Some management paradoxes*

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"Never take anything for granted"
(Descartes, *apocryphal*)

Abstract

Managers and researchers have been using a number of notions for decades, or even centuries, taking their validity for granted. However, when we look at them with a critical eye, in the way the ancient Greek philosophers did, especially the so-called pre-Socratic ones, although we must not put aside Socrates and Aristotle of course, challenge commonly held 'truths', we realize that these notions, when their 'logic' is pushed to the limit, hoard a number of paradoxes. This 'paper' examines, in a humorous way, some commonly used management notions which conceal 'strange creatures'.
We will look at 'customer satisfaction', 'lean management', 'process control', 'productivity', 'total quality' and 'artificial intelligence'.

* 1to 6 are by Jacques Martin, 7 and 8 by Federico Brunetti, 9 to 11 by Claudio Baccarani

1. Customer satisfaction

For several decades now, customer satisfaction has been highlighted as a key component of quality management. To paraphrase Peter Drucker: "No customers, no business", that we could expand as "no satisfied customers, no performing business". That is the reason why a number of satisfaction indexes have been worked out over the years. This being posited, we need to know what satisfaction is, and how we can measure this satisfaction.

Knowing what satisfaction is does not seem to be very difficult prima facie, but it can become somewhat tricky when we get into it. The notion of "Customer satisfaction" implies that we start from the customer, following what could be called a "pull logic". We assume that customers or a customer (and this makes a difference as will be seen later) have got expectations about the product or service they want to buy. Then it's up to the producer to meet these expectations, that is to offer the customer-s what they expect. If what customers get is what they expected, there is satisfaction. This is what is classically called "conformance to requirements", the very heart of the matter of quality management. If the offer does not correspond to the expectations – a gap as usually called -, there is non-satisfaction.

Now, first trap: can be bundle a number of customers together, meaning that we consider several people as one entity, or do we need to consider each customer individually? If we adopt the first stance, we assume that there is a number of customers (how many?) who have the same expectations. Is it reasonable? Just listen to guests in a restaurant commenting on their 'satisfaction' in front of the same food in the same environment and the same waitresses and waiters. It looks like bundling a number of customers together distorts the measurement of satisfaction.

Now, second trap: what do we know about the satisfaction of customers? Nothing about the vast majority of customers. Most customers, when they are satisfied, do not proclaim their satisfaction. They cannot be blamed for that as satisfaction should be the normal situation. So we do not know which customers are satisfied. Most customers too, when they are dissatisfied, do not complain by their providers. So, we do not know which customers are not satisfied. Then, how can we get out of this conundrum? We cry for help by some statisticians. Consequently, various methods are used to get feedback from customers. But how many, and which, answer these 'satisfaction questionnaires'? Do you? Customers can be polled. But again, what is the reliability of the samples constructed? If we want to be fair and honest (are statisticians fair and honest?), we have to accept big margins of error, making the results about meaningless. Any statistical analysis is prone to bias, and more particularly in the case of customer satisfaction.

Going back to the relation between expectations and satisfaction, we, of course, have to know the expectations of customers. This is usually done through various techniques of market study (old marketing is not dead!). But looking at the actual results, we realize that no definite conclusions can be drawn. Sometimes the product offered, following elaborate market studies, is successful, sometimes it is not. Better cast a die?

Moreover, very often customers do not know what their expectations are or they only have a fuzzy idea about what they would like. In a B2B relationship, we can reasonably expect that customers know what they want. They can and do express their expectations through detailed specifications as professionals, and there can be a direct relationship between the supplier and the customer. But in the case of a B2C relationship, this is hardly possible. Customers actually do not know what they want, and, if they have an idea, are not in a position to give any

specifications. Remember Steve Jobs saying "I've never seen anybody come to me and ask for an i-pod, an i-phone or an i-pad. I invented it, I designed it, I marketed it. And it was a big success." And way back, we can also remember the boss of Sony when he gathered all his engineers and marketers to make the 'walkman'. They all said it was bound to be a failure. The boss did not care and said "We'll make it". And it sold by millions.

On top of that, there are significant variations between customers for the same type of product, that is why companies try to develop 'customization', and there are changes in customers during the production process. Therefore, ensuring satisfaction ex ante is a dream. We can try and estimate it ex post but, as touched upon above, with a good number of limitations. And even if we succeed in measuring this satisfaction, what can we do? It is too late. The customer has gone.

Customer satisfaction looks like a big illusion…

Then, what do companies do, in spite of all the marketing and quality gobbledygook? They launch a product, cross their fingers and hope for the best.

