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The Senses of Velocity and Acceleration in Routine Worklife

by Maria José Tonelli

Escola de Administração de Empresas de São Paulo, Brazil

ABSTRACT

The purpose of this paper is to understand the senses that people give to the machines used in their daily work with special emphasis on new technologies. The present essay is based on the constructionist methodological theoretical referential, which considers knowledge – the product of interactions between people – as the analysis object and tries to understand the senses that are constructed by people through the discursive practices of daily life.

This work is focused on the connection that people establish with technologies – especially, the computer – at work. Since the computer is a machine that allows velocity at work, our interest also turns to the meanings that people attribute to rhythm, to the velocity and to the acceleration resulting from the use of machines in daily professional activities. In this way, more specifically, this essay tries to interpret the senses that people attribute to the velocity and to the acceleration of daily life, from the connections that they establish with new technologies.

THE SENSE AS SOCIAL PRACTICE

The production of sense, according to Spink (1999, p. 183): "[...] is essentially a social practice, intrinsically dialogic and, therefore, discursive."

The sense of things, the world, and oneself is constructed in interaction processes and in conversations among people. Therefore, conversation depicts itself as a practice and not just as a *discourse* or *representation*. If discourse is understood as *discursive practice*, the transformation possibility of the world rests on realizing how the senses of the world are built by people, and in this way:

[...] keep the conversation flowing. That is, it is the constant practice of critical expressions that substitute, turn relative, interact and are inherently one of another's criticisms. Everything that crystallizes and rigidifies social structures ends by naturalizing them. By naturalizing them, it removes the possibility of criticism. Anesthetizing criticisms, opens the way to barbarism, here understood as the free exercise of imposing power that reduces diversity to the will of whom detains hegemony (of knowledge, of production means, of authority, in short). (Spink, 1999, p. 184).

Spink and collaborators present the advances in this field in a systematic way. The basic question that guides this discussion is: "how do we give sense to the world in which we live ?" (Spink and Frezza, 1999, p.18). In this text, we observe that the path developed by social psychology was centered during many years under the hegemony of the tradition of the North American scientific research. In addition, as the authors put it: "Not every social psychology is a critical psychology; and the critical psychology also presents itself as *polissemic*: many are its meanings" (Spink and Frezza, 1999, p.22).

I consider these observations very relevant to social psychology as a whole, specially in Brazil, because here the field is being constructed by other researchers, who also develop critical perspectives, as for example Lane (1984), Sawaia (1995, 1999); Crochik (1996). What I am doing in this work is clearly a choice for a critical psychology, which supports itself in pconstructivism (Ibanez, 1992; 1994; Gergern, 1992; Berger and Luckmann, 1990).

According to Ibanez (1992, 1994), our conception about phenomena that constitute social reality is a result of our condition of being able to name them. In this sense, there are no absolute truths (even if here it is not a question of an absolute relativism), but there are discursive practices that allow us to dialogue and rebuild the world in which we live. As Spink and Medrado (1999) argue, interpretative repertoires demarcate the interpretative possibilities of a person in a given context, that is, our capacity of interpreting the world, as well as of acting on it from the sense we give to the world in which we live. To sum up, "[...] in daily life, sense results from the use we make of the interpretative repertoires that we have at our disposal" (Spink and Medrado, 1999, p. 47).

I understand language to be an essentially dynamic discursive practice: "Therefore, we can define discursive practices as language in action, that is, the ways from where people produce meanings and position themselves in daily social relations" (Spink and Medrado, 1999, p. 47). Discursive practices have spacio-temporal localization. This means that words and meanings are being produced by people and are marked by history (Thompson, 1999). The authors, in whom I support myself, argue for a "need to work the discursive context in the interface of three historical times. The *long time*, which marks the cultural content, defined along the history of civilization; *lived time*, of social languages learned through socialization processes; and *short time*, marked by dialogic processes" (Bergson, 1889; Spink and Medrado, 1999, p. 50-51).

Short time refers to the moment of interaction; to the conversation itself, to the dialogic process that becomes established in face-to-face interaction between people. *Lived time* refers to the socialization process, to the lifetime in which each one can build, through the socialization process, his personal learning process. *Long time* takes us to the set of knowledge accumulated in the most different spheres of human production, which is giving at each moment another meaning in the face-to-face interaction processes of the short time. The concept of *person* implies the idea of interaction and takes us equally to daily life, to the lived time and to the long time of history.

We understand that the approach of Spink *et. al* (1999), when discussing "the discursive practice in the production of daily knowledge" surpasses the proposal that we have developed in this work. We have limited ourselves here to present the *repertoires produced by people* and have not worked the dialogic intrinsically, since I have not carried out an analysis of the uses of these repertoires. Coherent with the approach that I am privileging, it is interesting to clarify the limits of the steps that we have given in the construction of this analysis, considering that the visibility of the interpretative process leads us to the construction of science. In other words, the objectivity intended by science is passed by the dialogic and by inter-subjectivity, present in the act of interpreting, and, therefore, is essential to give visibility to the interpretative process.

IN SEARCH OF MEANINGS

The interviewees

Eighteen interviews were carried out. The results were analyzed using the method of associative maps (Spink, 1999). Table 1 presents a synthesis of the data of the interviewees, including the reason for the choice of these particular interviewees.

