ABOUT TIME
Jacques Attali / Jacques Le Goff
Zygmunt Bauman

THE OTHER SIDE OF TIME
Alex Zanardi / Roberto Bolle

CAPTURING TIME
Peter Lindbergh / Patrick Demarchelier
Commissioned by the state (Ministry of Culture and Communication - French National Centre for the Visual Arts)
it was installed in the Le Havre court at Saint-Lazare station.
A signatory to the "Constitutive Declaration of New Realism", which advocated a return to reality,
Arman accumulated everyday, familiar and sentimental objects.
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THE TIMELESS APPEAL OF TIME

Jacques Attali

economist, writer, and President of PlaNetFinance
Time is intangible, and elusive; and yet, men have always strived to master it, in an effort to increase their own power. Measuring time was the first tool used by men in their attempt to give a meaning to something which escaped them. Political authorities then understood the stakes associated with time measurement: through the imposition of their own frame of reference, they could influence the way individuals managed their time and, to some extent, set the rhythm of society. Many political leaders, from the Chinese and Roman emperors to the French revolutionaries, therefore established their own calendars, in an attempt to appropriate time to serve their ambitions. Others saw in the notion of posterity a possibility to challenge and vanquish time: the accomplishment of feats which would ensure their fame amongst future generations would enable them to become part of human history, and thus to free themselves from the most fundamental constraint imposed on men: the lifetime which is bestowed on them. Some of them tried to do so by mastering another element: space. From Alexander the Great to Napoleon or Queen Victoria, they were the first to imagine a global government, and felt the urge to conquer whole continents in order to fulfill their vision.

The willingness to master time has nonetheless not always been translated into actions. Thinkers have also, in their own ways, tried to assert their power over time. They have done so by deciphering laws of history, and applying them to their own epoch in order to predict the future. When doing so, they have often given a specific meaning to past events, and a direction to history. Karl Marx, for instance, saw in class struggles the driving force of human history, and interpreted its different eras – feudalism, bourgeois society – as steps towards an ultimate progress: the advent of a communist society.

Such an approach is easy to disqualify for its detractors, as the “end of history” is nowhere in sight. The very idea of a linear progression of history is questionable, and may even seem absurd to those who perceive time as a cycle. In the same manner as night follows day and seasons alternate, history would be condemned to repeat itself, and events to reoccur. Men would have to accept this fatality, and their attempts to master and appropriate time would be vain.

This does not mean, nonetheless, that men must resign themselves to a state of powerlessness, for there is one thing over which they have absolute control: the use of their time. Of course, each man’s time is scarce; but that is what creates its value. Men cannot give or sell the time that is bestowed on them; but they can share it, which increases its value. Music is an illustration of this: sharing one’s time and one’s art with other musicians and with the audience is what makes the success of live performances. In the same way, the willingness of professors to share their time and knowledge with their students lies at the heart of education.

Each and every man should strive to make the most of his time, and, through these activities or others, use it to build his own happiness and contribute to that of mankind. He should live several lives at a time, and, through them, try to make the world that he will leave to his children better than the one that he inherited from his parents. Only then will his actions really achieve posterity, as Denis Diderot explained it to Voltaire, in a letter that he wrote on February 19th 1758: “There comes a time when all the ashes are mixed. Then, how important will it be to me to have been Voltaire or Diderot, and to see your three syllables or mine stay? One has to work, one has to be useful.”
"So what is time? If nobody asks me, I know; but if I have to explain it to someone, I don’t know," wrote Saint Augustine.

To knock on the door of the 89-year-old Jacques Le Goff, perhaps the most celebrated medievalist ever, is to ponder the same question. In his discreet studio, framed by books, overlooking the Canal de L’Ourcq in Paris’s 19th district, time slips away among hourglasses and sundials, and cities are transformed into urban conurbations, the headquarters of churches, associations and corporations.

Le Goff, both a historian and a disenchanted but enthusiastic observer of time and its passing, does not try to persuade but rather to explain. Claiming ignorance, like Socrates, whenever the questions edge away from his principal field, the Middle Ages. Rattling off dates, biographies and lives of saints, he recounts the slow unfolding of the centuries. He finds meaning in the irrational passing of time and the haphazardness of historic events, turning history into the most human of sciences. Memory and reality blend with fantasy and imagination, which can neither be pinned down in a neat definition, nor held captive.

There is a sort of anxiety that historians cannot live without. As if the single chronological dimension of time were not enough for them. Where does this uneasiness come from?

Time is a multifaceted phenomenon. Men have tried to hold it captive using tools that have been improved over the centuries, from the hourglass and its three minutes of sand, to the sundial, to the revolutionary invention of the mechanical clock. But human time eludes such measurements. Because it is time faded by memory, the slow time of waiting, the accelerated time of fear and love. It is seldom purely natural; it is
Jacques Le Goff. Illustration by Pierluigi Longo.
also characterised by a social or cultural perspective.

**How?**
The most eloquent example is the bell tower, a symbol of time linked to spiritual needs. Or the calendar. For us historians, time is the subject of a science that is essential to man and which, although founded on objectivity and facts, cannot manage to free itself from their social and cultural manipulations, obliging us to come to terms with the many faces of the same moment.

**With the evolution of communications and the shortening of distances, are concepts of time destined to become increasingly similar? Or are we instead moving towards an ever more subjective notion of time?**

In our era we are witnessing an evolution of temporal relations in the universe, a movement towards globalisation, the results of which unfortunately we cannot predict: the future remains an enigma. Time encompasses the slowness of geological ages, but it is also the rapid, individual time of our day-to-day lives.

**What effect does this double nature of time have on man?**

Every man is a sundial and individual time becomes intertwined with other times, other existences, merging to form the passage of history. Nevertheless, there exists an absolute time, belonging to God, which merchants since the Middle Ages have tried to sell, but it is a sacred time belonging to another dimension, far from here.

**Does the space dimension influence the time dimension?**

Yes, time is tied, almost anchored, to space. And in the modern age, the temporal dimension offers a fundamental reflection on current problems, like shared transport (Le Goff was consulted by RATP, the French public transport provider, for a series of debates aimed at adapting transport networks to the needs of modern man, Ed.).

**In what way?**

Nowadays, two people living in two different capital cities, for example Rome or Tel Aviv, find themselves with more in common than two people living in the same country but in rural areas or provincial towns. And the reactions and solutions to metropolitan problems often end up being similar, because they originate in the same era.

**With the passing of time, have people become more similar?**

Over the centuries, man has acquired the ability to influence time and space, including the invention of ever faster, ever cheaper modes of transport. Like aeroplanes, which introduced the ultra-modern concept of democratisation of space: the other side of the world is accessible to everyone. An evolution of humanity that has made possible the emergence of phenomena such as migration and created individuals with multiple homelands.

**According to your studies, Europe was born in the Middle Ages, with the first urban conurbations.**

**What about the Europe of today: how has it changed?**

The Middle Ages is the moment when Europe emerged and differentiated itself from other continents, with values shared by all nations and similar attitudes, from industry to urbanisation, as well as strong, diverse personalities. Today, we should focus on a Europe of nations, to avoid yielding to the monopoly of America and the advance of Asia.

