





Yearbook 2016



*“El contenido de dicha publicación
es responsabilidad exclusiva de la entidad ejecutante
y no refleja necesariamente la opinión de la
FUNDACIÓN de Prevención de Riesgos Laborales”.*

EDITION
Secretary of Labour Health and Environment UGT-CEC

DESIGNS AND PRINTS
Blanca impresores, S.L.

Legal Deposit: M-42473-2016

ISSN: 2173-0830

2016
yearbook

All rights reserved. Neither the whole nor any part of this publication may be reproduced, stored or transmitted by one information retrieval system in any form or by any means, electronic, mechanical, photochemical, or electro-magnetic, photocopying, scanning, recording or otherwise, without prior written permission of the publisher



INTERNATIONAL YEARBOOK
ON PSYCHOSOCIAL RISKS PREVENTION
AND QUALITY OF LIFE AT WORK

2016
INFORMATION AND COMMUNICATION NEW TECHNOLOGIES
AND
PSYCHOSOCIAL RISKS AT WORK

UNIÓN GENERAL DE TRABAJADORES
COMISIÓN EJECUTIVA CONFEDERAL



INTERNATIONAL YEARBOOK
ON PSYCHOSOCIAL RISKS PREVENTION AND QUALITY OF LIFE AT WORK

Direction

Ana García de la Torre
Occupational Secretary of Labour Health and Environment UGT-CEC

Coordination

José Antonio Fernández Avilés
Academic Director Of The Observatory
of Psychosocial Risks

Authors

Confederación Sindical Internacional (CSI)
De las Heras García, Aránzazu
Durán Bernardino, Manuela
Fernández Avilés, José Antonio
García de la Torre, Ana
González Cobaleda, Estefanía
Manzano Santamaría, Noemí
Martínez Selva, José María
OIT

Pinilla García, Francisco Javier
Prados Atienza, José María
Rodríguez-Rico Roldán, Victoria
Rota, Anna
Triclin, Alexis
Triguero Martínez, Luis Ángel
Vallecillo Gámez, María Rosa
Vallellano Pérez, María Dolores

Translation team

Álvaro de la Torre Vallecillo
Susana Martínez García
María Rosa Vallecillo Gámez

INFORMATION AND COMMUNICATION NEW TECHNOLOGIES
AND
PSYCHOSOCIAL RISKS AT WORK



Editorial line



Presentation: What offers the International Yearbook 2016?
Ana García de la Torre
José Antonio Fernández Avilés

Preface: Unions say healthier workplaces deliver healthier workers.....
International Trade Union Confederation

FIRST PART
ICT's AND NEW PSYCOSOCIAL FACTORS OF RISKS (IDENTIFICATION)

Information and communication technologies (ICT's) and new forms of work organization: psychosocial risk factors.
Noemí Manzano Santamaría

Psychosocial risks of intensive users of ICTs. Analysis based on data from the VII National Survey of Working Conditions (2011).....
Francisco Javier Pinilla García

SECOND PART

PROTOTYPICAL FACTORS AND PATHOLOGIES AND THEIR PREVENTION

Stress at work: a collective challenge

International Labour Organization

Labour technostress stress resulting from the implementation of new technologies

José María Martínez Selva

Techno-addiction at work? A view of work stress from the psychology

María Dolores Vallellano Pérez

José María Prados Atienza

Techno-stress and techno-addictions: the problematic legal category as a professional contingency

María Rosa Vallecillo Gámez

TIRTH PART

LOOKING AT SECTORS WITH PREVALENCE IN THE USE OF ICTS.....

Prevention of occupational risks in teleworking: special reference to psychosocial risks.....

Aránzazu de las Heras García

Psychosocial risk factors in labour relations in the call center sector: transnational identifying on purpose of the vision of the international work labour organization.....

Luis Ángel Triguero Martínez

FOURTH PART

WORK WITH USE OF ICTS, WORKING TIME AND RECONCILIATION OF PERSONAL AND WORK LIFE (NEW PERSPECTIVES)

New technologies, time of work and psychosocial risks prevention

Estefanía González Cobaleda

Il dibattito europeo sul diritto alla disconnessione nel rapporto di lavoro.....

Anna Rota

L’experience française du Droit a la deconnection.....

Alexis Triclin

FITH PART

OTHER RELEVANT ASPECTS: THE PROTECTION OF WORKERS’ FUNDAMENTAL RIGHTS AND THE POTENTIAL OF ICTS TO PROMOTE A PREVENTIVE CULTURE.....

New technologies, employment control and infringement of fundamental rights.....

José Antonio Fernández Avilés

Victoria Rodríguez-Rico Roldán

The use of new technologies to promote preventive culture

Manuela Durán Bernardino



Presentation

WHAT OFFERS THE INTERNATIONAL YEARBOOK 2016?

Ana García de la Torre
José Antonio Fernández Avilés

“...We shouldn’t believe that connection equals complicity. Every civic or spiritual relationship needs technical equipment, but there’s a stretch from the “connective to the “collective”.

DEBRAY, R.: Elogio de las fronteras, Gedisa, Barcelona, 2016, p. 55.

Technological revolutions have always inevitably led to more or less drastic changes in the ways of production and the way in which human work is carried out. The emergence of new information and communication technologies (ICTs) has changed the very structure of labour markets, with the emergence of new employment niches (eg. call centres), as well as the decline or disappearance of traditional jobs that are now not so necessary with the use of technological “tools”. New technologies have also changed the way work is organized and the way their own services (e-work phenomena: teleworking, mobile or “nomad” work, etc.) are carried out. The renewed means of production employed have also led to the emergence of new risk factors, especially of a psychosocial nature, to which we must necessarily pay attention, both in the face of an adequate and effective prevention of health and in relation, more broadly, to the promotion of well-being at work.



The new information and communication technologies (ICTs) facilitate our work, but their “alienating potential” and their risks are of the first magnitude. As has been said metaphorically, they have “the two Janus” faces’ (Popma, J. : *The Janus face of the ‘New Ways of Work’ Rise, risks and regulation of nomadic work*, WP 2013.07, ETUI). Viewed from a profile, they can greatly facilitate work: they allow to take advantage of dead times (time of travel or of waiting); they allow the so-called “nomad” work (mobile and outside the traditional work centres); they can also help to make working times more flexible; as well as multitasking. But they do not necessarily free us from the greater mental demands and stress at work (the rapid making of relevant decisions), from monotonous, repetitive and unsatisfactory work (*vid.* Han, B. Ch.: *La sociedad del cansancio*, Herder, 2012). Technology - which is only an instrument - does not replace the need for a job that gives meaning to our professional life and the need for a supportive social network (also at work). Of course, they do not free us from falling into the “feeling of loneliness” in the new world of “hyperconnection” and social networks.

This is the reason why we decided to dedicate the Yearbook to the wide-and complex-problematic that generates the work with the use of ICTs in relation to occupational health of the psychosocial type. The first challenge to tackle the task was an interdisciplinary one, that is, to offer a panoramic view, as wide as possible, from the different disciplines that should pay attention to the phenomenon. In this sense, we have tried to cover the various perspectives of analysis of the object of study.

The Yearbook opens - as a Preface - with interesting reflections from the colleagues of the International Trade Union Confederation (“*Unions say healthier workplaces deliver healthier workers*”), which addresses, from the union perspective, the need for renewed attention - and with a focus on business organization and management rather than the resilience of the workers themselves - to the challenges posed by the new idea of “healthy” work, which also covers contractual conditions - including economic conditions - of the workers themselves, their own control over work and the reconciliation of personal and work life.

The first step of all research is the knowledge of occupational health problems that can lead to the use of ICTs, for this we have had the invaluable collaboration of the National Centre for New Technologies of the INSHT, which, with the very rigorous contribution made by N. Manzano Santamaría (“*Information and communication technologies (ICT's) and new forms of work organization: psychosocial risk factors*”), proceeds to an accurate identification of the relative psychosocial risk factors (time of work and “hyperconnectivity”, quantitative workload, qualitative overload,

psychological demand of cognitive nature, etc.), as well as possible evaluation methods and future scenarios. With keenness and precision, the contribution of F. J. Pinilla García (“*Psychosocial risks of intensive users of ICTs. Analysis based on data from the VII National Survey of Working Conditions (2011)*”), based on the theoretical debate on the role of ICTs in the world of contemporary work, offers us the panorama in our country; concluding, very revealingly, that the conditions of employment of ICT intensive users can be considered privileged in an increasingly degraded labour market; however, he also warns that “the very demanding (precarious) working conditions to which they are exposed today constitute a serious threat of an accelerated deterioration of their health that can predictably condition their future employment expectations.”

The next block of the 2016 Yearbook focuses on the most prototypical psychosocial pathologies that emerge from working with ICTs. The pathologies that arise with the use of new technologies at work are already known, such as techno-stress, or are in the process of being known in more depth, as happens - whenever the expression is admitted - with the new techno-addictions [*v. gr.* Nomophobia (fear of being out of mobile phone contact), phubbing (“phone snub”, not paying attention to others, only on the phone)], which are already part of the psychosocial panorama of our time (inside and outside of work).

First, the 2016 Yearbook provides a summary of the relevant report of the International Labour Organization on stress, one of the main psychosocial risks of work, published this year (“*Stress at work: a collective challenge*”), which addresses the crucial role of all actors involved in labour relations systems in stress prevention, as well as reaffirming clearly that health at work should “aim at the promotion and conservation of the highest degree of physical, mental and social well-being of workers in all occupations”; in a participatory approach, indicates that, in times of change in the world of work, dealing successfully with psychosocial risks “in the workplace is fundamental to protect the health and well-being of workers in addition to increasing the productivity of enterprises.”

Next, two pathologies related to the use of ICTs are specifically addressed. The contribution of J. M. Martínez Selva (“*Labour technostress stress resulting from the implementation of new technologies*”) reviews the most important areas and aspects in which the implementation of ICTs provoke or favour - directly or indirectly - work stress (physical conditions, temporary distribution of work, overload or excess demand, etc.), emphasizing in aspects such as the increase of the depersonalization favoured by the communication through the computer and the work to distance; new specific problems such as interruptions in work or excessive supervision based on digital information

management are identified. Emphasising that the “majority of these problems are avoidable and treatable”, and that it is necessary for companies to carry out training and awareness activities, along with existing treatments for stress, as well as individual advice and general recommendations of various kinds.

On its behalf, the suggestive of work by M. D. Vallellano Pérez and J. M. Prados Atienza (*“Techno-addiction at work? A view of work stress from the psychology”*), tries to answer if the current work context could be inducing some type of dependence to the new technologies. Using an axis between inappropriate use and problematic use of ICTs, they assert that “the employment context may induce different alterations, especially when technology abuse and labour stress are linked,” although more experimental research is needed to corroborate this “provisional” conclusion. However, in order to prevent what they call “problematic use of ICTs at work”, they suggest a set of measures that go through: creating contexts of prevention and coping with work stress (overcoming the “fear of being disconnected”); that the company or organization reserves an “ICT free time”; to reassess interpersonal relationships and genuine affective bonds; as well as revaluing “the important things”; as well as that job descriptions should reflect the functions and tasks related to ICTs, and collective agreements should include good practices in the use of ICTs at work.

In order to close this block, M.R. Vallecillo Gámez (*“Techno-stress and techno-addictions: the problematic legal category as a professional contingency”*) faces the problematic qualification of these pathologies as occupational contingencies, a transcendent legal issue for its adequate repair and rehabilitation treatment in the framework of our Social Security system, but which also produces some effects and interacts with the preventive system itself.

The second block of the 2016 Yearbook is dedicated to the problem of risk prevention, especially psychosocial, in two activities where the use of ICT is intensive, revealing the shortcomings of the regulatory framework and the difficulties to extrapolate the regulatory preventive framework to this type of activities. Firstly, the contribution of A. de las Heras (*“Prevention of occupational risks in teleworking: special reference to psychosocial risks”*), after an exhaustive normative analysis, emphasizes that the development of the work activity, in a remote working regime, makes difficult for the employer to be vigilant in preventive matters, so that, before starting the provision of services, among others, the obligations to review the physical and mental state of the worker, informing him of the risks of the job and of the measures and activities of protection and prevention that he must adopt, as well as to verify that he possesses the theoretical and practical training in the necessary preventive matter for the job to be performed;

emphasising further that “it will be important to provide the worker with tools that allow better management of time, communicative skills or the management of emotions, as well as their own on work tools when changes occur.” The work by Á. L. Triguero Martínez (*“Psychosocial risk factors in labour relations in the call center sector: transnational identifying on purpose of the vision of the international work labour organization”*), for its part, focuses on occupational psychosocial health in the call centre sector, with a significant transnational dimension, focusing on the idea that the development of the sector should go hand in hand with the cost on people and their health, and this situation should be balanced with the reinforcement of the preventive participatory dimension.

The third block of the 2016 Yearbook focuses on the issue of working time, reconciliation and the use of ICTs. With the use of new technologies working time becomes more diffuse. Flexible hours - or lack of schedule - may also be detrimental to health. “Self-management” of time is a delicate subject, as it also entails a trap: it opens the freedom to “self-exploit” oneself (workaholism). It can generate “extra” pressure on workers in their free time, inability to “disconnect”, as well as a feeling of isolation when working - totally or partially - from home. This renews the debate about “availability” (the difference between “effective work” and “availability time”), now in relation to “connectivity.” Connectivity mustn’t be a synonym of “full-time availability.” The suppression of the boundary between private and professional life (so called blurring) is a phenomenon that is becoming widespread and increasing for reasons such as having business mobile phone, laptop, etc., and be constantly connected to bosses, customers or colleagues. The psychological alert at this time increases stress levels and affects the worker’s own performance. Hence the need to legally construct the new “right to disconnect”, as a requirement to protect the worker’s psychosocial integrity and guarantee his right to reconcile work with his personal and family life. At European level, the debate on this new right is already underway. For the moment, in our country, collective bargaining must be the call to intervene to harmonize the use of electronic devices at work with the guardianship of workers’ rest and their reconciliation of personal life. In this sense, there are already conventional comparative and legislative experiences, as well as good business practices that can light the way. In order to address all these issues, we have the outstanding contributions of E. González Cobaleda (*“New technologies, time of work and psychosocial risks prevention”*), A. Rota (*“Il dibattito europeo sul diritto alla disconnessione nel rapporto di lavoro”*) and A. Triclin (*“L’expérience française du Droit a la deconnection”*).

New technologies allow “permanent re-connection” with work, but it can also be a “new” instrument of business control, with the corresponding risks of undesired interference in workers’ privacy. ICTs open up the possibility

Preface

of introducing new labour control instruments, which correctly used, integrate the managerial power business, but, when they are disproportionate and unjustified, violate fundamental workers' rights and generate a "toxic" psychosocial climate within of productive organizations, when they do not integrate even more serious behaviours, such as harassment in its various forms, from the point of view of the psychophysical safety of the worker. To know the difficult weighting of the rights involved in this problem, as well as the legal limits to the exercise of business power to control labour activity through new technologies, derived from jurisprudence on the subject, the following chapter was written: *"New technologies, worker control and fundamental rights"*, in charge of J. A. Fernández Avilés and V. Rodríguez-Rico Roldán.

In order to counteract a possible pessimistic view of technological development, which is certainly not shared here, it should be noted that ICTs actually have a "neutral effect", because like all advances, their effects on occupational health will depend on the way we use them for our productive activities. And it is also true that they also have great potential to promote prevention of one's own occupational hazards. To know the "other side of the coin", the chapter (*"How to use new technologies to promote the preventive culture?"*) written by M. Durán Bernardino, shows the need to focus on the use of new technologies, as a vital tool for the optimal development of preventive management systems, describing the scientific and technological advances that are available to fight accidents at work, being therefore able to be a training and informatory mechanism, as well as a useful tool to establish preventive culture in the workplace and a key instrument to avoid exposure to certain occupational hazards and a good formula to educate companies and their workers.

The general objective pursued with this new issue of the Yearbook is that social agents and public authorities, as well as researchers, find in it not only many elements of reflection, but also keys to the development of effective preventive strategies increasingly attentive to the emerging risks derived from the use of ICTs at work. If we contribute to promote a now "preventive consciousness" about this problematic, the effort would be worth.