2. 'Lean management'

Who would find a manager who wishes her/his business were less efficient than it is? Hardly anyone, we guess. The quest for ever-increasing efficiency is what quality management is all about, and indeed what management is about. So the question is: what is the best way of increasing efficiency and consequently performance, and in the end expand our business?

For a number of years already and for a number of managers and consultants, the answer has been 'lean management'. But beware of 'lean', it can be a bad omen. Remember Julius Caesar: "Cassius has a lean and hungry look".

'Lean management' can be applied to various activities in an organization; it can actually be applied to the whole of an organization, and this is what the advocates of it recommend. To see where 'lean management' can lead us, let's just have a look at two aspects of management: human resources and costs.

Managing human resources leanly means reducing bureaucracy, in its common rather derogatory sense, in order to increase their efficiency. Therefore it most of the time leads to a reduction in head count. If you reduce the number of employees, ceteris paribus you increase their productivity and consequently you increase the performance of the organization. We witness, however, that there is no strict correlation in real life between a reduction in employees and an increase in performance. Now let's imagine that we reduce human resources (the labour factor) to zero, which is possible through a full automation of processes. What happens to productivity? Productivity being the output divided by the man/hours, we have the following operation: x/0=? A mathematical impossibility. Then another way of increasing efficiency is boosting production with the same number of employees, meaning that in relative terms the human resources get leaner.

So, be careful; leanness leads to starvation! Do we want anorexic organizations? Or if we do not want to starve – do we? -, by increasing production, this means that getting fatter makes us leaner!!!

Now let's have a look at costs. 'Lean management' implies some cost-cutting activity. What can we cut? First, most of the time, we cut the labour force, and we are back to the situation mentioned above. Second, we can cut machines and equipment. If the number of machines is reduced and we manage to get the same output, that's fine. But it is only fine if the machines

are under-utilized, which we rule out from the start because our goal is to expand our business. So, reducing the number of machines necessarily implies some reduction in the throughput. And such a reduction obviously impairs the performance. Third we can tackle waste. Eliminating waste, taking it for granted that it is possible, which it is not in real life, is fundamental to 'lean management'. 'Harrow muda!' is the slogan. Easy to shout. Let's examine the situation. Any waste is the result, or the offspring, or some externality – call it what you like – of some production process. This means that resources (labour and capital) have been used to 'produce' this waste. So, waste, waste though it may be, has got some value (Isn't it why we are encouraged to re-cycle? By the way, if there was no waste, there would be nothing to re-cycle. Think of the consequences for some). Then, if waste is eliminated, this leads to an under-utilization of assets. And an under-utilization of assets means a lower return on investment, that is a lower performance. So, waste is good for performance! Of course, if we have under-utilization of resources, we can reduce the latter: be leaner. And we are back to square one (above) in a sort of vicious circle.

Moral: be lean alright, but moderately. 'Beware of leanness!'. Julius Caesar was right…

3. Process control

Process control has long been key to ensuring the quality, understood as conformance to requirements, and measuring the performance of a process, and hence, with a global vision, the overall performance of an organization. The results yielded by process control measurement are also the basis for continuous improvement.

One of the favorite tools to measure and control processes, and then to improve them, has been for decades now 6 sigma. The grail of performance is to operate at 6 sigma, meaning that you are right when you only make 3.4 mistakes for a million things that you do. Considering that, when we think we are good, we operate between 2 and 2.5 sigma, 6 sigma is an incentive for committing suicide! And by the way, how can you make 0.4 mistake? The wise man would be tempted to say that either you make a mistake or you don't! Maybe, statisticians are not wise men…

Anyway, when some manager comes to you and boasts operating at whatever level of sigma, be cautious; sigmas can hide some surprises.

There are basically two ways of using the 6 sigma tool.

The first one is to consider the entirety of a process. If the output (product) we get is the output we expected (conformance to requirement), then we are performing. We do this by comparing the number of defective products with the total number of products produced. Imagine we produce 100 products and we end up with 20 defective products, we technically have a 'yield' of 80%, and we operate at 2.34 sigma. But by doing this we sort of disregard what happens between the input and the output. Consequently, for a given process, you can be 'good', although you make a number of mistakes in-between, or 'bad' even if you make fewer mistakes.

The second one is to consider the chances of making a mistake, called opportunities (maybe not quite an appropriate word), during the unfolding of the process. Your performance is then assessed by calculating the so-called DPMO (defects per million opportunities), that is the proportion of defects over the total number of opportunities multiplied by 1 million. So, let's imagine now that we produce 100 products and we have 10 opportunities for defect, and we find out 40 defects, while in the end we have the same number of 'good' products, our

performance will be 3.35 sigma. This means that our performance is better although we have made more mistakes.

And this business of opportunities can be quite tricky. Depending on how you identify the opportunities, your performance will vary. In fact, the more opportunities there are, the better the sigma performance will look!