NUMBER	AGE	Sex	PROFESSION	REASON OF THE CHOICE
	38	M	Engineer/ Marketing Manager	Age/managerial function
	56	M	Professor Director of Foundation	Function of directing
	58	F	Serving maid	Function
	36	F	Secretary	Age/function
	39	F	Secretary	Age/function
	52	F	Secretary	Age/function
	27	F	Administrator/ Foundation Superintendent	Age/Function of directing, "accelerated"
	19	M	Trainee/ Administration Student of Getúlio Vargas College	Age, linked to the company's presidency
	36	M	Engineer/ Financial Analyst	Age/managerial function
	28	F	Pharmacist/ Company President	Age, direction function, "global"
	32	F	Economist/ Autonomous	Age/occupation, "accelerated"
	34	M	Administrator/ Analyst	Age/occupation with technology
	38	M	Engineer/ Computer Manager	Managerial function/ occupation with technology
	43	M	Administrator/ Computer analyst	Age/ occupation with technology
	38	M	System Analyst	Occupation with technology
	34	F	Secretary	Age/function
	38	M	Engineer/ President-director	Direction function, "accelerated"
	35	F	Serving maid	Function

About the interview analysis

In order to interpret all the interviews I used idea association maps, as proposed in Spink and Lima (1999), because:

The maps have the objective of systematizing the analysis process of the discursive practices in search of the formal aspects of the linguistic construction, of the repertoires used in this construction and of the implicit dialogic in the meanings production. They form visualization instruments that have a double purpose: to give subsides to the interpretation process and to facilitate the communication of the steps subjacent to the interpretative process. (Spink and Lima, 1999, p. 107).

The objective, when using the maps, was to understand which were the senses that appeared associated to machines and to velocity/ acceleration, as well as the repertoires used by people when talking about technologies present in daily work. Besides that, I also wanted to understand the changes which occurred in the use of the technologies in time. For this purpose, it was essential to utilize the "associative interview", as described in Spink and Lima (1999, p. 111).

Each interview was divided into two blocks; in the first, I asked about the machines used in daily life and after that, I asked the following question: "has it always been like this?" This question allowed me to achieve a sense of timing and the changes perceived by the interviewees. In the second block, I mapped the associations with the words "velocity" and "acceleration" at work. My analysis map contains the following columns: the mentioned machines, the machines that impose rhythm, comments, velocity definitions, advantages/positive points and disadvantages/negative points relative to the velocity and to acceleration at work. The column of comments, located in the middle of the two blocks, was destined to the comments relative to the machines, as well as to the comments relative to velocity. We present, in Figure 1, the cut of one of the maps to facilitate the visualization of the analysis model:

Age: 38
Sex: M
Profession: System's Analyst

Machines			Velocity/Acceleration		
Mentioned	That impose the rhythm	Comments	Definitions	Positive	Negative
	Which machine do you believe imposes your daily rhythm? There are many. There is the part of the technology, without which we feel we cannot survive.	My day is focused in the technology, that is, besides using it, I am questioned about its use and about the good use of technology inside the company.			
	However, we are observing other things happening: cellular communication, many other machines that are arising, bringing many different technologies				
Are you talking about the cellular phone? Of the cellular phone indeed, this change has begun with the bip sound.		A person may be available all the time, in every moment, may be bothered, may be found, may be everything, thus, it is a change we cannot close our eyes to.			
	And another boom in this aspect was the internet. Nowadays, everything we look after is there.				
And which other machines are present in your daily life? I have mentioned some of the communication area, which is much present. The car is another thing that is much present.		And one hour to go and another to come back in the traffic?			
			If I mention the word velocity at work, what do you immediately associate? I associate it to technology; I would say that it is not the only variable, but one of the strongest.		
			Anything else? Quality.	Velocity has two aspects: there is no use in getting a result in a short time if it is not the best result that I could have obtained.	
				Thus, the relation of time versus quality is something very serious... I would say that technology is an aspect that provides velocity.	
					But technology used in an indifferent way, without worrying about quality, may cause damages.

Figure 1 – Cut of an associative map

After preparation of the maps I carried out a synthesis of the interviews, which included:

- Interview's context.
- A synthesis of the mentioned machines.
- A synthesis about the machine that imposes rhythm and related associations.
- A synthesis about acceleration/velocity and the negative/positive points associated with it.
- A synthesis of the interview.

All these procedures helped in the construction and analysis of the results.

In this essay, I collected data about the senses of the machines and about the senses of the velocities. Due to a problem of space, here I will present only the results related to the issue of velocity. In the first part, I will present a brief discussion about time, in order to emphasize that in industrial societies exists the incorporation of clock time in our conscience, in a slow process of social construction. In the second part, I present the senses attributed by our interviewees to velocity. Finally, in the last part, I discuss possible consequences of the incorporation of the computer time.

ABOUT THE TIME

Time assumes different senses for people in different cultures and in many moments of history. Time today has been described as a time of velocity and of acceleration (Mumford, 1934; Kramer, 1997; Jameson, 1994, 1998; Lash and Urry, 1994; Adam, 1996; Virilio, 1993, 1996, 1999). Nowadays, time, using an expression of Kurz (1999), is a "star of the media" and the debates that surround it reach different dimensions: work, city, leisure, and private life. Time is scarce, time escapes, time is short, time is money, and time goes by fast. Measured presently in nanoseconds, time seems to fly and, the more we control it, the more it escapes us. If today "time is a function of velocity," following what Jameson (1998, p. 51) presents, and if time is something that results from our own constructions, how could we get this far? Which conditions were necessary to permit the present society, as characterized by an intense flow of information, images and work in groups with a fast circulation of objects and subjects (Lash, 1994).