Last but not least, we would like to express our gratitude to all the institutions and researchers who have collaborated, in a generous and disinterested way, so that this Yearbook becomes a reality. To all of them will correspond the possible success of reception that may have this collective work.

UNIONS SAY HEALTHIER WORKPLACES DELIVER HEALTHIER WORKERS

INTERNATIONAL TRADE UNIONS CONFEDERATION

Whichever side of the desk you sit, you'll know sickness absence at work is not a good thing. Managers know it impacts on the bottom line, workers know it can damage both their income and their job security.

Yet with stress repeatedly topping the work-related ill-health league table, there's an evident and evidently serious disconnect between recognising there is a problem and the interventions at work necessary to do something about it.

In a working world where fast-changing communications technologies, automation and performance management are the new normal, workers are much more likely to collapse from the stress of the job than from occupational diseases more commonly linked to work. Heart disease, suicide and stroke could be the major killers of the 21st Century workplace.

'Bad habits' like drug and alcohol use and an unhealthy diet –and the sickness, obesity and poor attendance that might accompany them- are, studies show, frequently the consequence of bad jobs. Poorly designed shift patterns, excessive workloads, long hours, work that is too demanding or too boring and punitive sickness management systems can and do take their toll.

Unions press the message that poorly designed and managed jobs can also be behind 'lifestyle' related health problems. There is a strong link between stress and the use of tobacco, recreational drugs and alcohol. Having a job

that involves sitting down all the time or only having access to junk food during a 20-minute lunch break can lead to obesity and increase the chances of heart disease and diabetes.

A 2012 US report confirmed the impact of bad jobs on workers' weight. *'Obesity/overweight and the role of working conditions'* found that hotel housekeepers, janitors and other blue collar workers who rarely sit during the day have neither the time nor the energy to benefit from traditional healthy lifestyle recommendations.

Associate professor Nicole Champagne of the UMass Lowell Department of Community Health and Sustainability, a study co-author, commented: "This report shows what an important impact the conditions of a person's workplace can have on their health. When we are only looking at individual behaviours, such as diet and exercise habits, as a way to improve health, we are missing a big piece of the puzzle."

'Low job control is bad for your heart', A study published in February 2013 in the Canadian Journal of Public Health found, for example, the proportion of cases of hypertension among men that could be attributed to low job control was 12 per cent higher than the proportion of cases that could be attributed to poor health behaviours such as smoking, drinking, not getting enough exercise, and not eating enough fruits and vegetables.

Recent US research has also confirmed another component of a bad job –low pay– is linked to higher rates of both workplace injuries and hypertension. The US government -backed study on hypertension– which is linked to heart attacks and strokes – found doubling the wages of younger workers was associated with a 25 to 30 per cent decrease in the risk of a hypertension diagnosis, and doubling the wages of women was associated with a 30 to 35 per cent decrease in the risk of a hypertension diagnosis.

This isn't news to unions. Experiences shows the health crisis at work isn't the consequence of bad habits, it is an inevitable side-product of bad management.

However, workers face business as usual, with companies targeting the symptom –the sick worker– and ignoring the cause, the sick workplace. This misguided response might manifest itself in punitive sickness management systems, which place those made ill by their work on a fast track to dismissal. Or it could be performance management systems that push individual targets remorselessly up, with a fixed proportion of the workforce failing by design. Targets cause

stress, stress causes sickness, sickness exacerbates stress. It's a perfect storm of mismanagement predicated on workers being a disposable commodity.

Even some enlightened employers can get it wrong, by trying to 'fix' the worker and not the dysfunctional workplace. There has, for example, been a recent boom in management consultants claiming the way to improve productivity is to make staff more "resilient" to stress and work demands. It has spawned a new resilience industry.

Unions believe the issue is not how you change the worker to help them cope with pressure, but how you change the workplace to remove unreasonable stress and demands. You don't make your workers more bullet proof, you take away the gun.

Well-being programmes can also miss the point. In US firms with more than 200 workers, 94 per cent had well-being programmes in 2012. A significant minority penalised workers who didn't meet specific biometric outcomes, such as a cholesterol number or body mass index (BMI), and most imposed penalties if workers refused to participate.

Improved well-being at work is unobtainable in the absence of a genuine commitment to cure unhealthy management systems, workloads, work pace, work patterns and hours of work, combined with a willingness to promote genuine worker involvement and to improve the level of control a worker has over their work.

In most workplaces that means addressing a power imbalance at work, and that in reality means accepting and benefiting from a union presence. The union dividend –safer, healthier workplaces, better wages and greater equity at work– is the comprehensive antidote to workplace stress.



First Part
ICT's and new psychosocial
factors of risks (identification)

1



INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT'S) AND NEW FORMS OF WORK ORGANIZATION: PSYCHOSOCIAL RISK FACTORS.



Noemí Manzano Santamaría.
National Institute of Safety and Health
at Work New Technologies National Center

Summary

1. THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT's) IN THE WORKPLACE AND THE NEW FORMS OF WORK ORGANIZATION

2. FORMS OF WORK ORGANIZATION CONFINED TO THE E-WORK: MOBILE TELEWORKING AND NOMADIC WORK

2.1. Mobile teleworking

2.2. The nomadic work

3. PSYCHOSOCIAL RISK FACTORS

4. METHODOLOGY FOR ASSESSING THE PSYCHOSOCIAL RISK FACTORS

5. FUTURE SCENES

6. BIBLIOGRAPHY

ABSTRACT

This paper reflects how the advance of the technologies of the communication and the information (ICT's), among others factors, have led the emergence of new forms of work organization. Among the various forms of organization of work, will be to analyse nomad and telecommuting workstations, since they're considered emerging and growing. Once explained the evolution of the ICT's and their potential, both for companies and for workers, we'll deepen into each of the chosen forms of work organization, defining them briefly to have the necessary information that will allow us to analyse the potential psychosocial factors of risk to which workers may be exposed. A time made the identification, there's built-in a paragraph relative to the methodology susceptible to be used to identify such psychosocial factors of risk, since it can be of great practical help.

Finally was added a section of present and future scenarios, which attempts to describe the current situation and establish predictions of the future of both forms of organisation of work situation.

1. THE USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT's) IN THE WORKPLACE AND THE NEW FORMS OF WORK ORGANIZATION

Today is becoming more usual the use of the ICT's to do our job, but, what is known as ICT's? When we talk about ICT's we refer to the set of technologies (Tools, media, channels, software etc.) which allow the user to access, store, process and transmit the information by presenting it in the form of audio, text, or image "(Zambrano Martínez <http://www.revista.unam.mx/vol.10/num11/art79/int79.htm> - a, f. 2009:1)'

Since the appearance of the first computer (1939 by John Atanasoff), the digital electronic computer (1949 by John Mauchly and John Presper Eckert) or the first cell phone (1973 by Martin Cooper), the ICT's have evolved dramatically, going from being used only by a small number of workers, to a widespread use both in the private sector (using the mobile phone to interact with friends, family, etc.) as at work (since the early 1990s, using "smartphones", "tablets", "e-mail" etc. to interact with coworkers, clients, bosses, etc and to develop work).

In this regard, in line with technological changes discussed above; one of the first changes on the way of organizing work thanks to the use of the ICT's came in the 1970s in hand with the organizational mode called "Telecommuting", intended as a means to mitigate the impact on labour that was causing the oil crisis in the United States, and that replaced the "commuting", or daily travel to the workplace, by the use of the ICT's from home, as a way for average

workers (only executives in its infancy) to perform their work and optimize the use of non-renewable resources. This labour practice became widespread in the 1990s to be extensible to all types of workers, and growing exponentially decades later thanks to technological advances, the widespread use of Internet, computer costs and devices down etc. “(Morales Varas, G., Romanik Foncea, k. 2011:9)”. Since then, the generalization of the use of the ICT’s to different spheres of life is noted with the **“e- phenomenon”**, appearing terms such as; the “e-commerce”, the “e-teaching” or the one that concerns us today; the “e-Work” (perform labour tasks anytime, anywhere with the help of the ICT’s).

At workplace, in the wake of these technological and organizational changes, comes the **concept “e-Work”** “(Vartiainen, M. 2006:22)”, defined as *all that labour practice that makes use of the ICT’s to increase the efficiency, flexibility (in time and place) and sustainability of resources used*. This concept is much broader than the concept of “Telecommuting” (which focused on the change of the place of work of the worker, initially partnering it with the work done at home), because the “e-Work” encompasses any form of organization of the *remote labour* (a concept which involves distance, i.e., the realization of the work away from the facilities of the employer) and *remotely controlled* (concept which implies that communication, transfer of data and results is carried out through the use of ICT’s). Therefore, the forms of organization of work that can be considered as “e-Work” would cover from the permanent telework, the supplemental and alternate telework, the mobile telework, the nomadic work, to others forms of play the work that require the collaboration of several workers; the virtual, mobile work teams.

In an attempt to clarify the multitude of markings used to refer to these forms of organization of work, the magazine of business “Flexibility.co.uk” “(Flexibility.co.uk. Resources For New Ways of Working, 2013:1)” collects the terminology used to designate changes related to new labour practices; “Flexible Working”, “New Ways of Working”, “Agile Working” or “Smart Working”, as well as the terminology used to designate the form that uses the technology beyond the workplace; “Telework”, “Telecommuting”, “e-Work”, “Location Independent Working”, being these forms of work organisation, in particular these relating to the “Telework”, which we’ll discuss in this article, leaving out, on this occasion, other forms of work such as the “interim management”, “casual work”, “crowd employment”, “portfolio work” and “collaborative employment” “(European Foundation for the Improvement of Living and Working Conditions, 2015:7-8)”.

Regardless the way we refer to this form of work organization, it seems undeniable that the use of the ICT’s in the workplace has a great potential, both for the company and for the worker, allowing you to access, collect and use information, the synchronous (real time) communication between the members of a company and/or clients; and asynchronous (using, for example, the e-mail), the digitization of information, the “content mobility” through the use of internet and wireless connections, 4G, WIFI etc. allowing the worker to perform their tasks in any place and at any time, reducing business costs relating to the physical workspace and even changing the conception of the physical workplace, emerging concepts as the “hot-deskers” (workers not fixed in the workplace physical location), “coworking” spaces, or “techub” (spaces where an international network of entrepreneurs can work, collaborate, interact and learn). To avail themselves of this great potential, both the companies as them workers have had to suit. Organizations have had to adapt to a new reality characterized by the formation of an increasingly competitive, globalized and flexible, global market that is easier to access if these organizations offer service outside the spatial and temporal organization boundaries, organizing the work in a more flexible way, enabling the worker to perform his work in multiple locations using work of virtual spaces using portable connected devices to wireless networks. On the other hand, the workers face a changing reality of work and demands of the global market, and a labour market which is opting for more flexible forms of work organization which are easing the breaking of chains obliging the worker to remain physically at the workplace. This cocktail, prepared with some of the following ingredients; labour flexibility, offshoring, increase of competitiveness in the world market and the use of the ICT’s in the workplace, is promoting the generation of emerging risks that should be anticipated by the study of these new forms of work organization arising out of the use of the ICT’s and its impact on the safety and health of the worker.

Once explained the importance of the study from the preventive point of view of new forms of work organization it will briefly be explained one of the existing forms of teleworking, mobile teleworking and nomadic work, in order to have the necessary minimum knowledge that will allow us to perform an analysis of much of the psychosocial factors of risk present in these two forms of organisation of work confined to the “e-Work”.

2. FORMS OF WORK ORGANIZATION CONFINED TO THE E-WORK: MOBILE TELEWORKING AND NOMADIC WORK.

As a result of the social and working relevance that telework had as a new organizationa lreality, in the year 2002 was signed the *Agreed European Framework on teleworking*, document that reflects the will of guarantee the balance between security and flexibility labor. Among its content it highlights the (fairly general and open) definition of

telecommuting as “a form of organization and/or carrying out the work, using information technologies within the framework of a contract or an employment relationship, in which a work which could also be performed at the facilities of the company is carried out outside these premises on a regular basis”, which leaves the door open to all those workers who organize and carry out their work using the ICT’s, not restricting its scope solely to teleworkers who perform their work at home on a permanent basis, but that covers one wider range in which you can include mobile teleworkers or even virtual workers who perform their work outside the facilities of the employer , for example in teleworking centres “(Helle, M. 2006:76-78)”.

2.1. Mobile teleworking

Since the emergence of the “telecommuting”, this organizational mode has given response to the demands of a market each time more global, competitive and delocalised, opting by it flexibility as a mean to adapt to them continuous changes of the market and them productive processes.

Mobile teleworking reaches more importance around the year 2000, receiving different names and definitions depending on the publication we consult; Mobile teleworking or work in multiple locations “(Vartiainen, M., 2006:23 - 24)”, mobile workstation based on ICT’s “(European Foundation for the Improvement of Living and Working Conditions, 2015:72)”, remote and mobile workers, ‘mobile e-workers or e-workers in multiple locations” (Institute of Occupational Medicine, 2009: 1)”.

In order to explain what is this form of organization of the work we’ll use the definition established by the European Foundation for the improvement of Living and Working Conditions; *form of work characterized because the worker (whether employee or freelance) operates from several possible locations outside the facilities of the company (for example, from home, from the facilities of the client, or in displacement) supported by modern technology such as a laptop and a “tablet”. This differs from the traditional telecommuting in the sense of being even less tied to the workplace.* “(European Foundation for the Improvement of Living and Working Conditions, 2015:72)” and of a non-exhaustive list of the main features of them telecommuters mobile, extracted of the sources of the bibliography consulted:

- Is a form of organizing the work in which *the worker needs to access to the communication system of the company and to exchange relevant information regardless the place and time. This requires any sort of system of data storage with virtual access from mobile devices and the related infrastructure (a network of computers, laptops,” tablets “, mobile phones etc.), as well as procedures for the exchange of communication and information”(European Foundation for the Improvement of Living and Working Conditions, 2015:74) “.*
- *For most of the employees, mobile work could be considered as a variation of the telework, where the workers carry their work out of the facilities of the employer. However, in contrast to the traditional telecommuting, they don’t work fixed elsewhere, but with greater flexibility in different locations or even in their way”(European Foundation for the Improvement of Living and Working Conditions, 2015: 73) “.* These locations can be: in motion (in plane, train etc.), in your own home, in places of third parties (hotels, cafes etc.), “(Vartiainen, M., et al, 2007:22)”, combining and alternating various locations according to their needs.
- “In this sense, it doesn’t matter where you perform work or where the worker is located (occurs a trivialization of the workplace), as **the work is something that people do, not the place where they will work** “(Blatt, k., Gallager J., 2013:288)”. ”
- The constant availability and connectivity of the worker is provided by the use of ICT’s, which originates the possibility of carrying out your work “anywhere, anytime”.
- To carry out the work in virtual workspaces in addition to the already existing workspaces; physical space (the traditional office), mental and social space. “(Aaltonen, I., et al, 2012:15-16)”.
- The use of mobility “(Schmidt, L., Holger, L., 2006:166 - 174)”, in all its meanings, not only talking about the physical mobility of the worker, but to the mobility of contents (that can be received and sent of an almost immediate way thanks to the use of the Internet etc.), the mobility of the used devices (in relation to the portability of such), mobility of the relations (the workers are not related solely in an only center of work to the companions located at it, but to workers in different locations,

at local, national and international levels or even through virtual spaces), virtual mobility (relative to the accomplishment of the task in virtual spaces of work and the possibility of storing them virtually from “iCloud” or of sending them by email).

The main features explained above have been collected in the graphic number 1, image edited from the graphic of “(Berg, or., 2013)” on the 6 pillars of the new place of digital work.

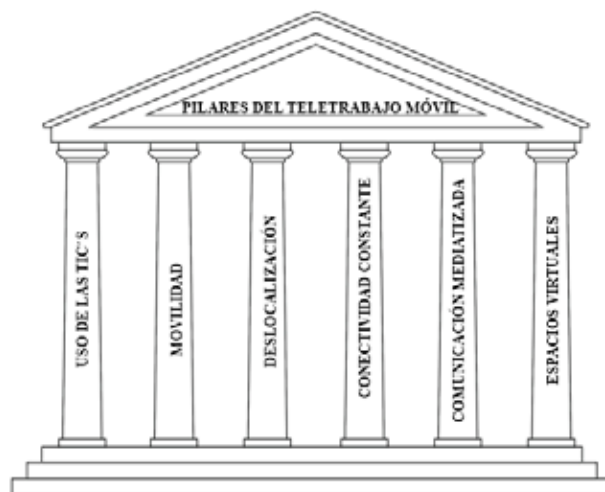


Chart number 1. The pillars of mobile telework.