When measuring performance, there is still more to it. If we go into a process and examine the internal performance of the process, we will get a picture which is different. In order to do that, we need to calculate the performance of each step (or activity) in a process; and obviously the performance of a preceding step will affect the performance of the next step, and that of the whole production. Imagine we use 100 inputs and we have 3 steps to reach the final product. At the first step, we have to re-work 3 products, so the yield is 0.97 and we move on with 97 'good' products. At the second step, we have to re-work 2 products, so the yield is 0.98 and we move on with 95 'good' products. At the third step, we have to re-work 4 products, so the yield is 0.96 and we end up with 91 'good' products (and a yield of 0.91). Looking at it this way reduces the performance.

And, of course, depending on how you work out your performance measurement, there will be different impacts on your 'cost of quality'.

Moral: when a 'black belt' jumps on you, untie the belt and have a look at what it sustains!

4. Productivity

For nearly two centuries now, the performance of an organization has been closely related to the notion of productivity. When and where there are productivity gains, the performance of the organization improves.

In the production function we have two basic resources: labour and capital. The way we use these resources determines how efficient we are in our production. So, we have two kinds of productivity: the productivity of labour and the productivity of capital. In the common use of the word 'productivity', it is the labour productivity that is understood. So, let's have a look at this one first.

The formula for calculating labour productivity is fairly simple. We have an output or volume of production on the one hand, and on the other hand we use a number of working people to produce this output. As all these working people do not work the same number of hours, we use the number of hours necessary to produce the output. So, productivity is the ratio between the volume of production and the man-hours.

How can this ratio evolve? If the volume of production increases and the number of man-hours remains the same, there is an increase in productivity. If the volume of production remains the same and the number of man-hours decreases, there is an increase in productivity. If the volume of production decreases and the number of hours remains the same, productivity decreases. If the volume of production remains the same and the number of man-hours increases, productivity decreases. And if the volume of production increases and the number of man-hours decreases, there is a bigger productivity gain; the dream of 'productivists'! So, let's consider this situation.

The question is: how can we increase the volume of production while reducing the man-hours? The answer is by using more effective machines and equipment, just as industrial processes moved from using water mills to steam machines and then electricity. In today's environment, this means intensifying automation and using more and more robots. With the

development of the so-called 'artificial intelligence', there are huge prospects of big productivity gains. We can increase production (robots can operate 24 hours a day, 7 days a week, 365 days per year – shall we grant them a day's break in leap years?!) while reducing man-hours as the robots can already do about everything themselves, and will most probably be able to do everything themselves in not too distant a future. The dream has come true! However, if we push this approach to its limit – what any sensible philosopher should do -, we get stuck in a mathematical impasse. Let's imagine that robots actually do everything, this implies that man-hours are reduced to zero. And when we apply the productivity formula, we are faced with a mathematical impossibility (division by zero), so that the very notion of labour productivity becomes totally irrelevant. Such a situation means that productivity now entirely relies on robots. And, to what factor do robots belong in the production function? They are part of the capital factor. So, we need now to have a look at capital.

For capital productivity, we use the same formula as with labour productivity. What is the capital required to produce a certain output? So we get the capital productivity by dividing the volume of production by the capital used (in financial terms, the return on assets). We can find the same outcomes as above with labour productivity. Now, if we place ourselves in the situation of ever-increasing robotization (with the limit mentioned) envisaged above, we get tremendous labour productivity gains, because we transfer the burden to the robots (i.e. capital). Consequently, for a given level of production, we need more robots (capital), and the productivity of capital decreases!

Now, let's imagine that the notion of labour productivity has become irrelevant and meaningless as there is no more labour, and that robots are used to the full (we know that under-utilization is bad for performance), there are no productivity gains possible, and it is the whole of the notion of productivity that becomes obsolete and irrelevant!

5. Total Quality

When the phrase 'total quality management' appeared, there was a – rather sterile – debate on the interpretation of this expression. Should TQM be understood as the management of total quality or the total management of quality (which is linguistically more robust)? Whatever the answer given, it does not change much to the heart of the matter. Thereafter, very commonly and concurrently with the TQM acronym, just the phrase 'total quality' was often used, suggesting that, in any case, there was something called 'total quality'. We will have a look at both interpretations.

It is interesting to have a look at this syntagm. If there is something like 'Total Quality', it means that there is something like Total non-quality (i.e. zero quality). Indeed if A (quality) exists, it implies that non-A (non-quality) also exists. The only way to prove the existence of A is to hypothesize the existence of non-A, and conversely.