**What should the new Europe be like?**

It must make partners, not enemies, of the emerging continents. But unfortunately we are faced with great ignorance, the inevitable consequence of the mediocrity of the current political class.

**A few years ago, Umberto Eco observed that the world is proceeding backwards like a shrimp, repeating the old errors of the past. Are we really going back in time?**

I would say that a shrimp proceeds. Backwards, but it still proceeds. I think it's wrong to underestimate the advances that have been made. Let's learn to broaden our temporal horizons, let's consider eras and not individual years.

**And if we broaden our vision, what will we see?**

We have had the Erasmus scheme, the disappearance of many customs boundaries, with the Schengen
agreements, the creation of a European Bank. These are changes which, viewed over the short term, we don’t notice. People often think that it is time itself that brings change, whereas time only provides a possibility, an opportunity for the contribution of men, ideas and intuitions, which will lead us, step by step, towards a more open, more liveable Europe.

The frequency of revolutions in recent years, the adoption of austerity measures and cuts in salaries have led many to talk of the death of capitalism. In your opinion, are we nearing the end of an era? In Europe, people have been fighting against capitalism since the time of Marx. Although I am an anti-capitalist, I don’t believe it is the main enemy to confront. The worst error is austerity: we need to rediscover a growth-oriented attitude and not restrain passions, repress initiatives or demoralise minds. It is not the end of an era, but rather a period of transition: the boundary between private time and professional time is changing, work is increasingly filtering into our personal lives and vice versa.

Is the primacy of the ephemeral a characteristic of the modern age? Yes, we have yet to escape the ephemeral. And this is not the only legacy of the modern age that is a burden to humanity: we are embroiled in our narrow day-to-day worlds, in the problems of our personal lives. We are the victims of a certain narcissism, which has become almost an obsession in our little dramas. Like adolescent romantics, curled up in our own egos, manufacturing a perfect image of ourselves.

You have stated you prefer the calm of night to the hustle and bustle of the day, and the slow progress of history to the rapid gyrations of the present. In other words, you have a penchant for decelerated time. Is it still possible to live in slow motion? Yes, it’s possible. Especially in the literal sense. Think of astronauts: bodies fired into space at the speed of light, obliged to move around their spaceship in slow-mo. This is a new way of experiencing time, which certainly in the Middle Ages people could never have imagined. I’m sure that new forms of time await us: undoubtedly faster forms but also slower forms, which for now we cannot even glimpse on the horizon, but which will soon arrive and surprise us all.

JACQUES LE GOFF (born Toulon, 1 January 1924) is a French historian specialising in Medieval history and sociology, and one of the world’s most authoritative academics in the field of hagiography. He has lectured at the Universities of Lille and Paris and since 1962 has run the École Pratique des Hautes Etudes in Paris. Publications: *Intellectuals in the Middle Ages* (1957), *The low Middle Ages* (1967), *Western Civilisation in the Middle Ages* (1968), *Merchants and bankers of the Middle Ages* (1976), *Time of the church and time of the merchant* (1977), *The Birth of Purgatory* (1982), *Interview on history* (1982), *The marvellous and the mundane in the Western Middle Ages* (1983), which is an anthology of essays published in various periods and some unpublished works. With the essay *Italy through the looking glass of the Middle Ages* (1974), he contributed to Einaudi’s “History of Italy”. 

ABOUT TIME

IN OUR ERA WE ARE WITNESSING AN EVOLUTION OF TEMPORAL RELATIONS IN THE UNIVERSE, A MOVEMENT TOWARDS GLOBALISATION, THE RESULTS OF WHICH UNFORTUNATELY WE CANNOT PREDICT: THE FUTURE REMAINS AN ENIGMA.
We are at the mercy of the moment, in an endless, unstoppable evolution.

Once upon a time there was time. But time is no more. At least not the way we used to think about it. Because the people of the third millennium are condemned to live in the present. At the mercy of the moment. Mobile fragments of the liquid society in the era of liquid time. In other words, in an endless, unstoppable evolution.

This is the description provided, in a quiet voice and with an orderly stream of thought, giving the correct weight to each idea, by Zygmunt Bauman: philosopher, sociologist, celebrated observer of post-modernity and its transient transformations.

An imposing man in spite of his fragile appearance: born in 1925, Bauman has lived through the twentieth century with its twists and turns, the horrors of history and the acceleration of development and technology. Of Jewish ancestry, in 1968 he was obliged to flee his native Poland, a country scarred by antisemitism. And for half a century, as a professor at the University of Leeds, in England, he has applied an old-fashioned patience and dedication to the task of providing generations of students with the necessary categories to understand reality.

With one required precondition. “The world is changing too rapidly to be able to ascribe a universal meaning to things. Nowadays it’s an individual struggle: each of us is fighting alone to make sense of time,” he politely explains.

How has the notion of time changed over time?

There are two aspects to consider, both of which significantly influence our way of perceiving and using time. The first is the absence of a long-term perspective. Today people are no longer used to planning their actions in time because they are increasingly and painfully aware of the rapidity of change. The speed with which events follow one another is such that any occurrence is largely spontaneous. And perhaps also unpredictable.
So we are at the mercy of the present?
It is no longer possible to conceive and plan things that take years to achieve, because in the time between the idea and its actualisation everything could change. The idea that people have of time today is no different to that of instant coffee: you pour some water, you put the powder in and you drink it immediately.

So even time is disposable?
There's a word to define this notion; nowist time. The time of this particular moment.

What makes nowist time different from the past?
Speed, for example the speed with which we lose interest in something: we can't keep our commitment and our attention on the same subject for too long.

What else?
The fact that we can't use the weapons of the past to face time.

For example?
Patience, which we used to teach to children: plan things carefully, work towards them step by step, do one thing first then another.

If we have lost the linearity of planning, what is left?
Pointilism, to borrow a word from the world of art. Like a picture, life is made up of moments, single points of colour. If you look at them individually they are just dots, each one very similar to the next, but by combining them carefully the painter is able to create a picture.

You said there were two aspects to consider.
Yes, the other is the morphology of time: time used to be structured. People fought to make it stable. For example, in my day time was divided into working time and private time, between duty and pleasure, so to speak.

Is it no longer like that?
Nowadays the divisions are becoming blurred, they are no longer clear. Not only are the boundaries not negotiable; they are also based on events that can't be predicted. Do you know why?

Why?
Because these days nobody is absent anymore, we are all constantly present. Anyone who has a mobile phone or an iPhone in their pocket can send a signal at any moment. And that signal means that someone wants you to do something different from what you are doing.

A side effect of email, which keeps us chained to work.
That's not all: the idea works in every sense. How many times do we see groups of young people on the street, each with his or her phone. When they get bored, when the conversation stops being interesting, they just have to pull out their phone to immerse themselves in something else.
So near and yet so far?
Time is liquid too, like society. You can maintain physical proximity but not spiritual proximity.

If it’s limited and fleeting, how should we use time?
This is a very individualistic society and we are each fighting our own battle to make sense of time. Benjamin Franklin said that time is money, for example, but I don’t think that’s true.

Why not?
Just take a simple example: you save all your life for your old age, but time depreciates money, making it worth less. So it’s a contradiction in terms. In theory, time repays you in a different way...