According to Giddens (1986, p.34), "time is perhaps the most enigmatic characteristic of human experience." In Giddens's view, each society organizes itself through a routine, through the construction of "day-to-day" activities, that implies the organization of time and space. To the author, the routine is essential to sustain psychological mechanisms, as well as the configuration of place and space, which play an essential role in this construction.

To Giddens, "the body's physical properties and the *milieu* in which it moves itself inevitably gives a seriate attribute to social life" (Giddens, 1986, p. 132). This conception, presented by the author in his proposal about "*The constitution of the society*," is important, because I intend to discuss how people, in their work routine nowadays, are "organizing" their time and their space in reply to the acceleration arising from the introduction of new technologies, that break the barriers traditionally built. The time today, if we wish to use Beck's expression (1998a) is global; a time, which has not stopped being local, due to the routine that work imposes, but which, depending on the kind of work, is each time more global. It is a time that started its globalization process, from the institution of a unique time for the world, in the Convention of 1925.

Living in society, therefore, means building relations between time and space as essential guides for conviviality, according to Elias (1998). In these relations, movement is continually present, being of one's own body, or being it of the Earth, so that, in Elias' definition (1998): "What we call 'space' refers to the positional relations between movable events, which we seek to determine upon the abstraction of its movements and effective changes; 'time,' on the contrary, refers to positional relations in the inside of an evolving continuum that we try to determine without abstracting its continuous movements and

changes" (Elias, 1998, p. 81/82).

THE CONSTRUCTION OF LINEAR TIME - CLOCK TIME

Antiquity already knew instruments for the measurement of time. Besides the so-called "water clocks" from the Hellenistic period, according to what was pointed out by Whitrow (1993), we have the archaeological discovery of a mechanism in bronze that allowed the calendar calculation, known by the name of Anticitera clock, with mechanical gears; precursors of the mechanical clocks. Even if the relation of these first engines and the mechanical clock that appeared around the 13th Century is not clear, there would have occurred a continuous process of development from the first mechanisms to posterior mechanical gears. The hourglass appeared in the 14th Century, from the quite probable hypothesis that water clocks would be inconvenient during winter. Hourglasses were much used in vessels to measure velocity. According to Whitrow, the clock was probably invented in monasteries due to the necessity of controlling time, and the proximity of the Church with the clock expresses itself in the own etymology of the words *clock* or *cloche,* which refers to the bell, in a clear association with the Church. The mechanical gears built to swing the bells should also have contributed, according to the author, to the invention of clock gears.

However, there is no precise date to mark the invention of the mechanical clock, even if one can consider the period between 1280 and 1300 as probable. The clocks in England are all dated from this period and, since then, the clocks started to spread about all over Europe. Being no longer restricted to churches, the clock began appearing in public towers.

In Whitrow's conception (1993), the dissemination of clocks all over Europe, from 1300 had as a consequence the unification of the hour in 60 minutes (although there has been great imprecision in the record of hours, with delays of even 15 minutes), even if there were differences in this count: 24 hours in Italy, for example, and two sets of 12 hours in other European countries[1].

The influence of time control was already felt in this period and over the labor time. According to Whitrow, "In 1335, for example, the Artois' governor authorized the inhabitants of Aire-sur-la-Lys to build a campanile, whose bell would mark the labor hours of the textile workers" (1993, p. 126). The author reports in the "Book of hours", of the regular use of time by the nobility, and that the word "hours" represented moments reserved for prayers. The days' calendar, in the 14th and 15th Centuries, the day's calendar registered events and specific holy days, which were respected or feared for being days of good or bad luck. There was a clash between the Roman Church (which celebrated special days) and the Puritans in England who proposed another form of time organization, in which Saturday should be respected as a resting day and work in the other days. These changes began in the 17th Century and paved the necessary way for the new labor habits. Already in a certain uniformity and rhythm it will characterize the Modern Age. From this time, there has already existed an association between the idea of time and the daily life. Clocks start to register all the hours of the day and not only the prayer hours. Time becomes united to the working rhythm of the week. Even if the clocks started to regulate the time and the activities, the possession of clocks was not common among people. Whitrow (1993) reports that the first reference to a private clock dates from 1540, when King Henry VIII gave Catherine Howard, his fifth wife, a golden case with a clock inside.

THE MECHANISM OF THE CLOCK AND OF THE AUTOMATS

For Whitrow (1993), the clock mechanisms are important in the development of the essential principles of applied mechanics. For example, the use of wheels with gears. The spring mechanism, associated with the spiral, according to Losano (1992), made the miniaturization of the clock possible and its application in the production of automats, permitting that they moved by themselves. From 1625, in Losano's view, the

automats have already enchanted and surprised for being machines that moved by themselves, giving the impression of moving alone. They were, many times, associated with magic. The clocks and the automats had a development inside the clockwork until the 19th Century. Losano (1992) shows, through the description of the appearance and development of the automats, the enchantment that these technical artifacts exerted on people.