Now, also, if there is something like Total Quality, it implies that there must be something like partial quality (non-total quality), but can partial quality exist? Something is or is not. Otherwise it would mean that something that exists, does not exist and that something that does not exist, exists! However, when we say total quality, is it not a tautology? What does quality mean? This requires some Latin. The meaning is talis… qualis. In other words an equality: A=B (translated into management language, it means conformance to requirements). As A necessarily equals A, A cannot be anything but total. So total quality does not mean anything!

Quality is enough. Now if there is something like 'less than total quality', it implies that A = A-epsilon (at least), which is impossible. So quality can only be total, or cannot be.

Now if we consider that there is total non-quality, as done above, in other words that A = zero, it means that something which is total can be equal to zero. Is this possible? You are or you are not. Can you be 'totally', or can you not be 'totally'? And we are back to the meaninglessness of 'total quality'!

Now if we go back to the phrase 'total quality management', whichever way we look at it, the snake bites its tail. If this means that you manage quality totally, fair enough, but only apparently because it suggests that you can manage partially. If you can manage partially something that can only be total, this is an oxymoron. Moreover if there can be partial quality, it implies that in fact you can manage quality partially, which is, as also seen a logical contradiction, and it also means that you can manage non-quality totally, which is certainly a good job as you manage something that does not exist, so there is nothing to do; and that is what many, many managers do, they manage nothing!!!

6. Artificial Intelligence

There has been a lot of talk about 'artificial intelligence' over the last years, although it is not a particularly recent phenomenon, of course in connection with the development of robotics and the effects it can have on management and on society at large ; a subject that we have discussed earlier.

'Artificial intelligence', commonly referred to as AI, was officially born in 1956 during a workshop at Dartmouth College attended by Allen Newell, Herbert Simon, John Mc Carthy, Marvin Minsku and Arthur Samuel, who are considered as the founders of research on AI. Their view was expressed in a simple, but probably optimistic way, when they stated that 'every aspect of learning or any other feature of intelligence can be so precisely described that a machine can be made to simulate it'.

It looks like since then everybody has accepted, if not their pronouncement, the phrase 'Artificial Intelligence'.

However, looking at it with a philosophical eye, it does not seem to be so obvious. First of all, if there is 'artificial intelligence', it implies that there is 'natural intelligence', and globally, quite simply, that there is 'intelligence'. This 'natural intelligence' is usually equated with 'human intelligence'. Poor animals! So, let us have a look at the 'natural / human intelligence', and we very quickly realize that we do not know what it is. Definitions are many, and substantially vary from one author / researcher to another. A sort of consensus was attempted in 1994, which describes (human) intelligence as "A very general mental capability that, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. It is not merely book learning, a narrow academic skill, or test-taking smarts. Rather, it reflects a broader and deeper capability for comprehending our surroundings—"catching on," "making sense" of things, or "figuring out" what to do" (Mainstream Science on intelligence). Everybody can find their food in this definition. One year later the limits of research on 'intelligence' were clearly stated in a report published by the American Psychological Association, entitled "Intelligence: Knowns and Unknowns" (1995): "Individuals differ from one another in their ability to understand complex ideas, to adapt

effectively to the environment, to learn from experience, to engage in various forms of reasoning, to overcome obstacles by taking thought. Although these individual differences can be substantial, they are never entirely consistent: a given person's intellectual performance will vary on different occasions, in different domains, as judged by different criteria. Concepts of "intelligence" are attempts to clarify and organize this complex set of phenomena. Although considerable clarity has been achieved in some areas, no such conceptualization has yet answered all the important questions, and none commands universal assent. Indeed, when two dozen prominent theorists were recently asked to define intelligence, they gave two dozen, somewhat different, definitions." So, it looks like we do not know what 'intelligence' is.
Then what about 'artificial intelligence'?

This is what the Encyclopedia Britannica tells us: "Artificial intelligence (AI) is the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. The term is frequently applied to the project of developing systems endowed with the intellectual processes characteristic of humans, such as the ability to reason, discover meaning, generalize, or learn from past experience." Well, does it help? Whether we adopt the so-called symbolic ("top-down") approach, or the connectionist ("bottom-up") approach; the former trying to replicate intelligence by analyzing the phenomenon of cognition, disregarding the biological structure of the brain, the latter aims at using neural networks and apply them to robots. But this seems a doomed enterprise as underlined by N. Taleb (2018):"Consider that the human brain has about one hundred billion neurons, and that going from 300 to 301 (the brain of the worm C elegans), because of the curse of dimensionality, may double the complexity."

And all this is not good news for the Dartmouth College gang: Intelligence CANNOT be so precisely described. So, how could we transfer or instill, or implant (we do not know which word to use) intelligence to machines, if we do not know what it is? It is interesting to note that the Dartmouth College experts use the word 'simulate', which means that machines would behave (is the word appropriate?) like (similis) 'intelligent human beings' – they 'pretend' as kids say when playing -, which then means that they ARE NOT intelligent.