How?
At least in theory, when you use it for things that seem impossible nowadays: for example long-term projects that oblige us to prioritise our interests, perhaps sacrificing momentary pleasures in favour of lasting things. In theory, by doing this we can look back and feel gratified by time.

And you insist that this is only theoretical?
Yes, because in practice often conditions aren’t stable, so planning doesn’t bring gratification after all. Students are the best example. They choose what course of study to undertake based on the skills that the labour market requires: theoretically, their choice should reward them.

But instead?
Instead circumstances are so changeable and unstable that at the end of their chosen course of study those skills are no longer any use: the market is already looking for something else.

So there’s no way out.
The numbers are clear: 50% of young people with a degree in Europe are either out of work or not doing what they studied to do.

Give us one positive aspect of the change currently happening.
Technology - the possibility of being constantly in touch with the public space by using a smartphone at any moment - is a revolution. It has swept away institutional obstacles, the gatekeepers who up to 30 years ago blocked access to the public sphere.

Is the modern world more democratic?
We can’t say: the consequences of the technological revolution are enormous, but impossible to assess today. While it’s true that everyone can access the public space, it’s also true that we can become slaves to Facebook “likes” and the number of people reading our blog. This phenomenon has a name.

What?
The Poor Man replacing celebrity: success is measured by being seen as much as possible. This is the key statistic of our times.
“We need to regain our hold on time. We need to learn to let it flow.”

ANDREW SMART

Sisters of the Redeemer, Sr. Sybille in the swing of the whirlwind in Steinbach, Würzburg, Germany.

Photo by Le Kien Hoang / Agency FOCUS / LUZ
Technology has changed the way we communicate and the way we organise our days. It has also divided the world into those who believe the internet has made us more efficient and those who, conversely, think it has taken something away from us.

So who is right? Social research and neuroscience demonstrate that we have not lost time, but we have accelerated it, often at the risk of losing sight of who we are.

Net gain or net loss?

THE IMPACT OF OUR WEB ADDICTION

It was 1964 when Umberto Eco published *Apocalyptic and Integrated* in Italy, sparking a debate on the social effects of the information society. In the same year, the American magazine *Life* provocatively inquired how we would fill all the time freed up for us by technology. Almost fifty years later, however, man has neither died of boredom nor of excessive laziness. But technology has filled up our time. Simultaneously it has changed our idea of time and its shape. The surprise is that the debate over how technology has affected the way we use time still divides us into the “apocalyptic” and the “integrated”. Into those who believe that the internet has made us more efficient - allowing us to organise conferences or conduct transactions remotely, thereby gifting us more seconds, minutes and hours - and those who, on the other hand, see the internet as a spider’s web in which we have lost precious moments, social relationships, and lived experiences, replacing them with a virtual imitation of real life. But now there are new tools for studying the relationship between time and technology: namely social research and neuroscience.

DEPENDENCY OR NEED? Technology has changed our lives, but it has not left us with more free time. In fact, our days are fuller and more stressful. After television came the discovery and proliferation of the personal computer, the tablet and the smartphone, allowing us to be constantly connected to social networks, first and foremost Facebook and Twitter. This could be defined as the second globalisation - the first having happened between 1870 and 1914 thanks to commercial integration and the spread of the telegraph - and it has progressed with such speed that we are now capable of communicating in real time right across the globe. The downside is that we are now all dependent on it, to a greater or lesser degree. The psychologist Kimberly Young began to study the “dark side” of the web in 1994, discovering that it could have the same effect on some people as a drug. And in 1995 she founded the first research centre for internet addiction, achieving academic recognition for the phenomenon of net addiction.

MORE ACTIVITY IN THE SAME TIME. Now, as an internationally recognised expert, Young is
“Technological progress has merely provided us with ready to debunk some myths: “The problem for the net addict is not the time spent in contact with technology but the quality of that time.” A concept that can be extrapolated to ordinary people. In contradiction to at least three previous studies, in fact, the research of the American sociologist John P. Robinson, director of the American Centre for Time Use, asserts that the arrival of the internet in our lives has not had such a great impact on the way we organise our days. Robinson analysed the data of the two largest studies ever carried out in the USA. A first survey (the General Social Survey) involved 55,000 adults between 1974 and 2012, while a second (the American Time Use Survey) collated the entries in 100,000 daily diaries from 2003 to 2011. The result? Over the course of the 40 years under consideration, there has been a decline in time dedicated to reading daily newspapers, but since the mid-1990s when the internet became a mass technology, there has been no other decline in social behaviour or behaviour linked to use of the media. Since 2004, social media have become the primary source of social contact: those who have increased their use of the internet have reduced visits to relatives but not those to friends. And, for the majority of Americans, time dedicated to the internet has increased by an average of only one hour per week. “Looking at these figures,” explains Robinson, “we can say that the invasion of technology into our lives is more an impression than a reality. The illusion might be explained not so much by the quantity of time we dedicate to technology but by the increased rhythm of the information flow to which we are subjected.”

THE UTOPIA OF THE 60s AND ACCELERATION. To summarise, if technology has not created more hours of free time by increasing the efficiency of communication, it is because the void has been filled by more communication. Time has accelerated. “The utopia of the Sixties is dead,” says Andrew Smart, researcher in cognitive neuroscience and author of the book Autopilot: The Art and Science of Doing Nothing, now famous on both sides of the Atlantic. “Our time has increased in density,
and we are subjected to a continuous flow of information with serious effects on our brain and even on our morale,” asserts the scientist. His claims are not based on literary dystopias or existentialist philosophy, but on the latest research in the field of neuroscience.

Studies published in the Journal of Neuroscience have confirmed that during sleep and rest the brain activates a sort of autopilot, a default mode. In this state the brain is not oriented towards any external objective, but rather is focused internally: “These are the moments in which we recall sensations, imagine the future and experience emotions with moral characteristics,” specifies the researcher. Essentially, the moments that promote both creativity and self-awareness.

THE DISTORTION OF THE ECONOMY.
The efficiency of an individual’s cognitive process depends on the balance between the externally-oriented state and the internally-oriented one. And this is where the impact of technology, with its hundreds of stimuli, can be seen. “The problem,” explains Smart, “is that we are obliged to constantly focus outwards. The distractions created by excessive use of social media disturb the development of all those abilities linked to focusing inwards.” He adds: “the research also demonstrates how hyperactive children have difficulty developing a moral sense.” However, Smart does not point the finger at technology, but rather at the economic system that has made it omnipresent and pervasive. “The use that is made of it and the acceleration imposed on our lives is by no means efficient from an economic point of view because it does not allow individuals to renew their creativity. In the long term,” he argues, “this also has an effect on productivity: we work a lot but create little. To improve our lives,” concludes Smart, “we need to regain our hold on time. We need to learn to let it flow.” And this is the key: to learn to ration the time we spend with technology, the time that lets us look outside of ourselves, to increase the frequency of communication. And not to take sides with either the apocalyptic or the integrated. “Your time is limited, so don’t waste it living someone else’s life,” urged Steve Jobs, someone who knew a thing or two about technology.
Time is money, said Benjamin Franklin, founding father of the United States of America. Time management is money; it would be more correct to say today. Indeed, if in the digital era business is measured in megabytes per second, then it is precisely the art of optimising every 24-hour period that makes the difference between loss and profit in an enterprise. Of course, time is not all money. And perhaps the best time-manager is the one who has the most free time. But what is certain is that organising minutes and seconds is becoming an exact science, and one to which the business world is paying increasing attention.