ICT’s-based mobile work is not suitable for all majors, as it means that it is possible to carry out the tasks of the job away from the facilities of the employer. The professions developed by teleworkers, according to a study made in an Italian telecommunications company, “(Corso, M., Martini, to., Pellegrini L., 2006:309” were; the strength of sale (47%), technicians and maintenance workers or installers (35%) and managers, researchers, company directors and inspectors (18% of the company’s employees).

There are studies that claim that this kind of work is most widespread in international companies and among those who collaborate with foreign companies and that, in general, the sectors where there are more mobile workers are the sector of the information technology and communication, or engineering (automotive, aerospace, building and construction sectors) among others “(European Foundation for the Improvement of Living and Working Conditions, 2015:76) “.

Another way to do the job, is form teams; mobile virtual work teams, that unlike traditional work teams, are formed by several mobile workers who as well as making use of virtual workspaces, communicate, collaborate and share knowledge through the use of TIC’s have physical mobility locally (visiting several places during the workday or moving in a certain area) or global (the case of the representatives of large companies that operate globally working on several continents), therefore its members can cross geographical and culturally the borders of other countries, working in areas with different slots.

In mobile virtual teams scattered work should take into account a number of determinant factors” (Hyrkkänen, U, Putkonen, A, Vartiainen, M., 2007:. 85-94)” to avoid the appearance of psychosocial risk factors; the excessive multiplicity of locations and the distance between them, the excessive number of trips to countries with different time zones, the work shedule counting the time spent commuting, the asynchronism in working time, the communication problems and misunderstandings result of linguistic and cultural differences among the virtual mobile teams members, the proper estimate of working time will be devoted to each project in which they participate and setting achievable and measurable objectives, the establishment of procedures to regulate the information and mediated communication between members of teams, etc.

2.2. The nomadic work.

Nomadic workers, defined as an extreme form of mobile working “(Makoto, N., Mark, G., 2008: 1)”, are characterized as mobile teleworkers for the use of TIC’s, the flexibility in the organization of time and work and physical mobility, because of these similarities, some publications and articles equate the term mobile teleworker and nomadic worker, but it should be taken into account three specific features that can make the difference between mobile workers “(Makoto, N., Mark, G., 2008: 1)”:

- Nomadic workers travel intensively during most of the time. In this regard it would be interesting to investigate further which practices they do in the way and their use of timeouts work “(Perry, M., Sellen, A., O’Hara, K., Harper are, RHR, 2001: 337) “ “(Axtell, C., 2011: 2) “because it is not easy to find current publications on this topic.
- They are not strongly linked to any office or workplace, since nomadic workers work “where they have to work at that particular time”, transcending the need to go to a center of physical work.
- Nomadic workers carry, manage, reconfigure their own resources when they perform their work in different locations unlike a traditional worker who has resources in the office (computer, fax, printer, internet connection, outlet etc.). For nomads workers Internet connections or power sources for laptop, printer or any portable device that need to use may not be feasible.

3. PSYCHOSOCIAL RISK FACTORS.

Once explained the peculiarities of the different forms of work, we’ll deepen into the analysis of psychosocial risk factors of mobile teleworkers, virtual mobile work teams and nomads. In order to do that, we’ll conduct an overall analysis of potential psychosocial risk factors to which they are exposed. The general definition can be found in the Prevention Technical Note 926 of the National Institute of Health and Safety at Work “(INSHT, 2012: 2-4)” and / or document of the European Framework for Psychosocial Risk Management “(the European Framework for Psychosocial Risk Management”. PRIMA-EF, 2008: 2.)” Defined as “psychosocial factors are likely to adversely affect the health and welfare of the worker “ (Benavides, Gimeno, Benach, Martinez, and Jarque Berra, 2002).

ANALYSIS OF PSYCHOSOCIAL RISK FACTORS.

One of the most controversial issues affecting the new ways of organizing work is relative to the **working time**, specifically the resting periods and working breaks, mainly because of the flexibility in working time, the constant availability, hyperconnectivity of workers and the ability to perform the work at any time and place through the use of ICT’s (in the case of mobile and nomadic workers). This can compromise the enjoyment of resting periods and breaks, increase the number of hours worked, etc.

Regarding regulations, the Working Time Directive 2003/88 / EC does not specifically regulate working time in mobile, nomadic or mobile virtual work teams workers, nor availability off-site is regulated. It seems, therefore, that all forms of organization of work differently to traditional can be confined to what is agreed in collective agreements or agreements between the social partners (Article 17.2 of the Directive on Working Time 2003/88 / EC), which suggests the need for updating the rules according to labor and business reality that we are experiencing today, reality that’s changing much faster than existing regulations.

This lack of specific regulation regarding working time, the hyper-connectivity, constant availability and the absence or inadequate implementation of business policies provoke a welfare worker scenario; the company can accept and normalize the fact that the employee performs part of his work out of the working time or at odd times, managers expect and assume that the worker will be available if they try to contact them outside working hours or even the workers themselves can consider policies designed to prevent hyper-connectivity and constant availability as *a loss of freedom in managing their working time that increases their stress level*”(European Foundation for the Improvement of Living and Working Conditions, 2015: 7-79). “ Therefore, we see that it’s not jus about designing corporate policies, but to implement them and become part of the corporate culture, so that if, for example, *the expectations of managers are reduced or eliminated that will increase the probability that workers are not connected to their devices after the end of their workday*”(Blatt, K., J. Gallager, 2013: 280),” avoiding or reducing the number of workers suffering from stress because of their constant availability with poorer life quality in their breaks, not-disconnection feeling, sense of “duty” to answer at the moment: anxiety, and / or addiction to mobile phone or mobile work related to the use of ICT’s in the workplace. This type of policies related to the working time can be performed by any company, with policies aimed to eliminate the expectations that workers respond to emails outside working hours or on weekends, or policies aimed to eliminate the automatic forwarding of e-mails to workers’ Smartphone once they have completed the workday.

A labour practice that is becoming common for those workers who travel to visit customers, suppliers etc. and that can cause prolongation of the working day, is the management of e-mails or making a phone call before starting the workday, what represents an advance of the start of the workday as ICT’s facilitate wireless connections ease the completion of the work “anytime, anywhere”.

Finally, it should be noted that those mobile teleworkers and mobile virtual work teams working with clients, co-workers etc. in countries with different time zones can affect their ability to manage the term structure of their work due to temporary asynchrony, since interacting with them can be conditioned by their time availability having to extend their work day or “rare” work schedules to interact electronically. The result can blur the boundaries between work and personal life of the worker, as the time spent working and worker’s personal life can become blurred. As for the influence of ICT’s in quantitative work load one of the most important consequences is related to multitasking (carrying out several searches of information in parallel, performing several tasks of different nature etc.) in an uncontrolled way, ie, those situations where passing from one task to another occurs unexpectedly, generating an increase of external work stoppages and increases unrealized tasks and quantitative work load.

Other situations, arising from the use of ICT’s, which disrupt the normal development of work and can cause a work overload are related to the absence of programming tasks unplanned which are communicated via ICT’s, the inadequate management of devices and electronic tools (not regulating the constant arrival of e-mails) or produced by the use of portable devices in public spaces, on airplanes, in cafes, etc., have an impact reducing worker productivity or in practices as the “leaveism” (“leaveism” including, among other labour practices, those in which *employees take work home that could not be done in normal working hours or in which workers perform their work during holidays to catch up*) “(Hesketh I., Cooper C, L, 2014:. 146)”. This practice can be done forming tasks such as: sending and receiving e-mail, phone calls, reading documents, etc.

Special attention should be devoted to inadequate management of e-mail, since studies consulted reveal the impact of the use of e-mail and the disruption they cause in the normal course of work and worker health, reaching to fill in some companies 28% of their working time “(Hemp, P., 2009: 12)” becoming a very important source of job stress. To avoid some of the consequences of improper use management of e-mail (emails overload and inability to manage them, lack of concentration resulting of the interruption, loss of effective working time, information overload due to the excess of information we receive by e-mail, etc.) measures on control of the entry of e-mail must be implemented (avoiding the automatic refresh), planning of time spent on this task in working hours, avoid the ping-pong effect of e-mails proposing face to face meetings, etc “(Hemp, P., 2009: 9-11).”

The technical difficulties that may arise when devices, tools etc. are being used (connection problems, problems processing data, slow or malfunctioning etc.) can also cause overloading accumulation of tasks, so must the

employer provide technical assistance to telecommute, as establishing the Framework Agreement on Telework in Article 7, as often conducting their work is totally dependent on the use of ICT’s, and if something precludes the use of mobile devices work cannot be performed normally.

Moreover, the management of ICT’s can be problematic for the worker, since the management of a device, tool, software, etc. it can be tricky, causing accumulation of quantitative workload and therefore must properly train the worker, as promulgates the Law on Prevention of Occupational Risks 31/95 Article 19.1 and the Framework Agreement on Telework in Article 10.

We cannot forget the qualitative work overload because it can be a psychosocial risk factor related to the use of ICT’s that can be dimmed if co-workers interact and collaborate providing informative support (transmitting knowledge between partners). This transmission can be compromised if workers do not perform their work in the same building / office and relate in a mediated way in a virtual space. One way to solve this situation is to establish channels of communication and virtual information to ease interaction and exchange of information and knowledge management, for example, creating a web platform, increasing the number of contact scheduled meetings face to face, creating forums, chat rooms etc.

Another aspect of special importance, which is directly related to the business culture of prevention is the design of policies by establishing criteria for **supervision and recognition of the work done** when the worker isn’t physically present in the workplace and when communication and interaction is largely telematics through virtual workspaces. The most common feeling that can arise in these workers is the lack of recognition of the work done, because of the limited feedback to them and the small number of face to face communications to avoid the feeling of receiving impersonal ratings on their performance based on telematics communication of the objectives achieved, on monitoring their connection time, etc., and the sense of monitoring the worker and not the objectives achieved and / or the quality of work performed.

Therefore, it should be given more visibility to the worker and the work done in the organization, avoiding the belief “if they don’t see me, I don’t exist”, the feeling of lack of appreciation and recognition of work, the lack of linkage and identification with the company, lack of commitment, job dissatisfaction and in some cases, increased labor turnover rates.

The **interest in the worker** as psychosocial factor that takes into account all actions by the company that show the concern of the company by the worker, covering aspects relating to the possibility of promotion, training, and development career, is especially important and is briefly reflected in Article 10 of the European Framework Agreement on Telework 2002.

With regard to training, it should be noted, that it should be designed specific courses according to the needs of workers to prevent them from being ineffective, adjusting the program to the knowledge, abilities, skills and profile of workers, including all workers (teleworkers or not).

One issue of particular importance is the promotion and advancement, the company must design a clear and transparent promotion or advancement policy, including mobile teleworkers and nomadic, avoiding the feeling of inequality and lost opportunities (for not being physically present in the company), the feeling that neither the worker nor his work “is visible” nor valued (which brings out the sense of imbalance between what the worker contributes with and the compensation received for it), the belief that “if they don’t see me, I don’t exist” or increased labor practices as “leaveism” as a result of inadequate business culture that prime excessive competitiveness, claim to be more productive than the rest for some specific reason or the mentality to work harder to “gain more merit” and promote earlier.

Due to the nature of mobile and nomadic telework, workers are less likely to have social relationships with their colleagues and superiors as they are not present in the workplace as regularly as traditional workers. In this sense, the Framework Agreement on Telework 2002 Article 9 states that “at the slightest possibility of teleworkers to establish social relations the employer must ensure that measures are taken to prevent the isolation of teleworkers and ensure that they regularly meet their colleagues. “The need to prevent isolation and enhance social relations is very important because it has an essential role to provide social support and cushion worker work stress” (Hiltraut Paridon, H., Hupke M, 2009: 3-4) “.

Some of the keys to prevent the occurrence of psychosocial risks by lack of social support is to identify and avoid a number of practices that can bring out the worker a sense of isolation, for example, nonexistence of communications face-to-face scheduled and periodicals, giving priority to telematics communications (via e-mail, phone call, video conferencing, etc.), or the lack of “virtual place” meeting (forum or a virtual platform) where workers

can interact, solve technical questions, receive information, fostering communication and social support, preventing the occurrence of work stress and achieving greater worker satisfaction while performing their work.

The implementation of a virtual space where workers interact with each other by creating a virtual platform” (Corso, M., Martini, A., Pellegrini, L., 2006: 309-312)” (with different sections, news, training, market products, community-forum, desktop events, expert support on technology issues, etc.) can serve for workers who have no way to interact with each other to share information, questions, concerns (providing emotional and informational support), improve communication and participation and between workers on company matters, avoid the general misinformation on issues etc. relating to the company, increasing the welfare of the worker.

A basic aspect to consider in this type of workers using virtual spaces of communication and collaboration through the use of ICT’s is the difficulty of this type of communication compared with face to face, and the facility to generate misunderstandings and conflicts. In the specific case of communications that take place between mobile virtual teams work with workers located in other countries” (Vartiainen, M., 2006: 29-36),” the problem may also arise from the poor domain of the language in which communications are established, the cultural differences of workers, time differences (in terms of time that is intended to contact), or even improper use of nonverbal language in the case of the videoconferences.

Regarding the relationship between **the family-work balance** and new forms of work organization, it is common to think that (thanks to the flexibility offered by these forms of work organization, together with the hyper-connectivity and use of ICT’s), the work-family balance will be strengthened, but do not forget that some workers may feel that the use of TIC’s and constant connectivity can negatively impact their work-life balance, so it is important to assess the psychosocial factor by determining whether it is positive or psychosocial risk factor, avoiding assuming that it will act positively on the worker and the work-family balance.

One of the possible consequences of hyper-connectivity and continued availability associated to an inadequate work organization is a role overload (of work), which, in turn, can trigger (if the expectations are not met in all roles) in one **work-family conflict**, which is caused by the difficulty or inability to meet expectations without rejecting the others, for example, the inability to reconcile all labour demands for reasons of time commitment for each task or for reasons of overload demands required in the workplace in relation to family demands. Thus, inadequate

management of hyper and continued availability can lead, in addition to a quantitative work overload or an extension of working hours, a work-family conflict (to take time and effort capacity necessary to meet family demands).

The other side of the coin would be the **conflict work-family**, this occurs when the high family demands required to the worker are incompatible with the completion of labor demands, either because they are excessive in number or that they don't have the time required to perform them. According to studies consulted, two possible psychosocial factors that may help reduce the chances of the family-work conflict" (Golden, T, D .; Veiga, JF; Simsek, Z., 2006: 1340-1350)" in permanent teleworkers are: flexibility in working time and autonomy in work organization. Mobile workers and nomads could also rely on them to successfully manage family demands, taking into account that there may be other variables that interact in the resolution of claims; the number of components in the household associated with increased family demands, the self-imposed pressure by the worker to meet family demands or the level of involvement in labor issues with workers with a high level of autonomy (as they can increase the hours spent at work environment to the detriment of the family).

In general, some of the recommendations to avoid duplication of work and family life in such workers would be: not link personal devices with the company ones (avoid automatic redirection of e-mails from the e-mail address of the company to our device for personal use), create a strong technological barrier between work and home creating different email accounts or avoiding turning on your company computer or mobile phone outside of working hours, etc.

Another psychosocial factor of particular importance, and which is related to matters discussed a little above, is the **psychological demand of cognitive nature**, addressed here, in relation to the realization of an "extra" intellectual effort by the worker to maintain attention and concentration on the task at hand while suffering interruptions and to meet the task that occurs unexpectedly without losing the thread of which was developing.