Even if we assume that 'some intelligent behaviour' is within reach of a machine, we have another challenge to meet. From what psychologists, neurologists, and 'common sense' (better!), (natural / human) intelligence appears as a continuous variable, not a discrete one. Do we not say of a person that (s)he is 'little intelligent' (sometimes 'not intelligent', which is abuse!) or 'very intelligent'? But it seems that we never hear that a robot is 'little intelligent' or 'very intelligent'. So?

It is always useful when trying to understand some notion or concept to look at the etymology of the word(s) used. What about 'artificial intelligence'?

'Intelligence' comes from the Latin word 'intelligentia', meaning the action of discerning (i.e. identify and recognize from Latin discernere, dis- 'apart' + cernere 'to separate') and understanding (i.e. getting the meaning from Old English understandan, stand in the midst of). The noun 'intelligentia' is derived from the verb 'intellegere' made of inter + legere. 'Legere' means 'gather' (1), 'choose' (2). This 'gathering' can be done through ears or eyes, hence the meaning of 'read' in its figurative sense (Gaffiot). 'Legere' itself comes from the Greek λέγω, meaning 'to express with words'. (Note that Greek resorts to other roots – referring to knowledge - to express 'intelligence').

Consequently if 'intelligence' is to gather things and choose among them, to identify and recognize them using ears and eyes (sensors), robots are excellent at doing that, much better than human beings! And as a result their 'intelligence' is not 'artificial' but of the same nature as the human one. So, let us have a look at 'artificial'. 'Artificial', from Old French 'artificial', from Latin 'artificialis', from 'artificium', means 'not natural' (easy!), 'made by man ('s skill and labour)'. 'Artificial intelligence' is then an artifact: 'intelligence' created by man, which is indeed the case. But 'intelligence', as seen in the (very) general definition also involves 'learning'. If 'artificial intelligence' is but an artifact, there is no learning. When a craftsman has created a table, the table remains a table. However, we are told with the development of AI that robots now are able to 'learn'. So, this ability goes beyond 'artificiality', and 'artificial intelligence' becomes 'natural intelligence'. Yet, 'natural' implies that the 'being' was born with it (at least with the potential of it, considering that it is developed through interactions with the environment). This will not be the case until robots can have sex and reproduce themselves (although now humans can reproduce themselves without having sex; sad!). So in fact we do not know if it is 'artificial' or 'natural'; 'natificial' maybe (?).

All this makes the various (dire) consequences of AI on management and society at large, which we have somewhat explored before (Martin, 2017) quite unpredictable, 'unintelligible' (intelligence cannot understand intelligence?).

We started by asking ourselves what this 'artificial intelligence' everybody seems to take for granted, could mean. And after a journey along this long and winding road, we may wonder if 'artificial intelligence' exists at all, and even if 'intelligence' exists…

So, I will leave the final word to dear old Socrates: "I know that I am intelligent because I know that I know nothing".

7. Measurement Paradox

It is often said that one cannot manage without measuring. More, measuring is one of the cornerstones in any management approach. The essence of management is usually found in the possibility to measure corporate activities.

In order to know the effects of one's actions and to understand whether they are yielding good or poor results, measuring is fundamental.

Measures and metric thus became essential and living part of any management system.

Yet Fayol included control among the fundamental functions of management (planning, organizing, staffing, directing, controlling). And since Fayol times on measuring, indicators and techniques has been really impressive.

Since then any reputable management approach has to comprise results measures, exactly because what cannot be measured cannot be managed too. The Quality Management circle – plan, do, check, act – includes activities monitoring as an inescapable transition phase between what has been done and what has to be planned for the future.

The metrics fixation, by the way, affects not only the corporate realm, but more and more activities and organizations (Muller, 2018). Think for example of healthcare services, sports or scientific research. Not to speak of app technologies that nowadays make it possible to measure and monitor many things of people's life: how many kilometres one has walked, how many hours one has slept, personal productivity.

Some problems, though, are well hidden inside measuring and metrics.

First of all, it's not that sure that everything inside the company is measurable: many aspects of corporate life cannot be estimated or are difficult to. Think, for example, of things like entrepreneurship, staff motivation, commitment.

Moreover, it's not that sure that metrics are correct: many corporate phenomena can be wrong or flawed. Accounting itself, for instance, relies on discretionary judgments, far from being fully neutral.

But, above all, the paradox we are referring to lies right in the circumstance that sometimes metrics easily shift from having an instrumental role to being an ultimate aim. Metrics become and end themselves.