“Anyone who has strong time management abilities enjoys a significant competitive advantage at work,” succinctly summarises Susan Gunelius. Nobody embodies the prototype of the new businesswoman better than this multi-tasking career woman whose lifeblood is time management. An entrepreneur and Forbes analyst, she created the famous blog ‘Women on Business’ after a career as a senior manager in American mega-corporations including Citigroup and AT&T. So what are the rules for effectively and profitably managing our time at work? The first is to assess “how to do it” along with “why to do it”. The three key principles of time management, according to Gunelius, are “the ability to delegate, the ability to assess a person’s productivity and the ability to assign the right priority to things.”

But are these skills we are born with, or do we have to learn them? Manuals, books and blogs (like the one she herself writes every day) can certainly educate us, but there is no better teacher than work itself. “When I was on the first rungs of the corporate ladder I ended up running small branches of some of the biggest companies in the world, where resources were limited and I had to learn to do everything by myself,” remembers Gunelius. A “priceless” experience that provided what she calls “the ability to connect the dots”. Where the dots are “the stakeholders, the potential obstacles, the various phases of a business strategy right up to the consumer.” In this context, “it would be wrong to make generic distinctions between how businesswomen manage their time compared to men.” Because the difficulties are the same for everyone: starting with the fact that we always have less time than we need. This is where the other keyword comes into play:

THE ABILITY TO CONNECT THE DOTS


Stefania Lucchetti, *The principle of Relevance*, RT Publishing 2010
do it for at least 20 minutes before moving on to something else. You can do more things by doing them one at a time than all together,” he concludes. Naturally. The computer, paradoxically, fails to simplify things. It is not enough that an increasing number of companies ban the use of Facebook or Twitter during working hours: “Companies are starting to worry about the phenomenon, but nobody has yet adopted innovative and efficient time management policies.”

Based on what principle? “To begin with, we need to replace the idea of reacting to stimuli with a culture of thinking about stimuli.” In other words, all those company policies that require people to have 10 chats open at the same time, to answer emails in 10 minutes and so on, are clearly destructive.”

Writing 200 emails per day is the digital equivalent of keeping the seat warm. “We need to learn to recognise our own biological clock, then distinguish between urgent objectives and strategic objectives, and between objectives requiring a lot of concentration and those that require less,” explains Lucchetti.

“On our list of things to do, tasks that are urgent and easy, like writing emails, should be assigned to the moments of least concentration, for example as a buffer between more difficult and strategic tasks.” Without forgetting that strategic does not always mean efficient, as Lucchetti points out. Confusing the two things can make you lose sight of long-term results.

“Efficiency is a tool to be used or ignored depending on the situation. Among the professionals I know, the people who achieve the best results are the strategic ones, the ones who don’t put efficiency before everything else.” Corporate culture undoubtedly counts for a lot. And on this front the American information technology giants have a lot to teach us. Yes, the very companies that produce those “digital distractions” which are so dangerous for time management.

It may be surprising, but the end of the myth of multitasking is not isolated. Neither is it just a stance adopted by professors who have plenty of time to dedicate to books and few pressing deadlines. Another person who is convinced of the futility of doing everything and doing things in haste, is Stefania Lucchetti, a business lawyer based in Hong Kong, who has written international bestsellers about time management like The Principle of Relevance and Own your time. “The digital age has made communication faster but it has also obliged us to communicate more. The expectations of others have grown. Communication has become more frequent and more superficial. All this takes time,” she explains.

The advice, therefore, is: don’t lose sight of your priorities.

It is no accident that in California “results-oriented workplaces” are becoming increasingly common. These companies allow their employees to work at home, in the knowledge that they have perfectly internalised their employer’s time management strategies. So in the end even the distinctions between home and office, free time and work, are dismantled. Because after all, what matters in business is not time or even space, but results.


Le Blanc Raymond, Achieving Objectives Made Easy! Practical goal setting tools & proven time management techniques, Paperback, 2008
Airports, stations and subways are no longer places of transit, thanks to technology and public services. Stefano Stabilini, director of the Laboratory of Urban Planning of Time at the Politecnico di Milano and founder of the Inter-university Centre for Urban Mobility and Times (MoTU), tells us how quality of life can be improved. The ancient Greeks had two words for time: krònos and kairòs. The first refers to the mechanical passing of minutes, the second means “the right moment”. On the one hand we have the quantitative concept, on the other the qualitative idea encapsulating two elements: action and good timing.
The themes that excited the ancient Greek philosophers in the fifth century BC are still relevant to our daily lives 2,500 years later. The urban planning of time, a field of study established in the mid-1990s, studies the habits of men and women who live in cities with the aim of identifying solutions to improve quality of life.

Stefano Stabilini explained to us how the variable of time is a fundamental factor in understanding and designing urban quality in contemporary cities. In the mid-nineteenth century, industrial cities began to emerge in Europe and the United States. This model spread and developed rapidly, dominating urban life until the final decades of the twentieth century. Over this long period of time, the factory became the hub of society, around which workers’ lives revolved. These were the years of the great captains of industry who also looked after the welfare of their employees, providing sports facilities, nurseries and schools. “For years, manufacturing shifts and assembly line schedules regulated all the rhythms, movements and flows in cities.” Today all this no longer exists. After the ’70s, society abandoned its industrial character in favour of a service economy. “A real revolution that also helped change the urban landscape.”

But the great revolution that began in those years also relates to the use of time. Under the influence of new phenomena such as flexibility and globalisation, working time began to spread out over 24 hours, traffic rush hours expanded, while nights and weekends were increasingly filled up with the activities of a new society based on knowledge and information. Those most affected by this transformation were women. “During that period, family time was thrown into crisis by the difficulties women faced reconciling their role as workers, wives and mothers with the new rhythms of work and the city. Hence the need to manage time differently, or rather: more flexible times for starting and finishing work, longer and more elastic windows of time to make it possible to drop children off at school and pick them up again, do the shopping at the supermarket and complete the daily chores.

“Nevertheless this rapid growth, sustained by the economic boom, led cities to develop in chaotic urban sprays, resulting in what the sociologist Aldo Bonomi has called “The infinite city”. Infrastructure and public services like trams, subways and bypasses struggle to keep pace with the new and growing need for mobility. New connections, new bus and tram routes and the introduction of nighttime services are not always enough to satisfy new social requirements.

The goal of urban planning of time is to improve urban quality of life by designing ad hoc solutions, based on the analysis of people’s habits. These days, reaching the workplace takes on average one hour. The challenge is to improve the quality of this time, which also means working on the quality of life of “city users”, in other words a city’s temporary residents, as defined by the sociologist Guido Martinotti, whose work represents one of the foundations of the MoTU project. City users, workers, students, tourists and businessmen are the new temporary residents who find themselves inhabiting certain areas of the city for a limited period of time, like for example airports, railway stations and subway platforms.