Before the pendulum and spring (17th Century), clocks had huge dimensions and were moved by heavy mechanisms. According to Losano (1992), the refined construction of the clock of Giovanni de Dondi, in 1364, had more than one-meter height in its mechanical part, besides the space of the weight that sets it in motion. At this time, all clocks, including this one, served less to inform the hours than the movement of the stars. In the referred clock of Dondi, the Earth is put in the center and around it was where the Sun, the Moon and the planets rotate (Lozano,1992). According to the author, "horologic" clocks are mentioned in order to refer to clocks set in motion by weights, but after the invention of the pendulum, the term "clock" is applied to all of them.

Thus, during this period, interest in clocks was associated with the necessity of knowing with precision the motion of the stars and regulating human activities. Astronomy and astrology interfered directly with behavior, therefore the need for greater depth in the knowledge of star movements, which led to the search for safer measurers and artifacts for the mechanical clock. The pendulum, for example, was the center of interest of Galileo's research from which Christian Huygens developed a precision mechanical clock. In Whithrow's words (1993, p. 145): "The mechanical clock was, therefore, the prototypical instrument, not only from the mechanical conception of the universe, but also from the modern idea of time."

In the 16th Century, time assumed a negative, maleficent meaning, becoming associated with death, such as the images with sandglass that go along with death images. Habits also began to change, but the idea of meetings with scheduled time would still take long to be diffused, since the possession of individual clocks was rare. In this way, the control of time, regulated by the relation with nature, continued in parallel with the dissemination of the use and the control of time by the clock. However, in the 16th Century, there were already reports of the regulated time of labor, of mining operations strictly controlled, including in the changes of shifts, as well as reports that there was a time schedule for the exercise of some professions, among them the one of teachers and judges, as Whitrow (1993) reveals.

From the 18th Century, with the continuous improvement of the mechanical clock, time in occidental societies began to be increasingly regulated by clock time. In the 19th Century, the concept of "wasting time" already existed and many dimensions of the daily social organization became articulated by this time, such as: the regulation of the hour schedule of transports, of post offices, of labor, requiring an increasing synchronization of activities and, therefore, of a unique picture of temporal reference (Elias, 1998). The development of cities and roads, permitted an increasing articulation of time and velocity as we have seen in the story of velocity, reported by Studeny (1996). Besides that, in the 19th Century, we have already become aware of time as the "time of history," a time socially built and organized (Whitrow, 1993; Àries, 1989; Elias, 1998). In a certain way, as Lash and Urry (1994) and Elias (1998) point out, people already observe that the human experience of time suffered changes along its development; people also conceive themselves as being a result of their own construction, more than being dependent of destiny and of gods.

However, in this period, there was not yet temporal homogenization. The calendar was not the same for all peoples. England, for instance, for political reasons took a long time to accept the changes introduced by the Pope Gregory III. The same happened with the oriental Church, which did not accept the Gregorian calendar until

1923. According to Whitrow (1993) some monks of a certain region of Greece still do not accept it. During many years, humanity lived in different times, organized according to religious or political needs, what makes a socially defined time evident. Gradually, the Gregorian calendar began to regulate time globally, even as many cultures kept their traditions in parallel. The Chinese and the Jewish calendars are two examples of time counting that are kept in parallel to the official world calendar.

INDUSTRIAL SOCIETIES AND LABOR TIME

During the 19th Century until the 20th Century, labor time was organized in conformity with the development of industrial society and of cities, that is, from the linear time of the regulating time clock that started to regulate labor relations (Thompson (1967); Hassard (2000a, 2000b, 2000c)). Taylor' essay (1987), with his proposition of the rational use of time, is the representation, by excellence, of the regulation of the human activities in labor inside this linear conception. The regulation, however, also generates resistances, and many studies explore the creative alternatives, elaborated by many workers in order to escape and deceive this time (Bauman, 1998; Dejours (1998); Martins (1999)), showing the multiple possible inventions in the time/space of the daily life.

Even if many cultures may still keep distinct relations with time, the linear time, controllable and measurable, began to be one of the most important aspects of the relations' regulation in the industrial capitalism (Thompson, 1967; Lash and Urry, 1994). This is expressed in the proverbs and in the sayings: "time is money"; "time is a limited resource" and "time is a valuable merchandise" (Hassard, 2000a).

At the end of the 19th Century, having incorporated the spirit of the clock mechanism and of the time control, having as a basis the belief that the technologies may create and operate under immutable laws, labor not only in Europe, but also in the United States started to be scientifically managed. The focus in productivity reached great development, with the incorporation of the sciences of labor (Rabinbach, 1992; Hirschhorn, 1981), including the psycho technology ones of the so-called Industrial Psychology and giving the engineers a new role in the industries' management. We get into the era of total management, using the _expression of Marcuse (1981,1982), in which the *language is operational.* We are living in a time controlled and organized by labor. The time of industrial labor starts to regulate other human relations as well, spreading its domain to other dimensions of life. The time of labor regulates the time outside labor – of private life, of familiar relations, of leisure, of religions – and defines the motion of people and of goods in the cities, regulating their flow.

In the period marking the end of the 19th Century and the beginning of the 20th Century, the labor time organized by the assembly lines (Taylorism and Fordism), as Rabinbach (1992) mentions, had as counterpart the idea that people were a "human motor" also adjustable in their times and movements, a body perfectly integrated with the highly specialized technical work.