As many more times happens, metrics climb the means-ends chain moving from the means position to the ends one.

Since they express corporate phenomena in numbers, metrics are actually really powerful. Numbers are – or are perceived as – objective, neutral, unmistakable (Baccarani, 2005). Numbers make it possible to make comparisons and rankings across different times and places.

It's much easier to focus on metrics rather than on the real facts behind them, since numbers are straightforward, simple to understand, purportedly reliable and true.

Any activity thus ends up being carried out no more to reach its very aims, but to get better performances in terms of the indicators set up to measure it (Moon, 2011).

Acting this way, the risk is that metrics more or less slightly replace the very purposes of any activity, altering its raison d'être and distorting the conducts which no more look at what is good, beautiful and right, but only at the increase of the quantitative performance.

Think for instance of the effects of metrics fixation in hospitals, universities or TV companies.

In the corporate domain, the pursuit of zero defects, of a larger market share, of an ever-growing profitability and/or firm's market value are just simple instances of indicators that risk to become top priorities, excluding or averting from the very purposes of the organization.

Metrics are thus bound to become ends in themselves, pointless, hiding the real rationales for the company existence.

Of course, one cannot think of removing measures from company management. Measures are indeed useful to grasp the effects of behaviours, allowing executives to confirm or revise decisions.

Measuring is definitely necessary and decision makers cannot operate having no feedback at all about what has been done.

It is all too necessary, on the other hand, not being dazzled by the metrics worship, letting them paradoxically take the place of what they serve for.

8. Rationality Paradox

Firm and management are usually considered sacred places of rationality.

At least in the representation carried on by the scientific discourse, firm and management are activities driven solely by a thoughtful and procedurally correct assessment of every factor, with the aim of maximizing the decision maker's subjective expected utility.

For a long time it has been held that firm and management were objective and neutral contexts, where only quantitative, certain, data should have to be considered according to logically well-grounded procedures.

It became thus possible to conceive business management as a sort of calculation, in pursuit of the one best way, and to treat management as a player able to plan and execute activities simply in a technical and completely influences-free fashion.

The paradox lies in the fact that in true corporate life, on the contrary, firm and management are all too far from this kind of situation and are, rather, places where intuition, emotions and many other non-rational elements are at play and are absolutely crucial in determining the actual behaviours.

Firm and management are inherently human activities, taking place in social contexts, and as a matter of fact prone to every distortion, disturbance and interference such a simple truth implies.

What is more, if business management was just a rational affair, outcome of an optimization calculus, it would be really hard to explain why companies are not always able to reach their goals and why different companies get different results.

A not so small misunderstanding therefore occurs when dealing with this topic, a chasm between reality and the way reality is believed to be, the common view people hold. Firm and management are considered far more objective, rational, and consistent than they really are.

Indeed, in recent years several research streams from various disciplines started debunking the rationality myth in company's decision-making and the exclusive citizenship right of the cognitive dimension in management.

Herbert Simon (1947), Henry Mintzberg, (2007) James March and Robert Cyert (1963), are some of the most notable scholars who described from an administrative perspective circumstances and reasons deeply questioning the traditional view of the company as a fully rational actor.

Daniel Kahneman (2013), Dan Ariely (2008), Richard Thaler (2016), are some of the most notable scholars who pointed out from an economic perspective the fallacy of a vision centered on the homo oeconomicus premises, which has been proved to be an abstraction all too distant from reality.

Daniel Goleman (2005), Gerd Gigerenzer (2008), Antonio Damasio (2005), are some of the most notable scholars who highlighted from a psychological perspective the existence of a relationship between rationality and intuition and rationality and emotion much more intertwined than that so far accepted.

Many are therefore those who, everyone from his own perspective contributed in theoretical terms to dismantle the rationality myth, bringing their respective disciplines well ahead on the way of a better understanding of reality.

After all, simply looking with pure eyes at any actual company allows anybody – no matter how expert he is – realize to what extent urgency, fear, selfishness, altruism, pride, patience and many many more are feelings and emotions able to determine administrative behaviours much more than rational procedures.

Accordingly, on a theoretical level, some approaches reconsidering, both in descriptive and in prescriptive terms, the most peculiarly human aspects in firm and management have been introduced and gained momentum.

With respect to this myth too, of course, to detect a paradox doesn't necessarily imply to move from a false belief to the opposite one, that would be all the same unrealistic.

To reappraise the rationality myth, therefore, doesn't mean to embrace the idea that firm and management should be discretionary, arbitrary and purely emotional activities.

Detecting and unveiling paradoxes should not be made in order to replace a false belief with a contrary belief, which would be as much false and unacceptable.

Detecting and unveiling paradoxes helps to get a clearer vision, maybe less fascinating from an intellectual point of view and less securing from a psychological point of view, but certainly more correct and adherent to reality.