In this sense, performing different tasks in parallel, searching for information, processing and / or management information from the use of ICT's can become a true madness that can cause a shallow reading of the contents , less understanding of what they read (because the human mind, unlike a computer, is not able to develop as many tasks at once without exhausting), lower worker productivity and a waste of time of effective work (according to data accessed, the worker can take up to about 24 minutes to fully resume the activity after suffering an interruption) "(Hemp, P., 2009: 2)."

On the other hand, the use of ICT's enables the worker to easily access vast amounts of information, but too much information can overload you cognitively generating "infobesity" or "infoxication", producing a deterioration in process ability and analysis of the information. One possible consequence is that the worker does not have time to delve into all the information he receives or finds on the internet (as it is incomparable), nor is he able to process it, producing a feeling of saturation, anguish and anxiety called Syndrome of computer fatigue or "data smog".

The user who handles ICT's can also be seen in the situation of needing to learn how to handle new applications, software and new languages in a short period of time can mean an extra cognitive effort wich must also be considered.

As it has been discussed, it is essential to establish channels of information and appropriate communication to the workers, promoting the arrival of information of what is happening in the company, **consultation** on matters relating to their job and participation in decision-making aspects of his job, as required by Article 18 of Law 31/1995 on Prevention of Occupational Risks and Article 9 of the Framework Agreement on Telework 2002.

As for the **temporary autonomy**, generally mobile teleworkers, teams of virtual mobile work and nomadic workers (consultants, commercial, managers, software developers, web designers particularly), have autonomy to address specific issues, they can distribute work breaks, determine their own pace of work, etc., but not to generalize, because it may be the case that they must adapt their schedules to their customers, partners, co-workers, which can mean losing their control over these labour issues, especially if they collaborate with workers or serving customers from countries with different slots.

A psychosocial factor especially affected by the use of ICT's in these forms of work organization characterized by delocalisation and the use of different places to perform the work will be on the psychosocial factor environment where they work, since due to the nature of their work they will have to work in cafes, hotels, trains, etc., with all that this implies; these locations are not designed to do the job for a long time, there is lack of privacy, noise, interruptions that hinder concentration, inadequate infrastructure (bad internet connection or few outlets), ergonomic problems related to the place where they are performing their work (level insufficient lighting, thermal and acoustic discomfort, inadequate working postures due to which they should have the laptop on the legs, on tables seat on the plane, etc., chairs and tables inadequate for working), etc .

Regarding the work devices used, Article 7 of the Framework Agreement on Telework establishes aspects relative to work equipment used by teleworkers: “The costs of the equipment needed must be covered before starting telecommuting and must be paid by the employer (installation and maintenance),” “under agreement of the parties, the worker can offer his equipment if they agree how will this be compensated.”

It takes special importance the choice of mobile devices that will be used in this case, the devices must meet the requirements of the work to be performed, using devices and software that achieve the goals set, enough storage memory, RAM speed, lightness if they have to be transported, high-quality visual interface if a small portable device is used, etc. allowing the performance of work in a normal way, without presenting problems in processing information or problems connecting to the network, since excessive technological dependence of worker to perform his work can cause stress or anxiety.

One aspect to consider, before concluding this section, is that “*technology itself is ‘neutral’, that is, that in itself it does not produce either positive or negative effects*” (Salanova, M. 2007: 3) “. Therefore, the fact that the use of technology in general and ICT’s in particular in a workplace have positive or negative effects for the company or for the safety and health of workers is an issue that depends on the proper design of the strategy of implementation, monitoring and evaluation of ICT’s in the company as well as the proper selection of device used according to criteria given above.

Some of the issues discussed throughout this section on psychosocial risk factors are related to corporation culture , and ultimately, with proper design and implementation of policies; the implementation of new TIC’s in the workplace, regulating availability and constant connectivity of the worker, communication with workers, promoting social relations and interaction face to face, avoid isolation and lack of social support, knowledge management, proper supervision of work, etc.

As we have seen, there are a number of psychosocial risk factors that may even interact with each other, in fact, Labour Inspectorate itself noted that the interaction between psychosocial factors was normal and common, and that it wa convenient to become familiar with it, “since the factors referred doesn’t act independently of each other. In the inspection practice it has been found that, at least in conflict situations with obvious psychosocial risk, an interplay of factors occurs” (Inspectorate of Labour and Social Security, 2012: 15) “, being of vital importance

to identify the factors psychosocial risk to which workers are exposed and their possible interactions with other psychosocial factors. “ This means that, for example, the overload of quantitative work while multitasking and suffer interruptions in normal development of work can interact with other psychosocial factors such as “working time” (prolonging their working hours to achieve their goals), the “balance between work and family life” (if worker prioritizes achieving labour demands over family so that it is incompatible satisfy both), or “psychological demands of cognitive nature” (derived from the cognitive effort involved in performing multitasking and constant interruptions for the development of their work) etc. Similarly, the organizational culture is a transversal psychosocial factor as it interacts with many psychosocial factors such as; the type of supervision to workers, the existence of rules and standardized procedures (formalized or not), the policy regarding compensation and promotion, the role of management to manage conflicts, etc., so it is important to define the type of organizational and functional culture of an organization, since the values and standards resulting from this will influence the behavior of individuals.

4. METHODOLOGY FOR ASSESSING THE PSYCHOSOCIAL RISK FACTORS

To assess psychosocial factors in organizations employing new forms of work organization, we can choose and use the **procedure standardized for the assessment of psychosocial factors** deemed most appropriate (considering that “a priori,” no “method”, procedure, technique or instrument can be considered the best”)(National Institute for Safety and Health at Work, 2015: 25-26),” depending on a number of criteria to consider for choosing the one that fits reality the best to assess: “The objective pursued according to the type of assessment concerned, the characteristics of the group (eg, ease or difficulty bringing together all workers), the adaptability of the standard procedure for evaluating the sector to analyse and size company “etc. “(National Institute for Safety and Health at Work, 2015: 23-25)”.

On the other hand, it would be interesting to see whether factors are included in the list of psychosocial factors to consider the assessment procedure il includes factors or items relating to temporary asynchrony, mediated communication, physical mobility of workers, the sense of isolation of the worker, the ability to work in different locations, the performance of work in an environment of non-standard work (cafes, hotels, trains, etc.), the constant connectivity of the worker, technological dependence for carrying out the work , etc., since they are some of the peculiarities of these ways of organizing work that should be assessed. If there were no specific items on these issues, you must collect and supplement the information obtained using the procedure standardized of assessment of psychosocial factors chosen using methodological triangulation, ie using complementary quantitative and qualitative techniques.

In the case of the application of additional quantitative methodology, there are several checklists that can guide us on the information to collect. These check list can be found on the document “Institution of Occupational Safety and Health” (IOSH) “(Institution of Occupational Safety and Health. IOSH, 2014: 11)”, the document of the European Agency for Safety and Health at Work (EU-OSHA) “ (European Agency for Safety and Health at Work, 2008: 5-9) “ or document of the Institute of Occupational Medicine (IOM) “(Institute of Occupational Medicine, 2009: 61-72)”.

- In the checklist on the remote work done by the IOSH several useful questions are collected, for example, on the type of communication established with members of the team, how to access the information of the organization, work breaks , etc.
- In the checklist on telework by the EU-OSHA (E-Facts 33), questions concerning the sense of isolation of the worker are collectd, the noise in the work environment, the software used, breaks, scheduling meetings, availability of the teleworker, the balance between professional and private life, etc.
- The IOM in its paper on remote and mobile workers make available to the reader the methodology used in the study in Appendix B (interview with several questions concerning contact with supervisors and co-workers, working time passing outside the home or workplace etc.) and Appendix C (questionnaire with multiple sections, health, physical symptoms, musculoskeletal issues, fatigue and general welfare) of the document.

5. FUTURE SCENES

It seems certain that we are living “changes” in the way of organizing work that tend to make it more flexible (in terms of working time and the organization thereof), to provide greater mobility for workers, delocalize it facilitating the realization work in different locations (home, business customers, traveling, etc.), etc., all of which are reflected in many articles and studies which attest to the importance not only to labour, social and economic level, but preventive level.

The current situation regarding the use of these two forms of work organization is:

Regarding the mobile work based on TIC’s, studies report their recently implementation in some European countries and their consolidation and increase in others, such as Denmark and Hungary”(European Foundation for the Improvement of Living and Working Conditions, 2015: 75) “. From the regulatory point of view, Hungary has specific legislation since 2013 that affects “outworkers”, including them in the Labour Code, and Denmark has legislation on working conditions affecting the mobile work.

As for the nomadic work, according to the V European Survey on Working Conditions of the European Foundation for the Improvement of Living and Working Conditions (Eurofound), 25% of workers in the EU are nomads (ie they are not required to attend daily to their workplace as they have been freed from this bindings that characterizes traditional forms of work organization), which far exceeds the proportion of workers in Finland, with 45% of the total labor force, and in the Netherlands, Sweden and Denmark, with 40%, “(European Foundation for the Improvement of Living and working Conditions, 2012: 95).”

The Eurofound in 2015 deepened on some forms of work that began to take greater importance since 2000 and analysed as based on national contributions, in which European countries data is a form of organization of the emerging work and which aren’t yet. Some of these data reveal, for example, that mobile work based on the use of ICT’s is a form of work is emerging and is being used by workers employed in France, Hungary, Finland etc., in others as Belgium, Cyprus, Portugal, Spain, Sweden, is more used by self-employed and in other countries like Germany, Greece, Norway etc. it is used by both employed and self-employed persons. “(European Foundation for the Improvement of Living and Working Conditions, 2015: 73).”

Reflecting the importance of these forms of work organization, the V European Survey on Working Conditions included some questions about performing tasks in different locations, in the case of question number 25 (of whether the worker should visit buyers, customers, patients, etc. or work from their premises or from home) or question number 26 (on what is the main workplace, the facilities of your company / your own business, facilities of customers, in your own car or other vehicle, in an outer room, the home, other etc.).

As for the possible **future scenarios**, there are several studies that have attempted to make estimates about the possible evolution of these forms of work organization, a key aspect that should be taken into account and that

may favor the increase and consolidations of these forms of work organization is changing the concept of hand work together with the new workforce; the “Generation Y” or “Millennials”, which unlike the previous generation, “Generation X”, are fully familiar with the digital world and the use of ICT’s, perceive workforce development as a state of change and continuous improvement work (discarding the ideal place to stay in one company for life), want to have flexibility in how they organize their work and control over their working and professional life

In general, it should be noted that it is not easy to find studies that provide current data on current situation of the mobile worker as a labour force, but some interesting data have been found on this.

The data provided by the interview conducted by Micropol and the European project to promote ICT’s-based work done in December 2012, cast by the fact that 81% of respondents were aware to work away from the employer’s premises, from home or telecentres. A worth information that shows a clear bias in the preferences of workers to these new forms of work more flexible, which gradually should be covered by companies, resulting in the near future in an increase and consolidation of this way of working “(European Foundation for the Improvement of Living and Working Conditions, 2015: 75-76)”

According to recent research done by the “Information Data Corporation (IDC), it is expected that the number of mobile workers increase, estimating that in 2015 the number of mobile workers would increase by 1.3 billion, with 37.2% of the global workforce and increasing by 300 million since 2010 “(Flexibility.co.uk. Resources For New Ways of Working 2014: 10).”

On the other hand, some of the predictions about what will work be in the not too distant future, based on the opinions of several workers “(Flexibility.co.uk. Resources For New Ways of Working, 2011)” who participated in a survey on issues relating to how they expected them to be the work in 2036, are as follows:

- Mobile workers will increase who will perform their work in several different locations than the workplace the employer, interacting with customers, co-workers etc. via ICT’s, using “the cloud” and the company intranet to store data, using forums, web platforms, etc. to communicate with colleagues and share knowledge and information about the company.

- Greater flexibility in work schedules that end with the rigid schedules of nine to five, making way for the introduction of flexible working hours and self-management of working time.
- Workers shall not remain not seek a job to do for life, “work to live” will be a thing of the past, workers will have several careers and change jobs more easily because they are formed continuously and acquire new skills and concerns. Companies must develop strategies to attract and select talent, commitment and keep their employees happy and working teams working together to achieve a common goal.
- The culture of “continuous availability” of workers will increase, which, improperly managed can lead to increased working hours due to the ease of doing work at any place and time and increased job stress, it is appropriate that the rules to comply the rapid changes in work practices to prevent damage to the health of workers.
- Mediated interaction with peers will increase, reducing face to face interactions. As mentioned, companies must regulate the way that communication is established to avoid isolation, difficulty to sharing knowledge among workers and less chance of social support.

All these data related to mobile and nomadic work suggests that new ways of organizing work are being implemented and developing rapidly, so that from a preventive point of view, it is necessary to adopt a preventive and vigilant position that serves to anticipate emerging risks likely to threaten the safety and health of workers and ensure a balance between safety and health of workers and the flexibility of work organization.

For this reason, the Spanish Security Strategy and Health at Work 2015-2020 believes that it will be important “study emerging risks, their causes and impact on the safety and health of workers, particularly those derived from new technologies” “(National Institute for Safety and Health at Work - INSHT, 2015: 31). Hence the importance of analysing some of these forms of work organization and psychosocial risk factors that the worker may be exposed to and the interest in conducting this article.

BIBLIOGRAPHY

Aaltonen. L., et al. (2012). State-of-the-Art Report on Knowledge Work. New Ways of Working. VTT Technical Research Centre of Finland.

Axtell, C. (2011). The Well-being of the Mobile Workforce. Institute of Work Psychology, the Management School, University of Sheffield, UK. iPass Inc.

Benavides, F., Gimeno, D., Benach, J., Martinez JM, Jarque, S., and Berra, A. (2002). Description of psychosocial risk factors in four companies. *Gaceta Sanitaria*, 16, 222-229.

Berg, Or. (2013) .The six pillars of the new digital workplace. <https://blog.zyncro.com/2013/11/05/los-6-pilares-de-nuevo-lugar-de-trabajo-digital/>

Blatt, K., J. Gallager (2013) “Mobile Workforce.: The Rise of the Mobilocracy “. *Global Mobile: Applications and Innovations for the Worldwide Mobile Ecosystem*. New Jersey Information Today, Inc.

Corso, M., Martini, A., Pellegrini L. (2006). “Knowledge Sharing in Mobile Work”. *Mobile Virtual Work. A New Paradigm?*. Berlin. Springer

European Agency for Safety and Health at Work. (2008). E-FACTS 33. Risk assessment for teleworkers.

“(European Foundation for the Improvement of Living and Working Conditions, 2012: 73).” V European Working Conditions Survey. Luxembourg

European Foundation for the Improvement of Living and Working Conditions. Mandl, I., Curtarelli, M., Riso, S., Vargas, O., Gerogiannis, E., (2015). New forms of employment. Luxembourg

Flexibility.co.uk. Resources For New Ways of Working. (2013) .What’s in a name ?. [Http://www.flexibility.co.uk/flexwork/general/defining-smart-flexible-working.htm](http://www.flexibility.co.uk/flexwork/general/defining-smart-flexible-working.htm) <http://www.flexibility.co.uk/flexwork/general/defining-smart-flexible-working.htm>

Flexibility.co.uk. Resources For New Ways of Working. Lake A., Dwelly T. (2014) .An Exploration of What the Future of Work Means for Business, Society and Public Polic. It’s work but not as we know it “. [Http://www.flexibility.co.uk/ItsWorkBut/Its-Work-But-Not-As-We-Know-It--FinalReport.pdf](http://www.flexibility.co.uk/ItsWorkBut/Its-Work-But-Not-As-We-Know-It--FinalReport.pdf) <http://www.flexibility.co.uk/ItsWorkBut/Its-Work-But-Not-As-We-Know-It--FinalReport.pdf>

Flexibility.co.uk. Resources For New Ways of Working. (2011) .The Workforce in 2036. <http://www.flexibility.co.uk/flexwork/general/office-angels-2036.htm><http://www.flexibility.co.uk/flexwork/general/office-angels-2036.htm>

Golden, T, D., Veiga, JF, Simsek, Z. (2006). “Telecommuting’s Differential Impact on Work-Family Conflict: There Is No Place Like Home? “. *Journal of Applied Psychology*, Vol 91 (6).

