agents who can work with the other departments to identify recruitment and training requirements. In most cases, these HR representatives are not scattered across the network; rather, they remain attached to the central unit and each have an area of responsibility. It is worth noting that in very large companies the HR department is not responsible for all training; rather, training is divided into many branches, particularly as regards the technical fields and HSE. But HR is responsible for the overall coherence, as well as the registration process, funding and, ultimately, ensuring use of the training for career development.

The product and production function generally has a different vision, with specialised teams providing distributed support in design, sales follow-up, and co-partnership with customers (participatory ergonomics).

The HSE function most often relies on a centralised corporate structure, with intermediaries at the different production sites or in the various subsidiaries.

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HOF ethics under debate

But irrespective of the department – HR, HSE and product –, the distributed or centralised macro-organisation structure does not fully sum up the debate over the difficult positioning of HOF specialists: management intermediaries versus a greater or lesser degree of autonomy, and recurring ethical issues, particularly as they are caught between defending the workers and protecting the interests of the company.

HOF can indeed be defined as work analysis to achieve transformation, with more comfort, more safety, and more efficiency.

But beyond the general idea, the devil arrives swiftly in the detail: who benefits from HOF-related initiatives? Who benefits from the analysis of a situation to improve and transform it? Is it those who ordered the analysis – often top-level managers wishing to impose new visions and transform the working environments to achieve more efficiency, productivity and safety? Or is it the observed workers, given that the HOF specialists listen to their concerns and offer better working conditions?

“Who benefits from HOF-related initiatives? Who benefits from the analysis of a situation to improve and transform it?”

The issue is all the more ethical because the results of HOF specialists are often built on complicity, trust, and on observing today’s workers in order to build the situations of the future, from which these workers will be excluded, to be replaced by new profiles, new organisational structures and new tools. Can we accept this objective? How do we re-think our ethics?

Sensibly, Véronique de Keyser (2000) says: *“One cannot overstate the need, for a psychologist, to know what their analysis will be used for and for workers to verify it... As soon as they [the psychologist] arrive in the field, they must ask themselves what possible use will be made of their work results: they are part of a social realm from which they cannot detach themselves, from which they cannot remove themselves.”*

What are the human resources and training needed for HOF?

“They are there to become intermediaries between the sharp end and top-level management, and use typically HOF-focused methods, which they are often the only ones to truly master”

When we talk about human resources dedicated to HOF, we mean employees specialised in HOF in the three areas where there is a need: HR, HSE and product. These specialists have different job titles depending on the department for which they were recruited (sectoral HR specialist, ergonomists and quality controllers, HSE specialists). In general, they do not have the same initial training, and they will rarely find themselves in situations where they switch jobs between departments. This is no doubt a field which could benefit from improvements and coordination in order to achieve a coherent, comprehensive view of HOF.

Despite this lack of homogeneity, certain common features can be observed in the approaches used for these specialised resources. In all three departments – HR, HSE and product – the HOF experts are specialised and, allowing for exceptions, do not hold management positions within their department. Instead, they are there to become intermediaries between the sharp end and top-level manage-

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ment, with all the reservations of the aforementioned ethical debate, and use typically HOF-focused methods, which they are often the only ones to truly master. One of the main reasons for this positioning is the “niche” aspect of their degrees which considerably restricts their opportunities for career advancement.

What are the lessons at this stage?

Despite the variety of benefits observed within the different HOF organisations in the company, we should bear in mind the importance of the existence of these three separate organisations – HR, HSE and product – along with some underlying questions: which is targeted by a given analysis? Is it reasonable to only target one of them for an assessment of effectiveness, even if local? In terms of HOF, what are the competing interests and power struggles that exist between these three departments? What about the overall coherence and the possible obstacles presented by this separation of HOF within the company when it comes to building a unique and corporate HOF project?

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