Uncovering paradoxes forces us to face a more complex reality, more difficult to cope with, but that can be possibly managed and acted on with much more awareness and, as a consequence, higher chances to get better results.

Paradoxes actually grow up when an observation, a statement, a belief, is made absolute, raised at a level so as to become a rule to be followed always, everywhere, regardless of the specific situation.

Reality, on the contrary, is an ocean and inside such an ocean there are many truths that shouldn't be concealed by paradoxes.

9. Management studies

Who does our work in management studies address? I believe that it is possible to agree that our activity targets four reference audiences: students, colleagues, company employees and the community in general.

The services that we offer these groups include training, research and knowledge dissemination for production, economic, social and cultural purposes.

Therefore the circulation of the results of our research and the subsequent knowledge is directed, or should be directed, to each of these audiences through forms of language that are suitable for grabbing their attention.

Now, setting aside the aspect of communication for didactic purposes in these brief thoughts – which is certainly not a negligible matter in the present age of online communication technologies and artificial intelligence that could compel one to question the very value of our educational roles – I would like to momentarily focus on how we communicate with colleagues and companies, as well as with the community.

In placing myself in this position, both the way we converse with colleagues and the opacity that envelops our interaction with the business world and the community appear clear to me.

With my colleagues, we have learned to communicate by means of very refined and intellectually advanced forms, using technicalities and amazing expressions that are capable of stupefying due to their perfection and enchanting development. Such a manner of expression and its sparkling methodologies are capable of astounding even the most rigorous referees of class A journals (according to the standards of the Anvur, the Italian rating agency for scientific journals) in view of the Publish or Perish principle, regardless of the study's topic or relevance. The most important thing in fact is to publish in alignment with the international mould, leading to the development of papers in accordance with standardized schemes that replicate predefined formats that numb and intimidate innovative thought.

Perhaps I am overemphasizing this line of thought, or perhaps not, but the reader who experiences this reality will obviously hold his or her own opinion on the matter. In any case, if one were to have any doubts and want to test scientific proof by selecting and perusing a statistic sample of published articles from the top ten journals in management with a high international impact factor, I believe he or she would find the answers he or she is searching for. In fact, it is not rare to publish pure stylistic exercises that flaunt research methods to demonstrate assumptions that had already been proven by simple, and often undermined, common sense from the very beginning.

In other words, from local auto-referencing we have passed, within a coherent and well-timed opening to the international community, to a supranational and academic journal sort of auto-referencing. We remain here, along with the world and its problems perhaps, but what we are most interested in is the precision and punctuality of the method that we apply according to uniformed codified schemes. This results in everything being performed within the same itinerary, starting from a constructed literature review that is often carried out on the basis of material that has never been read but is inserted only to demonstrate hypothetical competence because it usually consists in pure erudition. This is all followed by sophisticated quantitative analyses that can make even the most driven economists shiver: therefore we tinker around with the discovery that a certain hypothesis has been proven with scientific rigour.

At this point, intoxicated by the attained results, we believe we have discovered the truth, the law or law-like relationship, the rule, the managerial or entrepreneurial normotype, the much desired generalization. However, we also forget the fact that reality does not exist if not in the forms in which we activate it with the lens that are provided by our knowledge, experience, emotions and values.

And to think that once we proudly underlined that the difference between a corporate man or woman and an economist lies precisely in the fact that the former seeks to listen to the companies' breath while the latter traces general theoretical schemes that are often separate from their own behavior!

Alright, the reason for the opacity that I see in our exchange with companies is now clear to me. In truth, companies have nothing to do with our academic auto-referencing and management is neither hardly ever called upon to evaluate or consider our work, nor are they kept at the margins. On the contrary, it is preferable to overturn accountability and accuse practitioners of not reading, being uninterested in scientific research, and being detached from the world of knowledge. This could be true in part. Nevertheless, we should therefore ask ourselves why this happens. And it certainly is not only due to a lack in time.

It may be anything, but one thing is for certain: we have worked very little on the bridge where exchanges with companies take place. We have kept the world quite far from us, almost as if we were afraid of it because of the complexity that it expresses.

The same goes for our conversations with the community among subjects speaking different languages: therefore they do not happen in reality.

We have perfected research methods to the point of making reality incomprehensible to ourselves and unfortunately (although I would say luckily) elusive to our standardizations.

10. The business of business is business

"The social responsibility of business is to increase its profits"

This statement by Milton Friedman, which gradually became known as "the business of business is business" and that I have often criticized due to its limits, must be shared even if only for its substantial indeterminacy. The latter in fact demonstrates an absence of rigour in this expression, at least in the same manner in which the A. brands the supporters of the theory of corporate social responsibility.