From the second half of this century, the labor organization changed, because of the appearance of new technologies. We are in front of the possibility of elimination (for some, at least) of physical work, substituted by images, communication and self-regulating cybernetic systems (Rabinbach, 1992, p. 297). We will not restrain ourselves too long in the controversies that surround the discussion about the disappearance (or not) of the centrality of labor. We consider that we are before a change in the conception of time and space in the daily routine work of the present days, which has taken to new behavior models and requirement of new abilities to be exerted at work – including here the creativity, the "*empowerment*", the flexibility, etc. – aspects that keep us away from the model of the person as human motor and lead us to look for other metaphors. Time begins now to be described as a time of simultaneity and instantaneity. From the controlled time of the assembly lines, we are now

before a flexible and autonomous time at labor, a time that transforms our identity (see Turkle, 1997), in which no longer the machines, but cybernetic systems of automation allow us a greater freedom. Will it be like this?

THE SENSES OF VELOCITY AND ACCELERATION

Next, we present the associations that appeared for the word *velocity*, showing the repertoires that our interviewees constructed, which were grouped as follows: velocity associated to the machine, velocity associated to efficiency, velocity associated to haste (Table 1). Then we will list the senses of velocity that emerge in the discourses and that express the paradoxes of velocity: it is, at the same time, *facilitator* and *imprisoning*. We will also look for the understanding of the senses of velocity in three distinct contexts: according to the roles performed at work, to their private life and to the generational differences.

THE ASSOCIATIONS WITH VELOCITY AND ACCELERATION

The association between velocity and the machine: for five people, the velocity is directly associated with the computer, that is, there is a direct relation between the machine potential and the acceleration.

Association between velocity and efficiency: for 12 people the velocity appears directly linked to the efficiency at work. However, the efficiency at work does not mean the same for everyone. For the executive of a company, velocity is agility to take decisions, to visualize opportunities and be ahead of the competition. For people that occupy intermediary levels in the company, efficiency is associated to doing things as fast as possible with the best quality, or still, replying quickly to a demand, quickening processes, doing what has to be done in the shortest time possible.

Association between velocity and haste: this association is done by two serving maids, "It's the hurry, the rushing life", "it's a rush that has no stop, and you can't stop". If we compare the associations for the distinct hierarchical levels, we realize that for the executive, velocity appears as something intern, inherent to the taking of decisions; for the intermediary levels, it is already outside, in the processes, and for the serving maids the velocity is totally exteriorized in a daily life that forces them to rush with no stop.

Num.	Velocity Acceleration	Facilitating and Instrumental	Limiting and E imprisoning
	Confusion, efficiency	Reasoning, opportunities	Multitasks, more time for the work, decrease of personnel, lost of contact among people.
	Computer	Velocity, mobility	Slowness, anxiety
	It's the hurry, rush life	Progress	Rush
	Working in many things at the same time, rushing		
	Doing things as fast as possible with the best quality.	Reasoning	Anxiety, fear, and insecurity
	I immediately imagine the computer.	It requires more of me organization	Less tolerance with the error.
	Computer	Productivity, it expands production limits	" the masses" suffers, "eliminates" some duties, increase of work time for some duties
	Efficiency	Flexibility, velocity in the exchange of great amount of information, access to information.	Confusion, difficulty to select information
	Quick reply, answering to a demand	Opportunities of work, of business	Worry about not being left behind, always being up to date
	General organization, papers, organizing files, in the computer as of the papers	Fax, e-mail and internet allow to solve problems at distance	Accumulation of functions, to split in thousand, anxiety before the amount of information.
	"Overwork"	Creativity, being able to work at home	Lack of leisure, being able to work at home
	Powerful technology and computer	Being up to date	Increasing velocity each time more
	"Gap"	It is the machine that does the repetitions, work became less Taylorist, use of the thought, creativity, flexibility	Out of control change, nobody knows if for better or for worse, life more complicated
	Computer, turn processes agile	Processing of great amount of data	Very strong competition
	Technology and quality	Quality	Indifferent use of technology (with no quality) may cause damages
	Doing well what has to be done, in the less time possible		Competition
	Agility in taking decisions, visualizing opportunities, being ahead of the competitors.	Adaptation, instability in the sense of the constant change of flexibility,	Stress, little time with the family, managing the mass of information, balance between private and professional life.
	It's a rush that has no stop, you can't stop		There is no time for lunch, the machines they invent end by not facilitating anything, hole in the *ozone layer*.

Table 1 – Associations with velocity

VELOCITY: FACILITATING AND INSTRUMENTAL OR LIMITING AND IMPRISONING?

Our question to the interviewee was: What comes up to your mind when we say the word velocity? What comes up to your mind when we say the

word acceleration? Sometimes we completed the question adding: many people say today that time goes by faster, that the velocity has increased, what do you think about this? We restored here the discursive contexts and the senses attributed by our interviewees to this obscure condition that is, inevitably, linked to time dimension. In the discursive context of our interviews, the senses of velocity was mainly associated with the computer and therefore it is joined to the machine and to the technology. Time is the machine time. However, velocity is ambiguous and, because of that, we want to show that it can be at the same time: *facilitating and instrumental and limiting and imprisoning*.