Helle, M. (2006). “New Forms of Work in Labour Law”. *Mobile Virtual Work. A New Paradigm?*. Berlin. Springer

Hiltraut Paridon, H., Hupke M. (2009). “Psychosocial Impact of Mobile Telework: Results from an Online Survey”. *Europe’ s Journal of Psychology* 1/2009.

Hemp, P. (2009). “Death by Information Overload”. *Harvard Business Review*. <https://hbr.org/2009/09/death-by-information-overload><https://hbr.org/2009/09/death-by-information-overload>

Hesketh I., Cooper C, L. (2014). Leaveism at Work. *Occupational Medicine* 64: 146-147.

Hyrkkänen, U., Putkonen, A., Vartiainen, M. (2007). “Complexity and Workload in Virtual Work Environments of Mobile Work”. *Ergonomics and Health Aspects*. Berlin. Springer

Inspectorate of Labour and Social Security (2012). Guide Proceedings of the Inspectorate of Labour and Social Security on psychosocial risks. Madrid.

Institute of Occupational Medicine. Crawford, J, O., MacCalman, L ., Jackson, C. A. (2009). “The Health and Wellbeing of Remote and Mobile Workers”. Research Report 603-00911.

Institution of Occupational Safety and Health. IOSH. (2014). “Out of site, out of mind. Managing remote working “. United Kingdom.

National Occupational Safety and Hygiene Institute (INSHT). (2012). Prevention Technical Note 926 “Psychosocial factors: evaluation methodology”.

National Occupational Safety and Hygiene Institute (INSHT). (2015). Some guidelines for assessing psychosocial risk factors (expanded edition 2015) .Madrid.

National Occupational Safety and Hygiene Institute (INSHT). (2015) Spanish Security Strategy and Health at Work 2015-2020.

Makoto, N., Mark, G. (2008). Designing for Nomadic Work. University of California.

Morales Varas, G., Romanik Foncea, K. (2011). Current Employment Report No. 1. A look at the figure of telework. Directorate of Labour Government of Chile

Perry, M., Sellen, A., O’Hara, K., Harper, RHR (2001). “Dealing with Mobility: Understanding Access Anytime, Anywhere “. *ACM Transactions on Computer-Human Interaction, Vol. 8. No. 4.*

Salanova, M. (2007). “New technologies and new psychosocial risks at work”. *Digital magazine health and safety at work, no. 1.*

Schmidt, L., Holger, L. (2006). “Model-based Design of Mobile Work Systems”. *Mobile Virtual Work. A New Paradigm?*. Berlin. Springer

The European Framework for Psychosocial Risk Management “. PRIMA-EF (2008). Guidance on The European Framework for Psychosocial Risk Management “. A Resource for Employers and Worker Representatives. Switzerland Protecting Worker’s Health Series No. 9.

Vatiainen, M. (2006). “Mobile Virtual Work-Concepts, Outcomes and Challenges”. *Mobile Virtual Work. A New Paradigm?*. Berlin. Springer

Vartiainen, M., Hakonen, M., Mannonen, P., Mika P., Virpi Ruohomäki, V., Vartola, A. (2007). Distributed and Mobile Work - places, people and technology. Helsinki University Institute of Technology.

<http://www.revista.unam.mx/vol.10/num11/art79/int79.htm> - aZambrano Martínez, F. (2009). “ICTs in our social sphere”. Unam.mx Magazine Digital Magazine University, Vol. 10 No.11. <http://www.revista.unam.mx/vol.10/num11/art79/int79.htm> <http://www.revista.unam.mx/vol.10/num11/art79/int79.htm>



**PSYCHOSOCIAL RISKS OF INTENSIVE USERS OF ICTs. Analysis
based on data from the VII National Survey
of Working Conditions. 2011.**



Francisco Javier Pinilla García

PhD in Sociology

National Institute of Safety and Health at Work Research Coordinator

SUMMARY

1. ICTs at the centre of the debate on the model of society and work.

2. The consequences of using icts on how to work

3. ICTs usage in Spain

4. Exposure to psychosocial risk factors of ICT users

5. Work-related discomfort

6. Conclusion

Abstract

This article is dedicated to providing quantitative data on the extent and relationship between the use of the computer tool and certain dimensions of occupational hazards, in particular psychosocial risks. Previously we discuss the positions that the scientific literature has been defending, especially regarding the influence of technology on employment and on current forms of work. The following is an increasing use of this tool in Spain. It establishes a comparison of the exposure of intensive users with those that are not. It describes the demographic characteristics and conditions of employment of this group, showing its privileged situation within the framework of an increasingly degraded labour market. He noted the special and high incidence of psychosocial risks among the intensive users, in particular the indicators related to work intensification. Finally it shows the health cost and the difficulties to sustain for a long time a system of work so demanding.

1. ICTs at the centre of the debate on the model of society and work.

In the last decades substantial changes have been happening in the field of work. The most visible ones have been those affecting access regulation and maintenance of job. However, other changes, partly influenced by those forementioned changes, have had repercussions on the content of tasks for a large proportion of workers. In this respect, two types of changes have had a special impact. On the one hand, the increasing use of tools based on information and communication technologies in work activities and, on the other hand, changes in the way of organizing work. These are not temporally coincident changes but are strongly intertwined

The decade of the eighties and nineties of the last century was prodigal in deterministic prophecies about the world of work. Interpretation of observable changes then gave rise to a number of reflections on its nature, which focused on two interlocking processes, technology as an activator and the globalization of markets as a feedback framework for the process, requiring a continuous innovation in the forms of producing and competing on a global scale for both countries and for the companies themselves and their employees. In this endless career, the profound transformations in the technology used in labour activities constitute a particularly powerful vehicle for change, making possible and encouraging other organizational changes in the context of companies, unthinkable without their competition. It is the “network company” that Castells (1996) imagined twenty years ago and serves as a framework on which the “network society” is woven as a dominant form of social organization in our time. Within the framework of the labour process, it allows both the emancipation of the “chains” that tie the “white collar” worker to his office table, allowing him an undeniable autonomy, as well as, on the contrary, subjecting him to new forms of

control through the obligatory use of mobile devices, thus giving rise to an ambivalent effect of freedom and control that characterizes in particular the increasing proportion of teleworkers (Pinilla. 2011)

Nowadays, fascinated by the miraculous technological benefits that happen constantly, it is very difficult not to succumb to a renewed technological determinism. To think that almost everything that we know is changing or will change radically soon, and that these changes are going to be mostly negative (techno-pessimists), or on the contrary liberators of humanity (techno-optimists), constitute a debate today that is not new, but if renewed to the rush of what some point out as the imminent fourth industrial revolution. For some these transformations will generate net employment, although affecting in a differentiated way since some professions will win and others will lose (WEF. 2016) while for others the balance will be net of job destruction (Frey and Osborne: 2013).

But if the debate on the number of foreseeable jobs is certainly relevant, it is none the less the quality. In this respect, current concerns go through the consequences of the so-called “platform economy”, in particular the so-called “crowdworkers” as the digital slaves (Degryse, 2016). These labour figures certainly seem to announce a gloomy future in which refers to the status, salary, and general working conditions of the “Taylorists” of technological enterprises (Irani, 2015).

However, digital technology and its development are not just a fear of the future but, in the world of work today, a universal reality. The use of computer equipment has expanded, conquering a multitude of occupations and branches of activity, thus becoming, at the beginning of the century the work tool most frequently employed by most of the Spanish employed in the services sector and by a large proportion of industrial workers (Pinilla. 2015:168).

2. The consequences of using ICTs on how to work.

Frequent use of computers has modified the way of working and the physical and mental requirements of the task in a multitude of occupations. The “work tool” is a fundamental component of occupational risk. Thus, tasks performed with hand tools are mainly associated with accidents, and efforts, while working with computers is with uncomfortable postures and ergonomic and psychosocial risks.

However, the use of information and communication technologies (ICTs) should not be understood from a deterministic approach, since their consequences are different depending on the use they make of them. These are not “diabolic

machines or fabulous tools, ICTs are revealed above all as instruments at the service of organizational objectives that they contribute to achieve.” It is true that “they allow a control and a measure of work to levels of sophistication unsuspected,” so they are “strongly embedded in the strong trends that characterize the organization of work today: flexible management of labour, time, processes and human intervention at work “(Vendramin. 2006: 129). And this is because the common elements to all current organizational transformations are control of costs and particularly variable costs associated with labour. But in addition, other recurring goals refer to flexible management in all its forms, the preponderance of the “king” client, the goal of total quality, and more precise time management. “ICTs are at the service of zero stock, zero delay, zero defect strategies, are equally applied to labour and contribute to increasing the burden, rhythms and density of work” (Vendramin. 2006: 130).

ICTs provide the technical substrate for a more precise adjustment of manpower needs. For example, in the trade the development of the barcode of the products allows to know in advance the frequencies of presence of customers and to adapt the number of operators necessary (Prunier-Poulmaire. 2000: 30). Thus, manpower needs are calculated as closely as possible and there is no room for manoeuvre to manage contingencies, contingencies or to develop skills or innovation (Vendramin. 2006: 130). Also in other more qualified service activities ICT plays a facilitator role of the extension of opening hours and permanent accessibility in a 24-hour society (Lopez and Pinilla. 2006). Likewise, they allow the organization of remote work by blurring the boundaries between time and professional and private space (Pinilla. 2011).

And it is that the ICTs allow an implacable measure of the work as before was almost impossible, thus making the work more visible for the executives. Taylor’s dream finally fully realized. Computer systems and networks allow continuous analysis and collection of a large amount of information on how workers perform their tasks. All these computer control systems are a source of stress. The work is placed under high surveillance. “ICTs control time, tasks and produce a battery of indicators on the work of each. They put the worker in a situation of unprecedented control and dependency while all this is hidden under the discourse on autonomy and responsibility at work.” “This obsession with the measure is linked to the organization “just in time”. The objective is the maximum benefit fighting dead time between two operations and against the porosity of working time. But this obsession of the measure has some dysfunctions, since the prescribed work does not correspond exactly with the real one, the unforeseen, the dysfunctions, the bad estimates or simply the changing character of the activities come to break the pressures and to disturb the planned development of the operations” (Vendramin. 2006: 132).

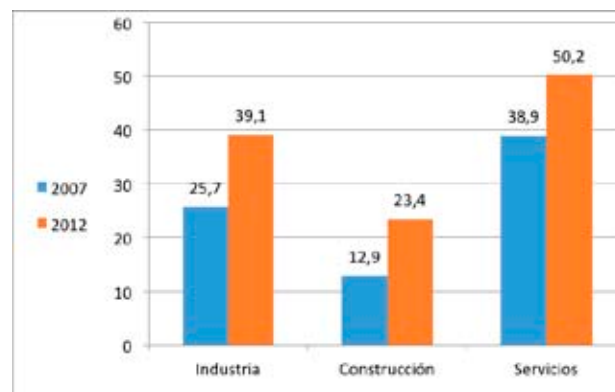
This way, it makes it possible to multiply the tasks to be developed, speeding execution times, reducing downtime, ICTs are accomplices of an increase in the workload for a large number of workers, by facilitating changes in work organization and in How to use the human factor.

To this must be added the very nature of working with ICTs. The worker works with a representation of reality on the computer screen; a simulation of reality that every day becomes more abstract and complex. To this growing abstraction, ICT work adds an informational overload (Vendramin, 2006: 133). The information overload comes from the multiplicity of sources (email, groups, forums, etc.), which results in the mixing of meaningful and insignificant information and, in addition, the need to be accessible at all times. Consequently, increased mental load seems inevitable.

3. ICTs usage in Spain

The computer tool as the main instrument of work has been consolidated for a large part of the employed in Spain (Pinilla 2015) The tasks that involve frequent use has grown in a short space of time, significantly in the three productive sectors, including those in which manual labour continues to be the essence of the activity (Figure 1).

Figure 1 Workers that use computers and other information technologies by sector. Evolution 2007-2012 In %.



Source: Surveys of Working Conditions VI and VII. INSHT

Base: Non-farm wage earners 2007 n= 10480, 2012 n= 8431. Answer Categories: "Always or almost always" and "often".

Our objective is to provide quantitative data on the extent and the relationship between the use of the computer tool and certain dimensions of occupational hazards. For this we will use the information from the National Survey of Working Conditions prepared by INSHT. These constitute the most rigorous, reliable and complete source of information on the state and evolution of working conditions in Spain. Made with a periodicity of between three or four years, they make it possible to describe and show the changes in many dimensions of working and employment conditions. In addition, specific analyzes allow to establish hypotheses regarding the relationship between different variables. In this article we will show these relationships between the frequent use of technological tools of information and communication and the psychosocial conditions and risks of work.

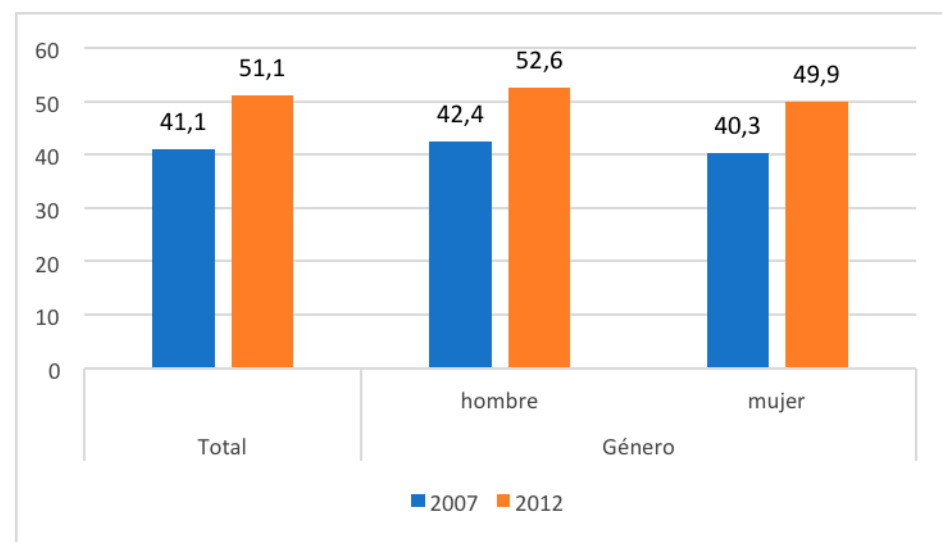
The last available edition of this survey is the VII whose field work was carried out between the years 2011 and 2012. We will refer to practical effects to the year 2011 by citing in graphs and tables the data of this survey.

Figure 1 shows the Services sector as the most salaried employees use computer tools with high frequency in the development of their tasks. Therefore, in the following analyzes we will focus on this unique sector of activity, creating a subsample with the micro data of the VII ENCT. It includes 5362 interviews. In turn this sample has been segmented into two categories using the answers to question 30.8 of the questionnaire of the VII ENCT. One of them, which we call "intensive users", includes all employees in the Services sector whose job requires "working with computers: PCs, networked computers, central computers, etc." with a frequency of "always or almost Always" and "often". The choice category is that of those who answer that question showing the other frequencies that refer to a sporadic use or non-use of those computer tools. To those included in this category we qualify them, in order to differentiate them clearly from the previous one, as "non-users". In the first group, there were 2,738 interviewees (51%) and 2,623 (49%) non-users.

The analysis will show the differences between both groups regarding the frequency of exposure to selected indicators related to the psychosocial conditions of work and health problems revealed.

Comparing with the results of the previous survey of 2007 and with a similar sample size, the rapid growth of the proportion of employees in the Services sector who use ICTs intensively in the performance of their tasks is observed. (Figure 2). In addition, it is noteworthy that this growth is balanced in both sexes. In this way, it seems that there is no gender gap in this collective.