“The times and spaces of mobility need to be filled with content. To this end, an internet connection is a powerful ally and the efforts of local administrations to expand Wi-Fi connectivity is a big step forward. The presence of commercial activities is moving in the same direction. Think of Milan’s Central Station. Until a few years ago it was associated with danger and lack of security. Since the renovation project involving the creation of shops, bars, restaurants and pharmacies, it has been enlivened not only by occasional travellers

“...The challenge for architects, sociologists, academics and scientists is to integrate time and space, finding the right balance between accessibility and liveability.”
In modern society, mobility is considered a right, and access to the city’s spaces and services must be guaranteed to all. There is a need to bring the city closer to its residents: this is the incentive behind initiatives like “citizens’ day”, which involves providing municipal services round the clock to simplify the “jungle of timetables” and help satisfy everyone’s needs. We got the double concept of time from the ancient Greeks, but we owe a debt to the Romans for another opposition: that of *urbs* and *civitas*. The former means the physical city, made up of homes and buildings separated by streets and squares, while the latter refers to the citizens who live in those spaces. “The challenge for architects, sociologists, academics and scientists who dedicate themselves to this subject is to integrate these two concepts better, finding the right balance between accessibility and liveability, in the knowledge that time is the unit of measurement of this balance.” It makes for a very sensitive thermometer of the health of a community because, although our time is an individual resource, it is one that the city can fill with meaning.

**STEFANO STABILINI.** Born in 1965, is a research fellow in Urban Planning at the Politecnico di Milano. He is the director of the LabSAT research laboratory of the Politecnico di Milano, based at the Arata Campus, Piacenza. He is a promoter and member of the Inter-university Centre for Urban Mobility and Times (MoTU), established in 2012 by the Politecnico di Milano and Milano Bicocca University. Moreover he is a founder, along with Dietrich Hendel and Roberto Zedda, of the international network of researchers ENGHT (European Network on City Times). In 2006 he completed a 2nd level Masters degree at the Politecnico di Milano: “Time policies for quality of life and mobile sustainability”. He runs the Urban Planning Laboratory course for the degree in Environmental Architecture at the Politecnico di Milano, Piacenza campus.
Life is getting longer and our way of life is changing, leading to changes in the labour market and our own expectations. We discussed all this with Mark Cropley, Professor of Health Psychology at the University of Surrey.

As life expectancy increases, is it inevitable that our working lives will also get longer?
It is estimated that people aged 65 and over will account for 23% of the total population by 2035 (ONS, 2012). Furthermore, ageing of the workforce will be the most significant development in the labour market over the next 15 years and approximately one third of the European labour force will be aged 50 or over by the year 2020. The default retirement age of 65 years has now been phased out by many European countries. Moreover it is fiscally unlikely that the state could continue to fund pensions at the current level, while more people will have to continue working past the traditional retirement age. In addition, the age at which State Pension can be claimed is gradually increasing to 66 for men and women by 2020, and ultimately to 68.

Are men and women prepared to work into old age?
The literature suggests that the experience of work in the wider context is different for men's and women's health. Most domestic responsibilities are shouldered by women, which is why some studies indicate that women do not experience their non-work time as leisure. The combination of total paid work and domestic work during non-work time will inevitably place considerable additional demands on women workers, leaving them little time for social, educational or recreational/recovery activities. Retirement can be seen as a welcome lifestyle transition, where the retiree has multiple options. Some individuals may continue working. Those who are financially secure have greater opportunities to retire, take up voluntary work or continue with their present work, if they enjoy it. However, others will have to work post-65 out of financial necessity. Thus, the reasons why people work post-65 may be varied. At the moment around 60-64% of people work past retirement age, however governments encourage people to work beyond retirement so it is likely this percentage will increase over the next decade or so. We therefore need to examine the way people work later in life through options such as part-time work, flexible hours, self-employment, and volunteering. Work-related fatigue is a major concern for many industrialised countries, and has been associated with lower productivity, poor occupational health and safety, higher healthcare costs and lower health and wellbeing. However, much of the available data is based on workers under the retirement age and it is not known how working post retirement age effects these issues. We do not know what is the ideal work/rest model for people post-65.

In this context, what can science, medicine and technology contribute?
I cannot talk about other disciplines but I think psychology can play a big part in this area of research. We need to start interviewing older workers to get an understanding of the issues from their perspective. Also, I think we need to conduct more longitudinal studies to follow people before 65 and then over the next 5-10 years to see what effects working has on health and well-being. We need to assess people who don’t work, those who have to work and those who work for enjoyment. We also need to examine different work/recovery patterns to see which model is the least likely to cause fatigue and ill health (e.g. is it better for a 70 year old to work 3 days and have 4 rest days or can they continue to work 40 hours/ 5 days per week, etc.). I don’t think we will ever find a model that suits all but we need to know
whether working a 40-hour week is really feasible for someone who is 70.

**How should the workplace and working hours change?**
Older workers are more likely to have a significantly higher need for recovery from work after performing psychologically and physically demanding work than younger workers. Furthermore, as work demands increase in older adults so does the risk of all-cause mortality. The general assumption is that weekends are necessary for rest. Over time most industrialised countries adopted a seven-day model consisting of a five-day working week, with a two-day weekend. However, we do not know at present whether this model is optimal for older workers. It may be that workers past traditional retirement age need three recovery days, or that work is better for health when it is segmented into a reduced working week.

Due to the circadian changes with age, it may be beneficial for some to only work mornings but have the afternoons free for rest or leisure.

**Will working longer be a problem or an opportunity?**
There is evidence to suggest that working is beneficial not only financially but also for health and wellbeing (simply put, people in work appear healthier and happier than people not working). Conversely, there is also evidence that older workers have an increased likelihood of reporting fatigue from work and a higher need for rest and recovery. As the need to work longer into later life takes effect, it will become more important to understand the needs and physical and mental abilities of older workers performing different kinds of work. In short, we simply do not know whether working longer will be a problem or an opportunity.

**MARK CROPLEY** is a psychologist and Professor of Health Psychology at the University of Surrey (United Kingdom). He conducts research in the field of health at work and in particular how people recover from the effects of work-related stress in their free time. In 2008 he was involved in organising the first international workshop on recovery from occupational stress. Professor Cropley sits on the Scientific Committee of the European Academy of Occupational Health Psychology, and is working on a special edition of the magazine *Stress and Health* dedicated to recovery from work-related stress. His current research projects relate to cognitive aspects of rest from work, methods for reducing mental “rumination” and work fatigue, and the evolution of recovery processes with age. Cropley recently took part in the 9th edition of *The Future of Science*, an international conference organised by the Fondazione Umberto Veronesi, Fondazione Giorgio Cini and Fondazione Silvio Tronchetti Provera.
For him, sport has always been a race against time and a high-speed challenge. Both before and after the accident that cost him the use of his legs. But in life, Alex Zanardi has never been in a hurry. And if he had to choose a time to return to, it would be his childhood, when he used to dream in front of a poster of Gilles Villeneuve. Alex Zanardi does not wear a watch. He does not like to wear the passing of time on his wrist. That is why he is often late and in a hurry. And yet, if he could, he would never miss an appointment, being almost incapable of saying no. But not to satisfy his ego. He is not interested in popularity, and never has been. Even when he used to hurtle round a racetrack. Before the crash and the start of a new life. A new time.