The *facilitating/instrumental* velocity, which arises out of the machines' incorporation, does not even appear to the serving maids, once it is associated mainly to the computer use, but it appears to the "global" executives . It was associated with: efficiency, condensation of information, access to information, turning processes agile, processing great amounts of information, quick answers, thousands of opportunities, employment and new business, progress, mobility, fastness, quality, with a more demanding work (thought, creativity and flexibility).

The *imprisoning/limiting* velocity was associated with: limitation of people to follow the amount of machine information, people become lost, difficulty for selection of information, there is a great effort in order not to stay behind and not stop in time, the computer is a paradox, he brings the slowness as well, the "dullness", since more time is necessary to prepare details, the flexibility allows more work, re-work, multitasks, leads to pressure to reduce personnel, more work at home, no one knows if the changes are for better or for worse (the risk is always present), the changes are out of control, there is a great anxiety with the own slowness: slowness of the own machine (we get used to velocity and have no longer patience with the delay...), slowness of the questions personally human (for instance: to catch a cold, two, three days, and not be able to change the nose!), lost of private contacts, life becomes only working.

The ambiguity is so present in the talks that it was not possible to cut or dismember the talks that refer to limiting velocity and to imprisoning velocity. This condition appears in the talk of the younger people as much as in the ones of the older people, for men and women, in all types of professional occupation.

The next sequence of talks is, in our understanding, the most expressive on the machine ambiguity. The ambiguity here expresses itself in what refers to the exercise of work as much as in the consequences that the microcomputer's velocity may impose to the interaction, showing how the technical objects help to build our forms of relation. Impatient with the delay of the machines, we also become impatient before the people's time or still before ourselves and our health.

R – *If I say the word velocity at work, what comes up to your mind?*
I – Computer, it is the one which gives me the velocity and also the slowness.

R – *Why?*
I – Formerly, I used to write by hand and gave it to the secretary to type. Today you write, then, lose 3 hours to put it right, prepares the layout, with coloured letters, the paragraph well divided, the edition, everything, you keep losing time.

R – *Nowadays one talks about velocity, acceleration, what is this, how do you experience this?*
I – Velocity is terrible, I'll give you an example, the simplest one, and my first flight was at the age of 26, the first time in my life that I travelled on a plane. Nowadays, I travel at least twice a month, what changed in terms of mobility is impressing. Formerly, for you to become informed about research, you wrote, nowadays you don't need to, you talk to people by phone, fax or e-mail, almost in the act, it was a very great change, my generation still becomes amazed with this.

R – *So....*
I – I believe that children have no idea of how it was before, of what was slow.. We also become annoyed, because the computer delays... I will change the computer. The change was very violent; I don't know if it is good or bad, it gained in velocity.

R – *For you, is it good or bad?*
I – *It's good, I don't know if everything is good. The balance is positive. But maybe it turns us a little more ambitious with things that take longer to be solved, private relations, health relations, you want an immediate replacement: I have a cold, change my nose, and ready, it's solved. Maybe it creates some things...*

R – *Anxieties?*
I – *Who are not possible to be dealt with at this same time...it has been already a day that I'm in bed (56 years, M sex, foundation director).*

The paradox between confusion and efficiency at work also appears in the talk bellow and, again, there is an articulation of the machine with the form or organisation of private relations.

R – *And if I say the word velocity at work, what comes up to your mind?*
I – *The first word is* confusion, *the paradox is that it has to do with* efficiency, *there are processes, which may become fast and may be solved, but there are others that we can not solve and this brings confusion.*

R – *Which are the biggest difficulties and the biggest changes nowadays at work?*
I – *Multitask, through the velocity that is existing, this huge flow of information that we are receiving, on one hand giving you thousands of opportunities, and on the other hand, requiring from you a reasoning each time better in order to distinguish what is important. Why am I doing this? One of the reasons is because there is required from me an ability in a field that I had none, one day I talk to a person of automation, another to one of marketing, another to a financial analyst. It also happens due to a pressure of the companies in order to reduce their personnel,* people end having to dedicate a time they were not used to dedicate to other tasks.

R – *When you say that you have to do other things besides those you have already done, how do people deal with it?*
I – *People end by dedicating more time, the technology is appearing so that they dedicate more time to work. Wasn't it a thesis originating of.....It's quite common to see a high level employee leaving with his notebook and being able to connect at evening at his home with the company's net and working at home as well. The computer came to help, it condenses a series of information, but the work is requiring each time more of each one, it is evident that this is a* paradox.

R – *Do you also do that? Do you take your notebook?*
I – *I try not to do it, but I am an exception, I do what is possible and impossible to do everything in my 9,10 daily work hours.*

R – *What else could you say about acceleration?*
I – *I think that, as incredible as it looks, people end by transforming themselves in islands of knowledge?*

R – *How is that?*
I – *I believe that* people end by losing contact with each other... *(36 years, M sex, marketing manager)*

THE CONTEXTS OF VELOCITY

The senses of velocity are tied to the *production context.* In order to understand this diversity, we explored the following dimension: work, gender and generation.

THE CONTEXT OF WORK

In the context of the work, velocity appears associated to *more work*, to "*overwork*", to *the increase in the intensity of work*, eliminating any utopia that the machine would be leading to the end of work. It is worth mentioning that the work intensification occurs for the different functions and reaches from the secretary to the director/ president of the company. The interviewed people approach this question in a different way. One of the secretaries raises the question of the *increasing demand for perfection*, originating from the use of the computer.