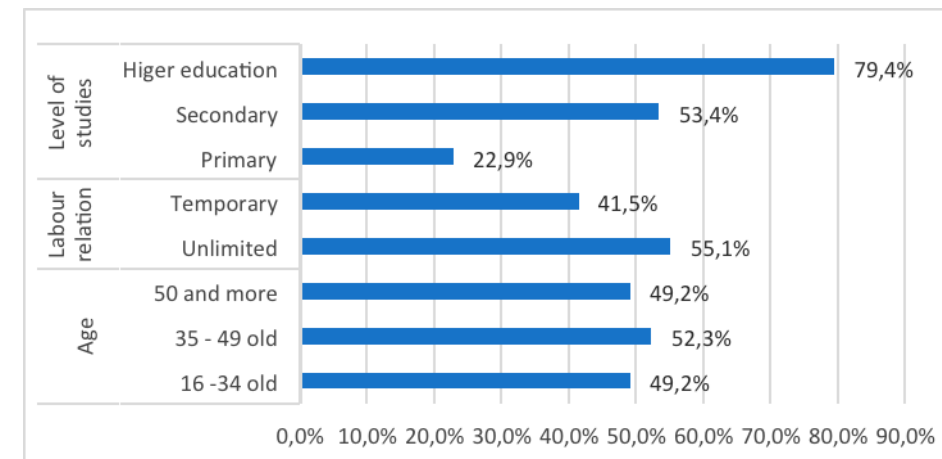
Figure 2. Intensive users. Evolution 2007-2011 In %



Source: Surveys of Working Conditions VI and VII. INSHT
Base: Employees of the Services sector, 2007 n= 5800, 2011 n=5362.
Answer Categories: "Always or almost always" and "often".

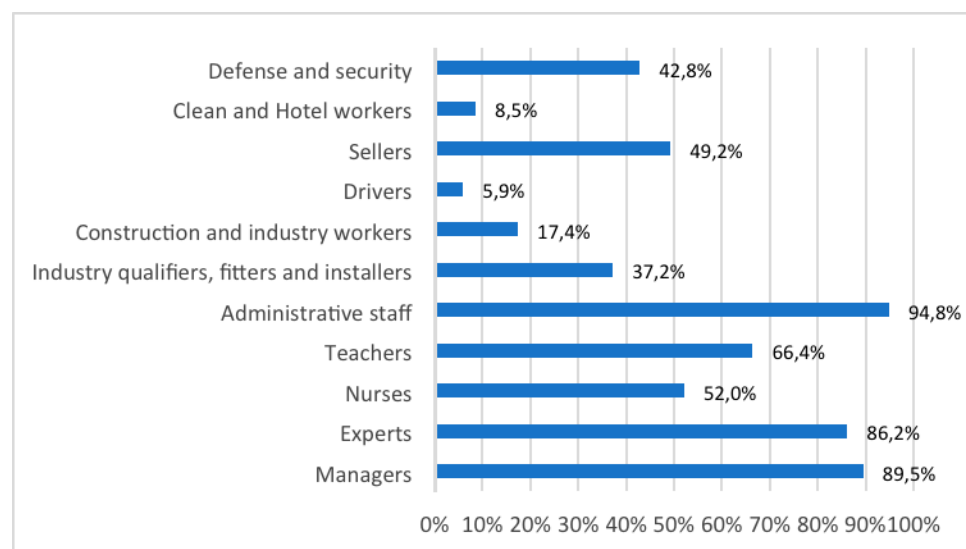
As with gender, there are no significant differences in the age of intensive users. There are any in relation to the level of studies. Eight out of ten workers with higher education have an intensive use of ICT, by only 23% of those with primary education. There are also differences regarding the type of employment relationship of these employees. The use of these technologies is less frequent among times (Graph 3)

Figure 3. Sociodemographic characteristics of intensive users. 2011



Base: Employees in the Services sector, n=5362.
Within the wide range of occupations included in the Services sector, those grouped under the concept of manuals are the ones that are represented to a lesser extent in the intensive user group (figure 4).

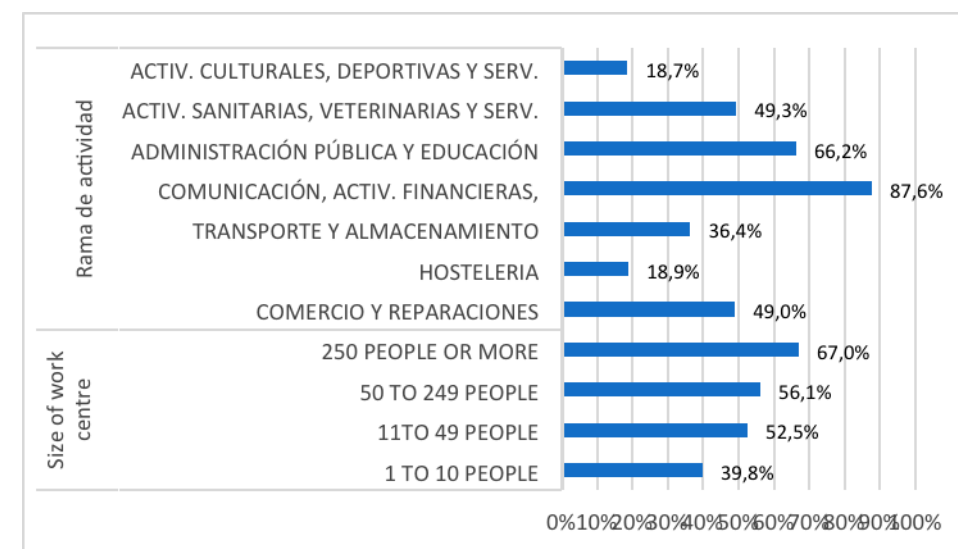
Figure 4. Intensive users by occupation. 2011



Base: Employees in the Services sector, n=5362

Communication, financial and assimilated activities, as well as those of public administration and education are the most frequent intensive use, while in the hospitality and cultural and sports activities we find the lowest percentage. There are also significant differences between the largest and smallest work centres (Figure 5).

Figure 5. Intensive users by activity and work center template size. 2011



Base: Employees in the Services sector, n=5362

As for the conditions of employment, the situation of the intensive users can be described as privileged, compared to the other group. These are characterized by a lower rate of temporary nature, bias, including undesired, lower proportion of dependence on subcontracts and a higher hierarchical level in the workplace (Chart 1)

Chart 1 Conditions of employment of non-users and intensive users. 2011. In %

| | INTENSIVE USER | NPN-USER |
|---|----------------|----------|
| Temporary contract | 15 | 23 |
| Without registration in Social Security | 0.5 | 7 |
| Part-time job | 11 | 22 |
| “Non-desired” part-time | 5 | 13 |
| Work in a subcontracting company | 2 | 6 |
| Supervisory or Headquarters | 20 | 6 |

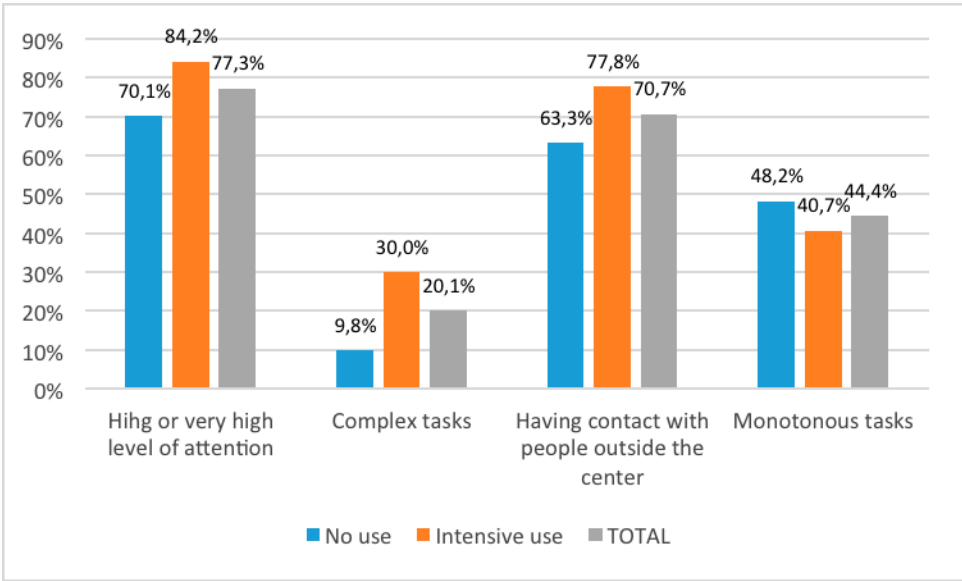
Base: Employees in the Services sector, n=5362

4. Exposure to psychosocial risk factors of ict users.

Indicators have been selected concerning the content of the tasks, the intrinsic motivation and the learning that they facilitate, the factors that cause work intensity and the determinants of the rhythm, the team work, as well as the level of autonomy that is available at work.

The content of tasks of the intensive users shows significant differences in the higher level of attention and complexity of the tasks that they execute, motivated by that level of abstraction that supposes the work with computers. However it is striking that it is in this group also where they accumulate significantly more tasks of attention to public. This entails adding a source of pressure to the pace of work that can translate into a greater mental burden. On the other hand, there are also significant differences in the monotony and repetitiveness of the task, although in this case favorable for the intensive users (figure 6).

Figure 6. Content of tasks. 2011.

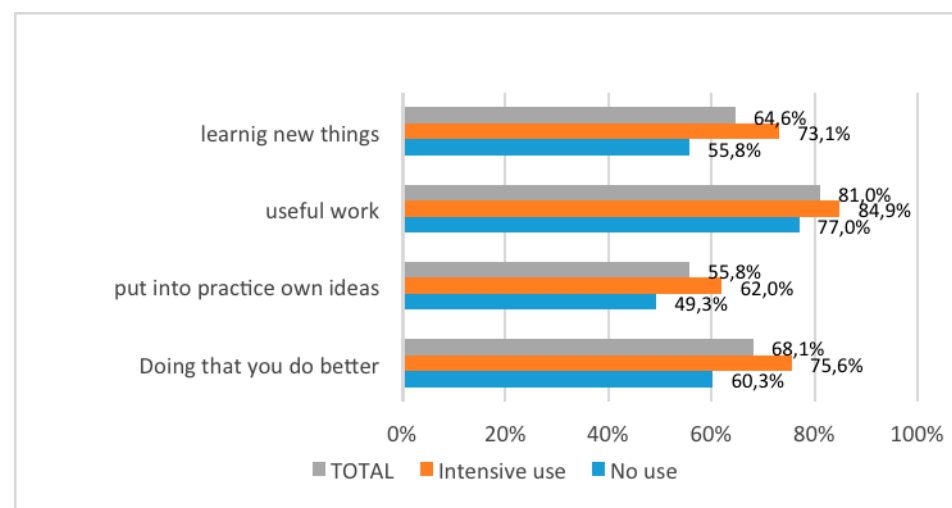


Base: Employees in the Services sector, n=5362.
 Answer Categories: “Always or almost always” and “often”.

A job that promotes lifelong learning is not only a source of well-being and satisfaction, but also a greater guarantee of employability in the face of a possible loss of employment. Also in this case the company benefits from an increasingly qualified work (Eurofound 2013).

Therefore, work among intensive users reaches higher levels than non-users in terms of allowing their work to “learn new things” (73%), adapts to their qualifications (76%), allows to “put into action their own ideas” (62%) and finally, the perception of the usefulness of the work they do (85%), (Figure 7).

Figure 7. Continuous learning and motivation. 2011.



Base: Employees in the Services sector, n=5362
Answer Categories: "Always or almost always" and "often".

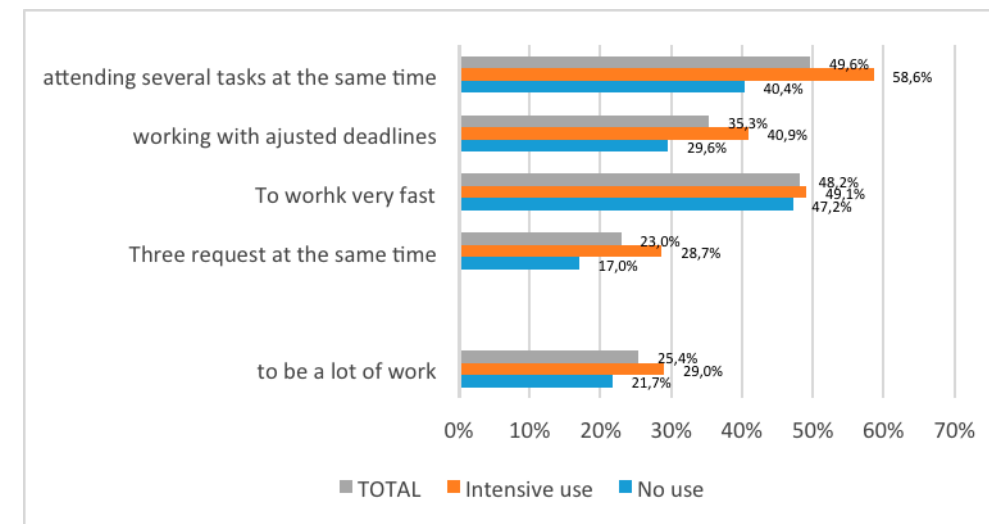
A key indicator of the consequences that the changes produced since the end of the last century have in the manner of work is the one related to the process of intensification of the work. The intensity of work seems to have grown almost constantly in most countries and, as we have seen, a common suspect in explaining this phenomenon is the use of information and communication technologies.

The intensity of the work is difficult to measure (Pinilla, 2004). The survey provides two indicators that characterize the level of subjective intensity felt by the worker. Both relate to the time dimension: perception of having to work at high speed, and to do so to meet tight deadlines. In addition, another relevant indicator that measures the degree of intensity is the one that refers to the need to provide "attention to several tasks at the same time", characteristic of activities of attention to the public with a permanent availability, or of those labor organizations that live in permanent urgency (Askenazy, 2009: 21)

In these three indicators the intensive user worker reaches high percentages, in particular in the latter to attend several tasks. It is also significantly superior in terms of working with tight deadlines, but there is no difference in working at a high pace.

A combined exposure of three factors is imposed on 29% of intensive user workers, the same percentage of those who complain of having too much work and feeling overwhelmed by it (figure 8).

Figure 8. Intensity of work 2011.

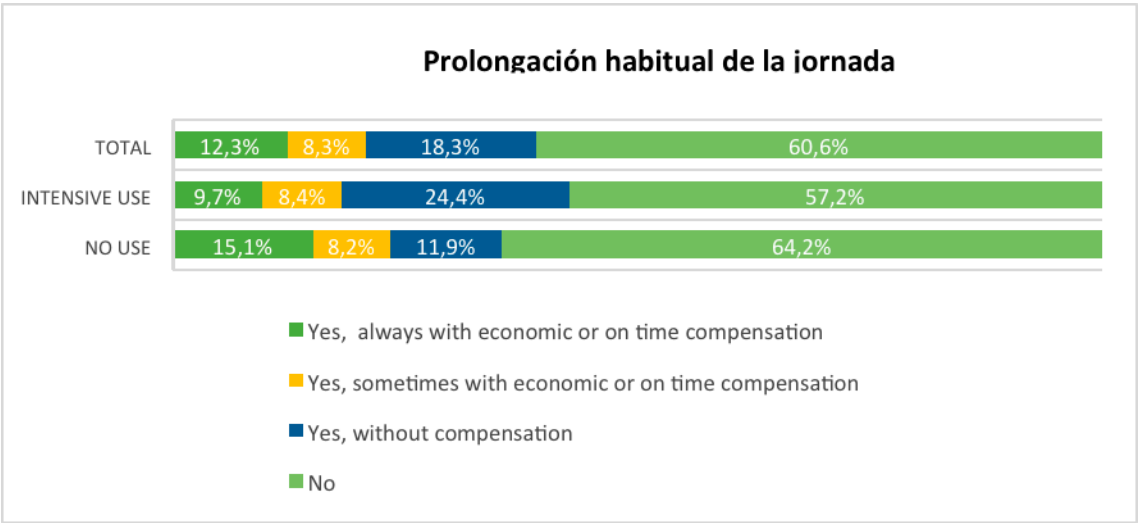


Base: Employees in the Services sector, n=5362
Answer Categories: "Always or almost always" and "often".

Excess work is often the most frequent justification for not respecting the legal or conventional limits of the length of the work day. 43% of the intensive users usually prolong their day. And almost a quarter of the total does so without being compensated either economically or in time of rest. Both percentages are significantly higher than those of

non-users. These circumstances in any case suppose an extra effort that is not always possible to maintain over a long time without manifesting symptomatology of disease

Figure 9. Common prolongation of the working day and compensation. 2011



Base: Employees in the Services sector, n=5362.