Zanardi continues to race against time. And he does everything he can to take his time, saying “You can’t do everything in life, so you try to do what you think will work as well as you can.”

What is your relationship with time these days?
Different from how it was in the past: it evolves with age. As a boy you think time is infinite, now you hear the clock ticking and you feel time advancing.

What do you mean?
Rightly or wrongly, there are lots of people who respect me and want me, so sometimes I have to spend my days replying to invitations or to people who contact me looking for comfort because they see me as someone who has experienced suffering and come through it.
In sport is it harder to compete against a flesh and blood adversary, against yourself or against the clock? All three, in different ways. But again it depends on your time of life. Nowadays I realise I'm more of a stopwatch man, perhaps partly because with cars I often had to give my all, alone on the track, to win a pole position.

Even in Formula 1?
In motor sport, a race is not just about jostling for position. Often you find yourself alone on the track, and if you need a hare in front of you then you've already lost the battle.

What is your relationship with speed?
I'm a good sprinter. If it comes to a sprint, I'm a dangerous prospect for my adversaries. But I must say I enjoy racing against the clock. I feel time passing steadily regardless of the effort I'm putting in; it doesn't go faster when I'm going flat out or drag when the finish line is far away and feels like it will never arrive.

In everyday life how do you deal with time passing?
I have a very naive relationship with time. People think I manage to fit 20 times as much as a normal person into my day. And maybe sometimes it is like that. Yesterday I was in Rome, I got back late at night, a few hours later I left again for Pescara and now I'm on my way home.

So you're always racing?
Almost always. There are days I spend lazing around, staring at the ceiling and thinking. That's not wasted time for me.

So you're not afraid of downtime?
If you need it, it's not downtime, but recovery time, which is vital in life. We can't always choose what we do with our time. Those moments when you regain control of your own time, when you get to decide how to use it - even just for playing with the dog or sweeping leaves in the garden - are crucial.

How many different times would you split your life into?
I'm still living it; it's difficult to assign more importance to one moment than another. If someone wanted to make a film about me they'd probably dedicate lots of space to motor racing, but I would spend more on my childhood, when I used to stare at the Gilles Villeneuve poster on my bedroom wall and dream; or my adolescence, when my friends used to go to the disco and I would be in the garage fixing my go-kart for the next race.

Why?
I think the most interesting part of life is not putting your plan into action, but rather the road that takes you to that point.

How has your relationship with time changed since the accident?
I'd say the change is more related to age. I'm very devoted to sport, I still feel like a sportsman, and there are still lots of things I'd like to do. But I'm getting older and my career isn't going to offer me many more springs.

Have you ever had the impression you were wasting your time?
Without wishing to offend anyone, it happens when I accept an invitation just because I'm incapable of saying no. When that happens I've deprived myself of time I could have spent with my son, with my wife, or going fishing. And instead I've allowed myself to be dragged into certain events because someone told me I couldn't miss them. But it wasn't true. You only live once and I should have listened to my heart, not to other people.

In your life, there's been a time for starting, a time for staring over, and many times for winning. Do you ever think about the time for stopping?
Actually I've already stopped more than once. Beginning a new project very often means giving something else up.

In what way?
When I decided to start racing handbikes in 2009, nobody noticed. The discipline I had chosen was unknown, and I had to give up cars, which were far more popular. Then I won the Paralympics in London and I achieved a level of popularity I wouldn't even have had racing at Monza with Ferrari.

ALESSANDRO ZANARDI
Born in Bologna on 23 October 1966, was a Formula 1 driver. In the most important motor racing tournament, however, he never achieved the results he had enjoyed in the lesser categories. In 2001, in the CART Grand Prix at the Lausitzring, he lost both legs in a terrible accident, when the nose of his car was hit from the side by that of Alex Tagliani. Saved by the doctors, Zanardi was walking again with the use of two artificial legs a few months later, and in 2002 he was back in the driving seat. He continued racing until 2009, achieving excellent results in the WTCC. He then gave up cars for the handbike, a special bicycle powered by the arms. In 2012, he won gold in both the road race and the time trial at the Paralympic Games in London. This year he repeated his double victory at the World Championships, where he also added the relay title.

He is also a presenter on Italian television.
A LIFE IN DANCE

the rhythms and times of

Roberto Bolle
We might say that your life goes by in dance time, to the rhythm of music. Dance has been a part of your life for years. When did this intense relationship begin? When did you realise that it would become your life?

I was very young. If I had to give an age I’d say my passion began when I was around 6 years old, but looking back, I have no memories which don’t involve music. I’ve always felt like a kind of instrument in its hands. When I began to devote myself to dance at the age of 7 it was like discovering a second home. It was my world.

You are now a “star” of dance, who can perfectly interpret any work, with pathos, ease and vitality. I guess you have a favourite piece of music or a story you interpret better than any other.

As you can imagine, classical music is what I know best. That doesn’t mean I don’t listen to pop music and modern singers and composers: I always have a healthy selection on my iPhone. But I have a special relationship with classical music: it is with me every moment of the day, from my morning lesson to rehearsals and performances, as well as during moments of freedom and relaxation. From Mozart to Liszt, from Prokofiev to Bizet: nearly every great composer is associated with a character who is important to me. When I listen to Chopin, to give you just one example, I can’t help thinking of Armand in The Lady of the Camellias, a role I have played in the world’s most prestigious theatres, from the Paris Opera to the New York Metropolitan and obviously La Scala.

How much is it about hard work, exercise and sacrifice, how much is it about training and how much is it about your own improvisation and personal interpretation, about your essence?

Dance is an art that requires extremely hard work, uncompromising tenacity and an iron discipline. A dancer’s career is dedicated to sacrifice, and training is fundamental to realise one’s full potential. But the ability to interpret and breathe life and soul into each role is undoubtedly crucial. Technique without feeling can amaze and impress the audience, but won’t win its heart. Just like actors do, you have to immerse yourself in the role, experiencing the emotions and feelings of the characters you’re playing with your body and soul. If that doesn’t happen then you can’t call yourself a true artist. And it’s the ability to interpret that makes a dancer different from an athlete.

What is your relationship with fame, the stage and the audience, and with the expectations they place on you each time the curtain rises?

For me, fame, the stage and the audience are all linked to the same concept: the quest for excellence. I have never looked for fame other than that associated with my art, at the same level as my art. The stage asks questions of me every day and always pushes me to bring out the best in me. The audience, and the warmth and emotion they give me, always push me to rise to an unachievable level of perfection and descend into the deepest twists and turns of a character. Dance is an art that combines control and passion, emotions and lucidity.

Dance is a lot more than physical and aesthetic expression at its most visible - it is above all a representation of the soul, a communication of feelings and passions, expressed through the body. So do the identity, nature and feelings of the individual distinguish and personalise the way one dancer moves compared to another?

Absolutely. Technique alone, however perfect, cannot express the nature of a great dancer. The true dancer is also an actor. He interprets, he is moved by emotions and feelings, he experiences and portrays stories, conveying their passion to the audience.