What does this mean? A company's activity must focus on business while other matters, like actions related to social responsibility or supporting a productive partner at a difficult time, are not part of the corporate world, but rather an entirely different one. Profit is the motor of a company and this path of the progress and maximization of society has become its creed.

The above mentioned indeterminacy derives from at least two factors: the resulting concept of maximization and the community's cultural transformation/change.

Companies will certainly do whatever they think is best to obtain the maximum result from the employment of their resources, but how can such a benchmark be measured? How could they know whether the result would have been different and more consistent if other choices had been made? How could they know whether their own interpretation of their customers' needs, including those unbeknownst to them, could be in line with other needs that may not exist yet?

In other words, it is good for the concept of maximization to distance itself from a management line of reasoning and leave room for a more rational and coherent choice that is entrusted to common sense and one's ability to read between the lines of change.

On the other hand, while in 1970, when the statement was first made, its intention to distinguish economic activities from everything that could appear social in order to avoid socialistic tendencies in the A.'s vision was clear, this is no longer possible simply because the client defines the sense and content of business. Therefore, this sense and these contents have shifted/leaned towards these responsibilities.

Today, in fact, business must arrange for social legitimacy to exist for the simple reason that the community has become aware of the fact that wealth production for property and capital employ natural, infrastructural, social and human resources for a value that greatly surpasses what is returned through taxes. In other words, the production of private wealth entails the destruction of common or public wealth.

Therefore, companies have to act to increase profits like Friedman pointed out, but not in the way he thought, but rather the exact contrary. It goes without saying that this renowned author mistook the tools for the purposes. Profit, in fact, is not an end, but a means to reach a goal that increasingly tends to align itself with the production of the common good.

It is thus misleading to set the ultimate goal of increasing profit, for the more one seeks profit, the less of it will be found while, by pursuing the common good with useful, functional, pleasing and sustainable products, profit will be the one to follow the company.

So why are business schools still declaiming the race for profit as the company creed in the wake of the anxieties of an impatient capital? Either they need glasses to see far away due to the short-sightedness that has affected them, or we are simply dreamers, and this may very well be the case although benefit corporations have begun to enter the field in the meantime, albeit timidly.

11. The value of time

Without going into the meaning of time since we agree with St. Augustine's claim that one knows what it is until someone else asks him or her, and assuming a general awareness of its relevance as space in which each person's life, and therefore that of the company, may be located, we will see how companies do whatever they can to waste this precious resource.

In the corporate world, time is experienced with a twofold meaning: the temporal dimension of its use within the organization, i.e. office hours, and the use of such an hourly dimension.

Omitting the former aspect, which has moreover undergone substantial change thanks to communication technology (internet, cell phones and personal computers allow work to be done anywhere and anytime), and observing the way time is used, it is possible to come across a series of contradictory statements.

Here are some of them:

- Time flies, time is running out
- Time drags on
- We have to make up for lost time
- I don't have time
- Time is against us.

These are completely erroneous thoughts that are the result of a stressed, or in the best case scenario, psychological perception of time.

In truth, time does not run out, nor does it fly or slow down: on the contrary, it goes by at the same speed, and when it is gone it cannot be recovered. At the most we can salvage the gained experience that (perhaps) can help us spend present time better. Past time is history, memory, and nothing more (even if experience may have immense value).

On the contrary, time is against no one: as popular sayings go, time is a "gentleman" and passes at the same pace for rich and poor.

Neither is it possible to say that we do not have time: if anything, it is possible to say that our priorities are different from what is required, or that we planned to do too many things in that timeframe and therefore that the amount of work is incompatible, so we were unable to use the time at our disposal to the best of our abilities and define adequate strategies.

As a result, in observing the way time is spent in companies, there is always a sort of awkwardness because these common statements are anything but harmless: on the contrary, they devour and destroy time.

It's easy to say how this is done.

In truth, performed assessment may be concentrated in the principle/concept of a fleeting time that exhorts one to live in the moment as if there were no others, even more so if it is related to a period of crisis in which the prospects of a company boil down to the quarterly financial statement to be presented to its stakeholders.

In this manner, everyone in the company runs, and speed, which gradually turns into rushing and therefore a perpetual state of anxiety of being late, is rewarded.

As a result, trivial matters often rise to priorities due to the lack of suitable assessment parameters, mistakes follow one another and the time to think becomes distant along with the company's creative expression that tends to shrink and turn its activities into routines.

The conscious management of the relevance of time is thus led astray by contradicting thoughts that chase after time in a frenzied race....thus wasting a substantial part of it.

Is it true that those who run arrive first? Perhaps Aesop still has something to teach us.

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