R – *And what comes up to your mind when I say the word velocity?*
I – *I believe it is velocity itself, doing more things in the same amount of time, but there is another thing that comes as well, about this velocity at work; immediately I imagine the computer, it demands more from me and more time to prepare my work. For instance, formerly, my boss gave me a letter to type. Therefore, I used to put it in the machine and did it and one lost much time, because sometimes the person did not like what you wrote or you made mistakes. There was this coming and going, we wrote the letter two, three times and spent a period of the day, one morning or one afternoon preparing a long and well done letter. Nowadays, with the computer, I can do this in minutes. I will not care if the boss changes it 10 times because the machine that will do it for me; however, I am forced to be more organized.*

R – *Organized in what sense?*
I – *I will be more accurate, I want that work to be better executed, I can't allow that a letter typed on the computer has a changed letter, something that wouldn't bother me in a machine typed letter. The same happens to the person who receives the correspondence; she will have much goodwill to let some mistake pass if the letter is machine typed. She knows very well that the person will not redo the whole work, she applies a corrector and it is all right. Now, you won't allow something like this to happen to a letter typed on the computer, unless you don't notice it.*

R – *Would you say that there is less space for mistakes?*
I – *Less space for mistakes. There is another thing, since the computer allows you to have a collection of addresses, you need to have the totally complete address, you can't have the address without the ZIP code. Then you put the address that is on that letter in the mail and this takes time.* Thus, that letter that was quick to be done, is no longer so. *Because you will not want the envelope to be anyone,* you end by demanding more of yourself, *your work gets better and you get more demanding with yourself, it is not the boss. (52 years, secretary)*

The imperative of "modernization" is also present in the talk of a system analyst, emerging in a way that is an absolute paradox: it is a worry if seen in the context of concurrence, but an opportunity of new employment, new business and personal growth.

R – *If I say the word velocity at work, what comes up to your head?*
I – *Private* quick answer, *to reply to a demand, to a request, someone who calls, a work, a task that someone delivers, answering fast, to end your work quickly.*

R – *Nowadays, there is much talk about changes' acceleration, how do you see it?*
I – *I would say that there are two things: one is* the worry not to stay behind, *things has always changed, but now it is faster, it is such a velocity that when you think you understood, it's gone, you are already behind, there is no time to give a break.* Therefore, this velocity requires that you are always up to date in things, always open. This is a worry, suddenly you don't realize that you got behind, on the other hand, it brings you thousands of opportunities in your job, new business, there is this double focus, one of private worry and the other one that there are things happening, changing, opportunities to new growths, new business, to earn money.

R – *Which changes are these?*
I – *I would say that the globalisation affects a lot, the companies are changing, therefore our job is changing, is changing and it is where we spend good part of our time. The globalisation affects a lot, not in macroeconomic numbers, but affects the day-to-day. Five years ago, when we did not use the computer so much, this is inconceivable today, but it was the reality of technology of that time, in a short time, it opened itself much and if we use the same things that we used eight years ago. (38 years, system analyst).*

There is undoubtedly an enchantment with velocity, but there is also the conscience that the degree of demand increased a lot. The present machines changed life inexorably, not only at work, but life in general.

THE CONTEXT OF GENERATION

Velocity does not only refers to the execution of works. It also refers to the access to information that, although necessary for the professional growth, as the young 19 year old trainee points out, generate the need of option, of separating "the wheat from the tares" and drawing out what is good, that is, to proceed to a judgement of values. We can say that today there is such a great amount of information – an *over-information*, that, even for the younger people, is difficult to process it.

R – *And what comes up to your mind when I say the word velocity?*
I – *The first word was* **efficiency**, *the velocity at work, trying to do the activities that you would do in less time than the one you would do...*

R – *Nowadays, it is much said that, in behalf of the new technologies, there is a velocity increase, there is acceleration at work... how is that?*
I – *I feel it, it happens and it is not something that is being said without thinking and people are repeating, as it is the case of other administration theories... In my opinion, the information technology, for ten years now, is changing, in a first level, the organizational environment and the professional life of people, in a second level, inexorably; it is going to change the life of any human being.* There will not be anyone, in a short term, that does not get involved by the fact that the computer changed the velocity by which everything is done... *The velocity is changing, it is not only that the thing is fast, it is each*

time faster, it's an exponential curve, it is fast, but it is each time faster...so what happened with the Information Technology when it has advanced too much? It made you have a huge access to information, the most typical one is the Internet. Nowadays, I have cable TV, Internet, I subscribe newspaper, magazines, a lot of information, and this is great. I will have material to grow professionally, but, at the same time, I get lost in that stuff, it's too much to consume, to administer and draw out what is good... so I am a bit confused, a bit lost... *(19 years, administration trainee).*

Velocity appears as a cultural characteristic: the acceleration in perspective of the new generations, which have to adapt themselves to the new velocity standards, was a question of learning for many, life with anxiety for some. There is, however, the perception that the new generations are already growing adapted to this technological acceleration.

R – *And if I say the word velocity at work, what comes up to your mind?*
I – It's doing things as fast as possible with the best quality.