For us musicians, time or ‘tempo’ has many meanings, each of which is very specific: it is the speed of a performance or a composition; it is rhythm - as in 2/4 time as opposed to 4/4 time - and it also means allegro, andante, adagio.

And then, time can be different depending on the room you’re playing in and its acoustics.

Playing in an auditorium or a church requires a different kind of attention to prevent the notes and sounds from overlapping; you need to change the tempo of the performance and adapt it to the venue. So time is an extremely important variable for us, over and above the technical factors.

Then there’s another aspect: we violinists are sometimes accompanied by marvellous orchestras, but other times by less virtuoso orchestras. In those cases, certain tempos are a bit more tricky, more awkward, so you need to know how to adapt to a different tempo.

All these variations, all these details, are what makes an audience say that a concert was “beautiful”, without being aware of the small and not so small nuances that determine the success of a performance.

The concert is the result of hard work, of long and laborious preparation. That’s why time has such a broad and important significance for us.”

Salvatore Accardo, Musical Director of the Italian Chamber Orchestra and violinist, with one of his two Stradivarius violins, Cremona.
Clearly he brings something of himself to every life he represents. That’s why not only is every dancer different from every other dancer, but also when any one of us interprets a role, he does it differently each time. Because each time he invests it with his past, his frame of mind, his maturity, his life experiences.

If you could travel back in time, in which era would you like to have danced? Who would you like to have danced with?
I have been lucky enough to share the stage with dancers like Sylvie Guillem, Carla Fracci, Darcey Bussell and Alessandra Ferri, who in my opinion are among the greatest artists the dance world has ever known. But one period I find especially fascinating is that of Diaghilev’s ‘Ballets Russes’. We’re talking about the first decades of the twentieth century, when the creation of new ballets involved true geniuses: Cocteau, Picasso, Stravinsky, Balanchine, Nijinsky, Bakst, Massine and Debussy.

How do you spend your free time? What do you like doing when you’re at home or when you’re touring the world?
I split my time between family and friends, whom all too often I neglect during the year. I love being in contact with nature, especially my element of choice: the sea. What’s more, I always have to be up-to-date. Even on holiday I read the newspapers a lot, and catch up on the films I haven’t managed to see at the cinema. But my free time is very limited....

2 Leon Bakst, “Scenery for Sheherazade”, 1913 / LUZ
3 Roberto Bolle, photo by Julian Hargreaves / LUZ

ROBERTO BOLLE was born in Casale Monferrato, Italy. When he was extremely young he entered La Scala Theater Ballet School. Rudolf Nureyev was the first to notice his talent when he was only 15. In 1996 he was promoted to Principal with La Scala Ballet Company. His repertory includes leading classical roles and works by the most famous choreographers, such as Balanchine, Forsythe, Petit and Neumeier. As a guest artist he has appeared with the major ballet companies all over the world with such partners as Darcey Bussell, Alessandra Ferri, Carla Fracci, Sylvie Guillem, Greta Hodgkinson, Lucia Lacarra, Tamara Rojo, Polina Semionova, Svetlana Zakharova.

Étoile: La Scala Theatre, Milan
Principal Dancer: American Ballet Theatre, New York
If we follow the philosopher Aristotle’s definition, time is that which is measured by our soul. It is the things that, as they pass, remain within us. Which is why the philosopher wrote that time has only three dimensions: remembering, paying attention to something and waiting. Aristotle’s is an “intimate” measure of time, which has inspired many philosophers and scientists working on the meaning of time. The most celebrated of these is undoubtedly Albert Einstein, who with his theory applied to the physical world maintains that time is absolutely relative and depends on one’s frame of reference. Not exactly the soul, but nearly. Man has always tried to measure his time, inventing all kinds of tools to do so: from the sundial to the astronomical clock, not forgetting the calendar and its variants. To explore them is to take a journey through time.

**Aristotle said we measure time with our soul. Albert Einstein went one step further, linking time to the physical world. And man has always tried to put a value on time, by every possible means. From the hourglass right up to the smartwatch and the atomic clock.**

**TIMEKEEPING THROUGH THE AGES**

**FROM PREHISTORIC HOLES TO ATOMIC POWER**

If we follow the philosopher Aristotle’s definition, time is that which is measured by our soul. It is the things that, as they pass, remain within us. Which is why the philosopher wrote that time has only three dimensions: remembering, paying attention to something and waiting. Aristotle’s is an “intimate” measure of time, which has inspired many philosophers and scientists working on the meaning of time. The most celebrated of these is undoubtedly Albert Einstein, who with his theory applied to the physical world maintains that time is absolutely relative and depends on one’s frame of reference. Not exactly the soul, but nearly. Man has always tried to measure his time, inventing all kinds of tools to do so: from the sundial to the astronomical clock, not forgetting the calendar and its variants. To explore them is to take a journey through time.

**DAY AND NIGHT WERE NOT THE SAME LENGTH.** In antiquity it was enough to consider time as split into day and night. The Sumerians were the first people to do so (4th-3rd millennium B.C.) through the use of a sundial that divided the day into twelve parts, splitting each of these in turn into thirty fractions. Then it was the turn of the Egyptians, who decided it was more practical to divide the day into 24 hours instead of 12. The Egyptian day, while split into 24 hours, was nonetheless very different from the modern day: there were 10 hours of daylight and 12 of darkness, then on top of these 22 hours, they counted an hour for dawn and another for dusk. And so the daytime hours varied in length over the course of the year: they became longer in summer (around 75 minutes) and shorter in winter (around 45 minutes), when
the days were shorter (around 15 hours of daylight in summer compared to just 9 in winter). It was all disastrously vague.

WHEN THE YEAR BEGAN IN MARCH. The Romans were more precise, inventing the calendar. The first known example is that of Romulus, from 753 B.C. The year began with the month of March and there were perhaps ten months. But it is to Numa Pompilius that we owe the first Roman calendar certified by Livy: it lasted twelve months and 355 days and was used until 46 B.C. It was supplanted by the calendar of Julius Caesar, with its 365 days and 12 months of around 30 days each. Since then the way days are measured has not undergone any dramatic changes. The names and lengths of the months are still those decided by Caesar and then by Augustus. The only minor revolution was in 1582, with the papal bull of Pope Gregory XIII and the introduction of leap years and the additional subdivision of the year into seasons.

USING SUNLIGHT AS CLOCK HANDS. The first real instrument for measuring time was the solar clock, which used the shadow created by the sun on a rod, the so-called gnomon. Then came other means of measuring time during the night: hourglasses, candles, timekeeping sticks, then finally in around 1600 the first clocks appeared, at almost the same time as the introduction of the Gregorian calendar. The first models were mechanical, with serrated cogwheels, and took advantage of the principle of the pendulum. Pocket watches were a very masculine luxury. Wearing the passing of time on one’s wrist, on the other hand, was a feminine habit. We owe
it to the Swiss Philippe Patek, who designed the first wristwatches at the start of the 19th century. Their adoption by men can be attributed to the First World War and the need for soldiers to have a more practical timepiece than the pocket watch.