To the manifestation of the workers to work to a high rate, with strict deadlines to fulfill and attending to diverse tasks at the time, we can call it of intensity felt or subjective. Subjective, not in a disqualifying sense of the term, as if they were fickle opinions or states of mind, but to be able to differentiate them from those other indicators that have even more marked their objective nature, as external to the feeling that has the worker himself. These other indicators of the intensity are those relative to the sources that determine the rhythm with which one works, whether it is perceived as intense or not by the one executing it.

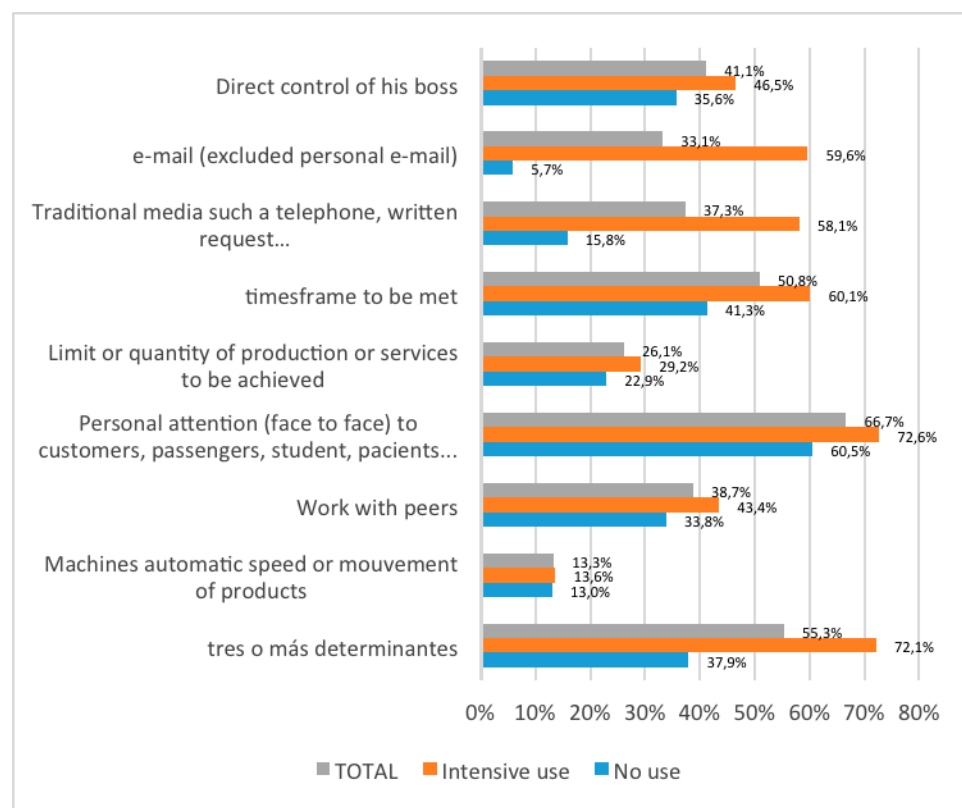
The forms of imposing a pressure on the rhythms are very varied and has to do with the specific organization of the work chosen in each company and this, in turn is conditioned by the type of product or service to be rendered. In the 2011 survey, the options on which the respondent is questioned in a multiple-choice question are the following:

- Automatic speed of machines or mouvement of products.
- The work of peers
- Personal attention (face to face) with clients, passengers, students, patients, etc.
- Limit or quantity of production or service to be achieved
- Timeframes to be met
- Traditional media such as telephone, written requests, etc.
- Email (excluding personal emails)
- Direct control of the boss

Some workers are dependent on technical devices, others on technical organization rules and others dependent on the social organization of work (control).

Well, in all of them except the one related to the “automatic speed of machines or displacement of products” significantly affect the intensive users. Emphasizes the high percentage of intensive users whose work pace is determined by personal attention, deadlines, e-mail and telephone and other administrative means. Thus, it is not surprising that those who accumulate three or more determinants of their rhythm are almost one in four of this group, (Figure 10)

Figure 10. Determinants of work rate. 2011.

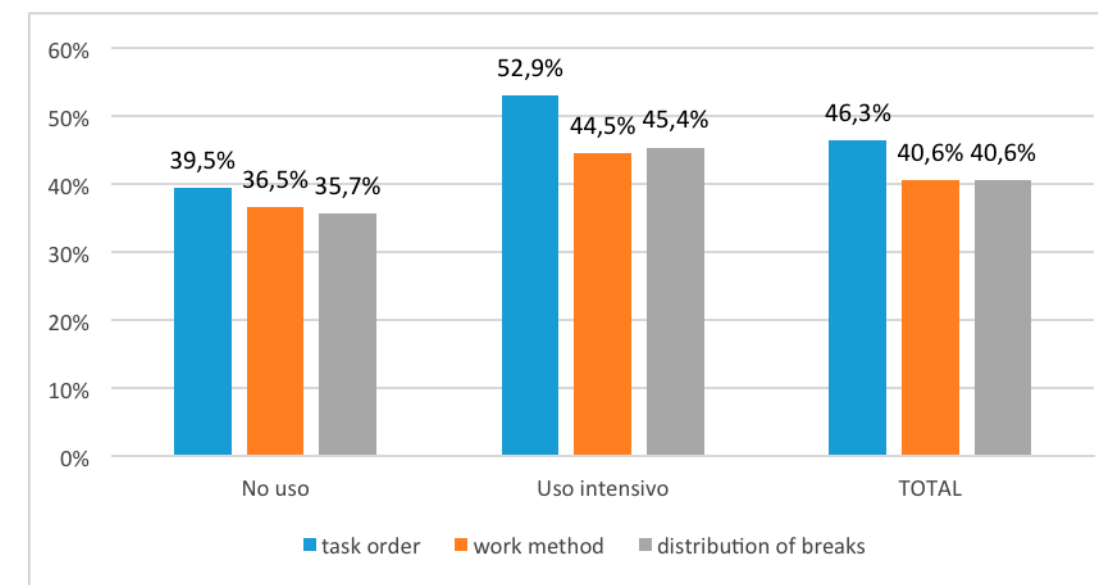


Base: Employees in the Services sector, n=5362

Thus, intensive users seem to accumulate in greater proportion than non-users several job requirements: speed in the execution of the task entrusted, having to meet increasingly strict and short deadlines and doing several things at the same time, while controlling the rhythm externally by several conditioning factors. But is there a correspondence between the demands that are increasingly received by workers and the means at their disposal to

achieve them? In the most influential theoretical models for analyzing work stress (the Karaseck model in particular), the return to the demands is the degree of autonomy that the worker can have to control his task. By autonomy, we refer to the degree to which work leaves freedom and independence to the individual to organize the task and to determine the methods that should be used to execute it. The degree of control or autonomy of the worker can be measured related to the possibility that the operator has to modify the order of execution of the tasks, the working method and even the rhythm of the task, as well as through the possibility of taking breaks autonomously, when everyone considers it necessary, to reduce the accumulated fatigue and to be able to resume the task in acceptable conditions. In this respect, a greater percentage of intensive users enjoy autonomy than those who are not. But, in any case, we should not ignore the fact that, on average, there are more users who have no autonomy than those who do have it (figure 11)

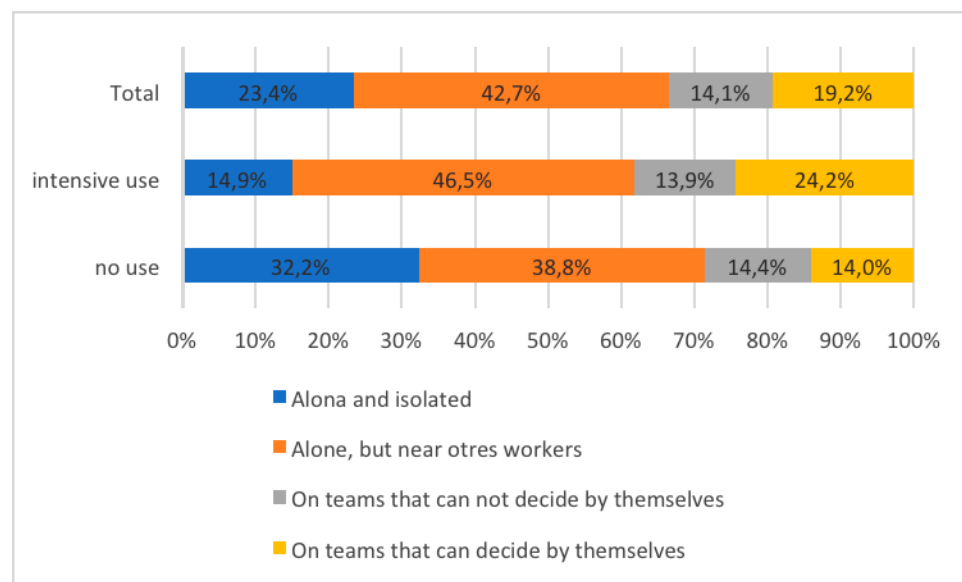
Figure 11. Autonomy at work. 2011.



Base: Employees in the Services sector, n=5362

The process of intensification of the work we have indicated coincides in time with the increase of organizational flexibility practices in the Spanish labor market and the implementation and development of the employment of teamwork as a fundamental tool of the new management. Teamwork has become the central element of a way of organizing work, considered both more productive and more satisfying and qualified. (Eurofound, 2007). However, this type of work has also been associated with more demanding work, even when the team enjoys some freedom or organizational autonomy (Capelli and Rogovsky, 1994: 236). An intensive use of ICTs also discriminates against this organizational form. In particular, the presence of workers in “autonomous teams” is much greater in deciding the division of tasks among its components (figure 12).

Figure 12. Work situation. Characteristics of “teamwork”. 2011

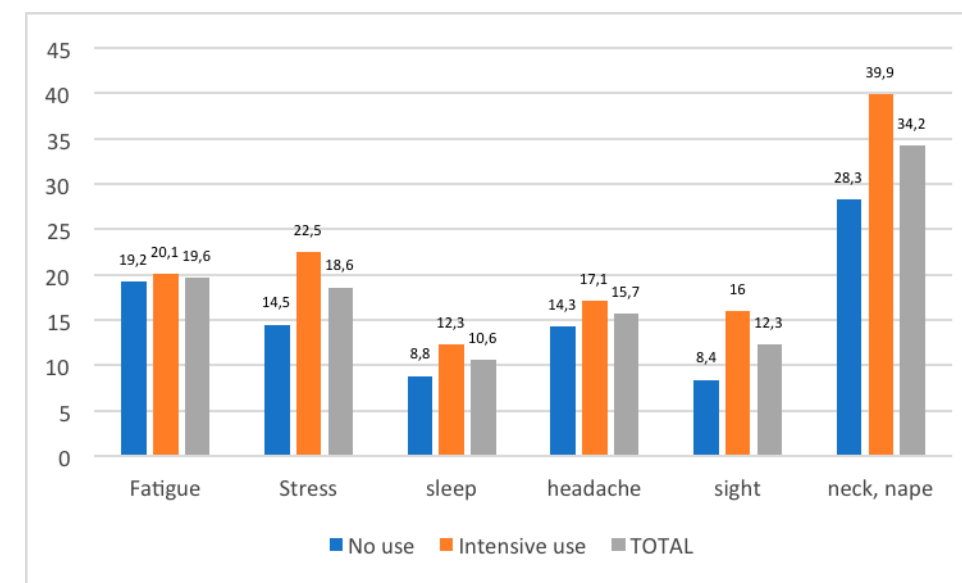


Base: Employees in the Services sector, n=5362

5. Work-related discomfort

The indicators that we have been showing shape the work of ICT intensive users as particularly exposed to important demands and a high workload, which due to the nature of the activity, information processing, is fundamentally mental. The process of intensification of work that we have indicated coincides in time with the increase of the practices of organizational flexibility in the Spanish labor market, and the implementation and development of the employment of teamwork as a fundamental tool of the new management. The analysis of the discomfort manifested by the workers confirms the expected relationship. Thus, the main annoyance is the musculoskeletal located in the neck, never, caused by the work posture and immobility maintained in front of the screen. Stress is indicated by almost one in four intensive users. The rest of the symptoms (except fatigue) also discriminate against these workers vis-à-vis non-users (figure 13).

Figure 13. Major work-related discomfort



Base: Employees in the Services sector, n=5362

6. Conclusion

The use of ICTs has been expanding in all sectors of activity. Its expansion became the main working tool of the service sector workers in a good number of occupations. However, while it is true that changes in the technological equipment of companies must be considered as the main ones, or at least the most visible sources that activate the processes of change in the way of working, they do not explain, however, by themselves the transformations in the work processes. Its use does not impose but it facilitates to experiment with new ways of working, as is the case of teamwork, distance or outside of conventional working hours, among others. In this sense can be accused of complicity in the processes of change that are experiencing workplaces.

Users who have been called intensive workers have a much higher level of education than the average of workers in the sector and, to some extent, enjoy more satisfactory conditions of employment. They also benefit from a more creative and satisfying job content, but another thing to say about working conditions, in particular some psychosocial risk factors. Most work intensity indicators clearly show the highly demanding nature of these tasks, the wide variety of sources of work pressure that affect them, and the frequent and unregulated extent of the work day. It is true that they enjoy a greater degree of autonomy, due to their position higher than the average in the hierarchy of companies. However, even in this respect, there are more those who do not have autonomy than those who do.

Finally, health consequences point to the cost of such demanding working conditions, both in terms of physical and mental damage.

In summary, it is true that, in terms of employment conditions, ICT intensive users can now be considered as privileged in an increasingly degraded labor market. However, the very demanding (precarious) working conditions to which they are exposed today constitute a serious threat of accelerated wear and tear of their health which can predictably condition their future employment expectations. These are the precariousness of the present working conditions of this group can be generates of precariousness in the employment, and of exclusion with the passage of time when the “work wear” leaves its imprint in its state of health.

BIBLIOGRAPHY

Askenazy, Ph (2009) *Los desórdenes del trabajo. Investigaciones sobre el nuevo productivismo*. Modus Laborandi.

Capelli, P y Rogovsky, N. (1994). “¿Qué calificaciones requieren los nuevos sistemas de trabajo?” en *Revista Internacional del Trabajo*. Nº 2. O.I.T. Ginebra.

Castells, M. (1996). *La era de la información. Economía, sociedad y cultura. Vol 1. La sociedad red*. Alianza editorial.

Degryse, C. (2016). *Digitalisation of the economy and its impact on labour markets*. Working Paper 2016.02. Brussels: European Trade Union Institute.

Eurofound (2007) Teamwork and high performance work organisation. Publications Office of the European Union, Luxembourg . (Publicación electrónica) http://www.eurofound.europa.eu/sites/default/files/ef_files/ewco/reports/TN0507TR01/TN0507TR01.pdf

Eurofound (2013) *Work organization and employee involvement in Europe*, Publications Office of the European Union, Luxembourg.

Frey C.B. and Osborne M.A. (2013) *The future of employment: how susceptible are jobs to computerisation?*, Oxford Martin School Working paper, Oxford, Oxford University.

Irani L. (2015) *Justice for ‘data janitors’*, Public Books, 15 January 2015.

<http://www.publicbooks.org/nonfiction/justice-for-data-janitors>.

López Peláez, A., y Pinilla, J. (2006). “Condiciones de trabajo, flexibilidad y riesgos laborales en la economía tecnológica avanzada: el trabajo rotatorio a turnos y nocturno en la Comunidad de Madrid”, en *Sociología del Trabajo*, UCM, nº 57, 30-59.

Pinilla, J. (2004) “Intensificación del esfuerzo de trabajo en España”. *Cuadernos de Relaciones Laborales*. UCM. 22 N° 2.

Pinilla, J. (2011) “Teletrabajadores. Efectos contrapuestos de la flexibilidad” *Abaco. Revista de cultura y ciencias sociales*. nº 67,39-48.

Pinilla, J. (2015): “Evolución de las condiciones de trabajo en España” *20 años de la Ley de prevención de Riesgos Laborales*. UGT.

Prieto, C. (2002). “La degradación del empleo o la norma social del empleo flexibilizado” en *Sistema* n°s.: 168-169. Julio, 89-106.