R – *Do you believe that velocity has increased?*
I – It did, in my case, I am learning how to have more velocity, but I see that children have already developed this thing of being faster, I think that it will be a cultural attribute *of people that are growing up now, of being much faster in their reasoning, in words, in the way of talking, in everything....*

R – *Do you believe that there is an acceleration?*
I – Undoubtedly.

R – *How do people experience this velocity?*
I – With much anxiety, with much fear, with much insecurity, it is something new, the new is always difficult, I thought the beginning was difficult...
R – *Is it difficult for you?*
I – It used to be difficult, it is much more easier by now, it is already more a routine for me, but it was difficult, made me anxious, worried, because I wasn't from this generation, which I wouldn't follow, but it is just a question of habit. In my case, I do not know for others, maybe for older people like my parents, maybe they do not manage to arrange themselves with it. I believe that yes, it is complicated... (39 years, secretary).

In the next talk, it's possible to observe that there is a differentiated perception of time and velocity in function of differences in the organization of work between generations:

R – *If I say the word velocity at work, what comes up to your mind?*
I – The most important thing that comes up to my mind when you say velocity at work, I think in gap. *What is* gap? It will still take some generations for people to adapt themselves to the velocity that machines may provide at work and this reminds me also of adaptability of people to new technologies...

R – *Why?*
I – The computer provides a speed at work and a change in the way you work, it requires a kind of education completely different from the one we had and that the children today are already having... Formerly, work was much more Taylorist, repetitive, nowadays, the tendency is for work not being so repetitive, because the machine makes the repetitions for us. On the other hand, the velocity in which things happen, you have to think much more in your work. Work nowadays is more demanding from standpoint of thought, flexibility and creativity and the tendency is that, from now on, it will be like that and people are not prepared for that... The world is changing too fast and, to tell the truth, no one knows if I is changing for better or for worse, because it is a change that is totally out of control. There are many agents, many around the planet, each one doing its change. A new crisis catches everyone in surprise... These are changes that are out of control, if this globalisation process of which there is so much talk, if this improvement in the companies' efficiency, the neoliberalism, if this will really create a more pleasant world to live in and more fair... no one knows the answer. In truth, what we are doing is the following: we are following the wave. I believe that my life...my father is a physician. My life is much more complicated than his life when he was my age. Many times, he does not understand the problems I go through, because the world at his time was a simpler world and it is not so long ago, my father is thirty years older than I am. *The world at his time was simpler and he lived in the same place as I do, in the same city. (38 years, M sex, computer manager)*

THE CONTEXT OF GENDER

In a certain way, the machine is greedy: it ties people to worlds with no hour schedules (if the work schedule was strict before, now we can talk about a total time, of total dedication) and it

invades inexorably the private life. For women there are extra implications:

R – If I say the word acceleration, what comes up to your mind?
I – Working in many things at the same time, *rushing, acceleration is running after time, doing many things at the same time. Our day-to-day is like that, doing many things at the same time and to conciliate my work and the domestic part is an absurd, it is complicated, even more with small children, I would even like to do more things for them, because they ask me to, but there is no way to do it...(36 years, secretary)*

They live with one foot in the industrial society, in which the woman has greater responsibilities, in the nuclear family. But we live with the other foot in the post modernity, in which the barriers of work expand themselves beyond the time of the industrial work and of the nuclear family. The *double journey* emerges even stronger in the organization of the post-modern time of work.

FINAL COMMENTS

In this work we have tried to show that our idea of time arises out of a social process of learning. Due to interaction among people, time has become more complex in the globalized world. It has led to the necessity of an even more precise schedule. The linear time of the clock, which we consider nowadays as a natural and almost homogeneous time took almost 300 years to be incorporated to the occidental society. We have asked if, with the computer, we will have the same model that led to the incorporation of the clock time, that is, the computer has been through the same process of the clock – just more intensely: from big machines, restricted to a few, to an extremely small object, spread in a more homogeneous way throughout the population.

We looked at the senses that velocity assumes for people in their daily work routine and we observed that the time acceleration of work is associated with the use of the computer. We observed that velocity is full of ambiguities: it is facilitating, because it allows efficiency, information and mobility in the instrumental use we gave to it at work: it is imprisoning, since people have difficulties to deal with the amount of information it allows, and it is necessary a great effort in order not to stay behind. The computer, which provides the velocity, also leads to the slowness, to the "dullness", because since we need more time to prepare the tasks and we are limited by the reduction of personnel, we take more work home. Since the regulation of the work time ends by invading the other dimensions of our life, we become more impatient in the private relations that depend on internal time and not on the time of the machines.

Did we become more impatient with the delay? What is actual time? Would it be the clock time or the socially built and embodied time of the clocks? May it be that we will embody the computer as we did with the clock? The computer, like the clock, becomes miniaturized. We may point out the parallel that exists between the ancient mainframes, great dimension computers, and the big clocks that remained bound to the cathedrals. Nowadays, the wristwatch is no longer a novelty, everybody has one, and the computer becomes miniaturized in the palm-tops. What is not clearly defined, in this moment we live, is what may happen with people when the palm-tops become incorporated like the wristwatches. What will happen to us at that time?

NOTES

[1] We are referring to the "countries" in their present denomination, considering that at that time there was no division in States as we know today, in order to point out the different European regions to which History refers.

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