**FROM “ONION” TO STATUS SYMBOL.** The war transformed the use of this object. Thus the watch emerged from the pocket and lost its characteristic “onion-like” appearance, moving to the wrist. And style transformed a practical piece of equipment into an object of value. This transformation was down to Louis Cartier, a French entrepreneur and watchmaker who founded the famous brand of jewellery. But it was the Rolex brand, registered in 1915 by the Swiss pair Hans Wilsdorf and Alfred Davis Nello, that made the wristwatch popular. In the same period, technology was advancing. The first quartz product arrived around 1930. These also took advantage of the oscillations of a pendulum, but using a quartz crystal. From then on, the watch began to appear on the wrists of the people who mattered, turning it into a status symbol.

**THE ATOMIC WRISTWATCH.** Over the course of the 1950s, technology focused on the quest for absolute precision in the measurement of time. This research led to the atomic clock, the last real innovation in the field, combining quartz with the caesium atom. The first experimental model was built in 1949 in the United States. In the race to build the most precise clock in the world of a reasonable size, the Swiss competed with the Americans. In America, the summer of 2013 saw the arrival of new generation atomic clocks which use a laser to achieve even greater precision than their predecessors. They can lose just one second over the course of millions of years. This result, published in the journal *Science*, was obtained in the United States by researchers at the National Institute of Standards and Technology (NIST), with the contribution of two Italian researchers. And it is an important step on the road towards the atomic wristwatch.

**TIME AS AN ACCESSORY.** The evolution of technology has kept pace with the changing use we make of the watch, which has now become smart, just like the mobile phone. Telling the time is just one of the many functions offered by the new generation of watches. Now the status symbol is to have a gadget on your wrist, with the same functions as a smartphone but in less space. This is the direction taken by companies of the calibre of Apple and Samsung, who have started to produce so-called touch devices, reinventing themselves and bringing models to the real world that have until now only been seen in the cinema or on television. These corporations have followed the example of the talking watch that Dick Tracy had on his wrist way back in 1946, which looked like a little radio, and even the wrist screen from the cartoon *The Jetsons*, which in the ’70s told the story of a family in space. The watch has become intelligent. You can browse it with a finger, and it talks, shows maps and plays music and videos. It is a no longer just a tool for measuring time, but also for passing it.

**THE CALENDAR AS A CULT OBJECT.** Calendars have followed the same evolution as watches, often with similar phases. Almost 10,000 years have passed since the creation of the 12 pits of Crathes Castle in the United Kingdom, discovered by researchers from the University of Birmingham in the summer of 2013. The pits were positioned in the ground so as to reproduce the phases of the moon and lunar months. From its origins as a primitive form of measurement, the calendar has now become a cult object, its evolution associated in particular with images of women. A fact demonstrated by the dozens of calendars promoted by magazines or, to an even greater extent, by the story of the Pirelli Calendar, a true homage to women that has been around for 50 years. It was a child of the ’60s, a period of protest and “naturist” eroticism emerging from Northern Europe, when discerning members of the public abandoned the Barbanera almanac (first edition 1762) for the more provocative and certainly more transgressive months of the Pirelli Calendar.
I started to photograph women I liked. They were independent and beautiful or not beautiful but they have character.

PETER LINDBERGH

The life and times of the Cal™

Photography is a moment. Good photography is a moment you catch. So you create a moment, and you take some pictures. Every day is a different picture, every day is a different moment and a different picture.

PATRICK DEMARCHELIER

‘64: Robert Freeman, unknown at the time, but later to become famous as the quintessential Beatles photographer, shot the Pirelli Calendar on the beaches of Majorca. And a legend was born. As Edmondo Berselli recounts in the introduction of the book dedicated to the Calendar, there were no nudes at the time, just the reflection of an era - the pop era - heralding a new aesthetic made up of colours and a new kind of graphic design. After just a few years, it was universally known as “The Cal”™. An iconic object, whose eye for taste and detail gave it the power to reflect - and perhaps even anticipate - fashions and trends. Portraying an image of woman that has changed and evolved, becoming independent and cosmopolitan, provocative and increasingly oblivious to the rules of social mores, to the point of stirring up strong reactions from the moral majority. The simple, provocative, rebellious taste of the ‘60s was followed by the dreamy, allusive ambiences of the early ‘70s, when the first hints of nudity appeared, when the job was first entrusted to a female photographer - Sarah Moon - who chose atmospheres with an impressionistic flavour in 1972, when the woman depicted was deliberately and ironically “fake”, the same way she was represented, for example, by Brian Duffy and Allen Jones in 1973. After a break of around a decade, The Cal™

1964, Pirelli Calendar by Robert Freeman

1985, Pirelli Calendar by Norman Parkinson

1991, Pirelli Calendar by Clive Arrowsmith
reappeared in the midst of the hedonism of the ‘80s, bringing with it the tyre print, sometimes disguised, other times more explicit, as in the 1988 edition from the lens of Barry Lategan, who adorned the bodies of agile ballerinas from London’s Royal Ballet with an animalistic tread. A deliberate choice to make explicit the relationship with the product that the Calendar is designed to represent and promote.

In 1987 Terence Donovan returned and immortalised the first models of colour, the beautiful, undisputed stars of a calendar with an “African” atmosphere. It was not until the ‘90s that male figures first appeared, notably in 1998 with the Bruce Weber version dedicated to the allure of Robert Mitchum. There followed a long series of big name photographers.

Variety and inspiration also characterise the settings, which were almost non-existent in the first calendars, before becoming a distinguishing feature of each photographer’s style and each edition. Real or metaphorical, from the classical Greece of Arthur Elgort’s 1990 shoot to Arrowsmith’s historical heroines (1991), from Avedon’s representation of the four seasons in 1995 to the almost faceless bodies of Annie Liebovitz (2000) and the Brazilian atmospheres of Patrick Demarchelier. From exotic beaches to big cities.

And naturally, each year has seen a parade of beautiful female figures, from models to actresses and singers. Dressed or undressed, in colour or black and white, enshrined in full length shots or captured in individual details, simple or seductive, malicious or transgressive, the world’s most admired women have represented Pirelli’s 12 months of the year in a wide variety of natural or symbolic settings. Helena Christensen, Eva Herzigova, Christly Turlington, Isabelli Fontana, Kate Moss and, of course, Naomi Campbell, who at barely sixteen years of age appeared in Terence Donovan’s 1987 edition, reappearing regularly in the following years. And side by side with them, famous women: Sophia Loren, Jennifer Lopez and Penelope Cruz. And famous men: Bono, Alessandro Gassman, Ewan McGregor, Kriss Kristofferson and John Malkovich.
CAPTURING TIME

From left: Miranda Kerr, Helena Christensen, Karolina Kurkova, Alek Wek, Miranda Kerr and Isabeli Fontana.
Photo: Patrick Demarchelier. The Pirelli Calendar 50th Anniversary

From left: Miranda Kerr, Helena Christensen, Karolina Kurkova, Alessandra Ambrosio, Alek Wek and Isabeli Fontana.
Photo: Peter Lindbergh. The Pirelli Calendar 50th Anniversary
From Pirelli’s Historical Archives, Riccardo Manzi, “La campana della sera” (The evening bell), illustration, “Pirelli” magazine, no. 3-4, March-April 1968