Prunier-Poulmaire, S (2000). “Flexibilité assistée par ordinateur”. *Actes de la recherche en sciences sociales*. Vol 134, 29-36.

Vendramin, P (2006). “Les TIC, complices de l’intensification du travail”. *Organisation e intensité du travail*. Askenazy, Ph Cartron, D. de connick, F. y Gollac, M. Octares.

World Economic Forum, *The future of Jobs. Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution, 2016* <http://reports.weforum.org/future-of-jobs-2016/>



Prototypical factors
and pathologies
and their prevention

2



WORKPLACE STRESS: A COLECTIVE CHALLENGE



OIT

Summary

1. Introduction

2. The protection of mental health at work

3. What is the impact of stress in the working population?

- 3.1. The magnitude of the problem
- 3.2. Impact on workers health, safety and wellbeing
- 3.3. Prevalence
- 3.4. The gender dimension
- 3.5. Impact on productivity and economic costs of work-related stress and associated mental health disorders

4. What is the existing legal framework on work-related stress and mental health at work?

- 4.1. International labour standards
- 4.2. Regional standards
- 4.3. National legislation
- 4.4. Employers' responsibilities and workers' rights
- 4.5. Workplace violence
- 4.6. Inclusion of workrelated stress and mental disorders in national lists of occupational diseases
- 4.7. Non-binding technical standards on psychosocial risks prevention and management
- 4.8. Social partners' agreements
- 4.9. Labour inspection

5. Strategies for the prevention and management of psychosocial hazards and risks

- 5.1. International organizations
- 5.2. Regional organizations and institutions
- 5.3. National strategies and initiatives
 - 5.3.1. Strategies
 - 5.3.2. Research and the evidence-base
 - 5.3.3. Guidelines
 - 5.3.4. Intervention tools
- 5.4. Employers and workers joint activities
 - 5.4.1. Employers' organizations initiatives
 - 5.4.2. Trade union initiatives

6. Global trends and foresight of future scenarios

- 6.1. Expert opinion survey
 - 6.1.1. Concerns and priorities
 - 6.1.2. Drivers and barriers for managing work-related stress
 - 6.1.3. Development of competences to deal with work-related stress
- 6.2. Foresight of future scenarios
 - 6.2.1. Delphi round 1
 - 6.2.1. Delphi round 2
- 6.3. Findings and global trends

7. Why is it necessary to have a collective approach to preventing and controlling the causes of workrelated stress?

8. Concluding remarks



1. Introduction

This report aims at presenting trends on work-related stress in both developed and developing countries with a view to raising awareness of the magnitude of the problem in the new context of the world of work. To this end it provides an interregional overview of the prevalence and impact of work-related stress, and examines legislation, policies and interventions for its management at international, regional, national and workplace levels.

Psychosocial hazards such as increased competition, higher expectations as regards performance and longer working hours are all contributing to an ever more stressful working environment. In addition, owing to the current economic recession that is augmenting the pace of organizational change and restructuring, workers are increasingly experiencing precarious work, reduced work opportunities, fear of losing their jobs, massive layoffs, unemployment, and decreased financial stability, with serious consequences for their mental health and wellbeing. Work-related stress is now generally acknowledged as a global issue affecting all professions and all workers in both developed and developing countries. In this complex context, the workplace is at the same time an important source of psychosocial risks and the ideal venue for addressing them with a view to protecting the health and wellbeing of workers through collective measures.

2. The protection of mental health at work

Since the 1960s it has become evident that organizational and managerial practices influence the mental health of workers and that their impact varies between organizations. But only recently concern for the wellbeing of workers, and not merely for their capacity to be productive in organizations, has been bringing about changes in management practices and occupational safety and health.

The current nature of work has brought about a shift in the focus of research more towards health and job satisfaction, performance management, organizational effectiveness, job insecurity and unemployment, *presenteeism* (sickness presence at work despite that sick leave should be taken) and absenteeism (not showing up for scheduled work), increased cultural diversity and technological change. Greater attention has also been placed on the preservation of the mental health of workers, the positive aspects of health and wellbeing, and the organizational factors involved in improving them. Accordingly, contemporary studies have shown the importance of the social environment in shaping work behaviours and valuing them, and therefore the role of human resource policies in ensuring working relationships based on trust, authenticity and partnership.

From an ILO perspective, the protection of mental health at work has more impact if it focuses on preventive strategies. Occupational health and workplace health promotion measures can contribute to improving the mental health and wellbeing of women and men at work and reducing the risk of mental health disorders. This implies an occupational health practice that involves protecting workers' health through psychosocial risk assessment and management for the prevention of work-related stress and work-related mental diseases.

2. What is the impact of stress in the working population?

2.1. The magnitude of the problem

In recent decades, globalization and technological progress have transformed the world of work, introducing new forms of work organization, working relations and employment patterns and contributing to the increase of work-related stress and its associated disorders. Globalization has led to changes in employment patterns through greater flexibility in the work process, more part-time and temporary employment and independent contracting of staff. These practices can result in higher job demands and job insecurity, lower control and an increased likelihood of layoff of workers. Technological advancement and the emergence of the internet have led to many changes and innovations in work processes, making the boundaries between work and personal life more and more difficult to identify. Incompatibility between work roles and family roles causing behaviour-based, time-based and strain-based conflicts at work can make role demands in the family difficult or impossible to meet, and *vice versa*.

The recent global economic crisis and recession contributed to increases in unemployment, poverty and social exclusion. Restructuring processes extend beyond the effects of layoffs. Organizational change causes uncertainty and antagonisms and workers that survive downsizing may experience feelings of guilt towards their dismissed colleagues. Besides the fear of losing their jobs workers have also to handle reduced opportunities for advancement. In addition, those remaining in employment may be required to be more flexible and perform new tasks, facing increased workloads, working hours, lack of control and role ambiguity. Evidence from previous crises showed that restructuring and organizational changes over such a period lead to decreased attention in the management of workplace risks under pressure for a necessary reduction in costs. As safety and health at work is still perceived by many enterprises as a cost rather than an investment, some of them reduce costs by disregarding OSH standards. The decrease in public spending also compromises the capacities of labour inspectorates and other OSH services in terms of delivery.

Work is fundamental to human health to the extent that people prefer bad working conditions to unemployment. Unemployment is related to lower life satisfaction, social stigma, loss of self-esteem and loss of social contacts, with negative consequences for mental health. Unemployment is also associated with an increased risk of drug use, alcohol use disorders, unhealthy diet, physical inactivity, and poor sleep. It is also associated with mental health disorders such as depression and suicide.

2.2. Impact on workers health, safety and wellbeing

The impact of stress on health can vary according to individual response; however, high stress levels can contribute to developing health-related impairments, including mental and behavioural disorders such as exhaustion, burnout, anxiety and depression, as well as other physical impairments such as cardio-vascular disease and musculoskeletal disorders. Growing attention is also being paid to the impact of emerging coping behaviours such as alcohol and drug abuse, smoking, unhealthy diet, poor sleep, as well as to their relation with an increasing rate of workplace accidents and non-communicable diseases.

Early research on occupational accidents was looking into “accident-prone” workers in order to manage accident rates through the selection process (i.e. excluding certain workers). Today many studies suggest that human error plays a small role in workplace accidents and that unsafe behaviour is motivated by efficiency, time management pressures and lack of training, and is not necessarily due to the individual worker. A growing number of studies are investigating the association of poor psychosocial work environment and work-related stress with increased risk of occupational accidents.

Evidence clearly suggests that factors such as high workload and job demands, low decision latitude, low skill discretion, lack of organizational support, conflicts with supervisors and colleagues, or highly monotonous work are linked to a higher likelihood of injury in an occupational accident. Findings also indicate that mental ill-health (in particular burnout) is negatively related to safe working practices, increasing the likelihood of a workplace accident.

A number of studies show that stressful working conditions can impact on workers' wellbeing by directly contributing to harmful lifestyle behaviour which may increase health risks. Available evidence shows that psychosocial risks (such as job insecurity, low control, high demands, effort-reward imbalance) and work-related stress are associated

with health-related behavioural risk, including heavy alcohol consumption, overweight, less frequent exercise, increased cigarette smoking, and sleep disorders.

Cardiovascular disease (CVD) is the first cause of death globally, with an estimated 17.5 million deaths in 2012 (thirty-one per cent of all global deaths). The rates of coronary heart disease vary across occupations, suggesting that working conditions might play a causal role. Overall, risks are at least fifty per cent higher among those suffering from stress at work in comparison with those who are not. Even if the available evidence supports a correlation between work-related stress and CVD. Findings are consistent across regions, indicating a relationship between exposure to a poor psychosocial working environment (also mediated by adverse health behaviour) and heart disease. Key psychosocial risk factors include: job demands, low job control, low support levels, effort-reward imbalance, job insecurity, and job dissatisfaction. Working time arrangements, including long working hours and shift work, have also been found to be associated with an increased incidence of CVD.

MSDs are the most common cause of severe long-term pain and physical disability, and they affect hundreds of millions of people around the world. The role of psychosocial factors and work-related stress in the development of MSDs has received increased attention. Overall, it is evident that the incidence of MSDs is associated with high perceived work-related stress levels, high workload and demands, low social support, low job control, low job satisfaction, and monotonous work. Effort-reward imbalance and difficulties in communicating with colleagues and supervisors, as well as workplace violence (in particular harassment, bullying, and intimidation) have been shown to be associated with MSDs.

Overall, it is evident that the incidence of MSDs is associated with high perceived work-related stress levels, high workload and demands, low social support, low job control, low job satisfaction, and monotonous work. Effort-reward imbalance and difficulties in communicating with colleagues and supervisors, as well as workplace violence (in particular harassment, bullying, and intimidation) have been shown to be associated with MSDs.

The Burnout Syndrome can be described as a prolonged response to chronic exposure to emotional and interpersonal psychosocial risks on the job. It is characterized by emotional exhaustion, cynicism (negative, dehumanized, and insensitive attitudes towards people who are the recipients of one's services), depersonalization, lack of involvement at work, low level of personal accomplishment and inefficiency.

Burnout is mainly the result of the following psychosocial factors: high or unmanageable workload (quantitative and emotional demands), role ambiguity, organizational changes, low job satisfaction and personal accomplishment, unsuitable work-life balance, poor interpersonal relations and support at work, and workplace violence, including harassment and bullying. Headache, insomnia, sleep and eating disorders, tiredness and irritability, emotional instability and rigidity in social relationships are some non-specific symptoms associated with the Burnout Syndrome. The Burnout Syndrome has also been associated with alcoholism and health problems such as hypertension and myocardial infarction.

Depression is a common mental disorder. Globally it is estimated to affect 350 million people and is one of the leading causes of mental disability for both women and men. It is characterized by depressed mood. Depression is a leading cause of premature mortality and of prolonged years affected by disability. The large majority of results from a number of studies confirm that the risk of depression increases up to four times, among workers experiencing work-related stress, depending on the measure, gender and occupational group under study.

Many high-quality studies have been conducted, showing that psychosocial hazards and work-related stress precede the onset of depression. A large number of studies found that poor mental health and depression are associated with workload (including long working hours and high physical, psychological or emotional demands), low decision latitude, low support, effort-reward imbalance, job insecurity, and organizational restructuring.

According to the World Health Organization (WHO), gender represents a critical determinant of mental disorders such as depression, anxiety and somatic complaints. Gender-specific risk factors for common mental disorders that disproportionately affect women include gender-based violence, socioeconomic disadvantage, low income and income inequality, low or subordinate social status and rank, and unrelenting responsibility for the care of others.

Every year over 800,000 people die by suicide according to the WHO. Suicidal behaviours have been associated with depressive symptoms. Suicide intentions may also emerge due to psychosocial risks associated with legal crises, discrimination, isolation, conflicting relationships, physical or psychological abuse, and academic or work-related problems.

3.3. Prevalence

Prevalence data on psychosocial hazards and work-related stress are available to varying extents across countries and regions; however, the quality varies considerably. The greater share of research in this field is to be found in Europe and North America, and in general in developed countries, but to a lesser extent in the Asia-Pacific region and Latin America, and to only a limited extent in Africa and the Arab States.

In Europe, the 4th *European Working Conditions Survey* (EWCS, 2007) revealed that an estimated 40 million people in the EU were affected by work-related stress. According to the European Risk Observatory Report published in 2009, work-related stress represented in Europe between fifty and sixty per cent of all lost working days. The study also found that on average twenty-two per cent of the European workforce was under stress, with levels markedly higher in the newer member States (thirty per cent) than in the older member States (twenty per cent).

In the Americas, according to the *First Central American Survey on Working Conditions and Health* (2012), more than one in ten respondents reported having felt constantly under stress or strain (twelve to sixteen per cent), feeling sad or depressed (nine to thirteen per cent), or losing sleep (thirteen to nineteen per cent), owing to concerns about working conditions. According to the Canadian third *National Study of Work-Life Balance* (2011), high perceived stress was reported by fifty-seven per cent of respondents, increasing from fifty-four per cent in 2001 and fortyfour per cent in 1991 as reported in previous studies. In the United States (US), according to the *Stress in America™* survey (2015), respondents rated their stress levels as 4.9 on a 10-point scale. The most commonly reported sources of stress include money (sixty-four per cent), work (sixty per cent), the economy (forty-nine per cent), family responsibilities (forty-seven per cent) and personal health concerns (forty-six per cent).

In the Asia-Pacific region, according to the Australian *Stress and Wellbeing Survey* of 2014, almost half of the respondents cited work demands (forty-eight per cent) as barriers to maintaining a healthy lifestyle. In Japan, the *Survey on the Prevention of Industrial Accidents* showed that thirty-two point four per cent of workers reported suffering from strong anxiety, worry and stress during the previous year.

Almost no information can be identified on the prevalence or incidence of psychosocial risks and work-related stress in Africa and the Arab States.

3.4. The gender dimension

Women and men respond to and manage stress in different ways. Even if the rate of labour market participation by women has increased enormously over the past century, according to the ILO overall the labour market participation rate of women remains some twenty six per cent lower than that of men and the gender pay gap remains over twenty per cent, with no evidence of any unambiguous or rapid reduction. In addition, in most societies women continue to be mainly responsible for domestic, unpaid work such as cooking, cleaning and caring for children, and therefore they carry a double burden when they are employed. Women are also largely represented among unpaid contributing family workers, such as those who work in a business establishment for a relative who lives in the same household as they do. Balancing responsibilities for paid and unpaid work often leads to stress, depression and fatigue, and can be particularly problematic when income is low and social services and support are lacking. Psychosocial hazards that may be more frequent and specific to women include: (i) the double role they have to play at home and work; (ii) the gender roles of society and the influence of social expectations; (iii) the risk of sexual harassment at work or domestic violence; and (iv) genderbased discrimination reflected in lower wages and higher job requirements.

3.5. Impact on productivity and economic costs of work-related stress and associated mental health disorders

Work-related stress can severely impact workers' general achievement levels in a negative way with respect to both efficiency and accuracy. Studies investigating the impact of work-related stress on organizational outcomes have revealed a number of associated forms of behaviour affecting productivity, competitiveness and the public image of the enterprise. For example, besides the impact on workers' health and wellbeing, a poor psychosocial working environment contributing to work-related stress can result in increased absenteeism and presenteeism, as well as reduced motivation, satisfaction and commitment, along with a greater rate of staff turnover and intention to quit. All of the above can have a negative impact in terms of human, social and financial costs.

Absenteeism is associated with work-related stress and psychosocial hazards such as workload, job control, role conflict, effort-reward imbalance, quality of leadership, shift work, limited career progression, and social relationships at work (including low social support and workplace violence, bullying, and discrimination). Scientific literature on presenteeism indicates similar findings, highlighting that an increase in work-related stress is associated with an increase in presenteeism, even greater than that for absenteeism. Organizational policies on pay, sick leave,

attendance control, downsizing, and permanency in employment, as well as job design have been suggested as factors fostering presenteeism. It should be noted that presenteeism can in turn lead to burnout over time. In fact, exhaustion and presenteeism were found to be reciprocal, suggesting that when workers experience exhaustion, they mobilize compensation strategies through presenteeism, which ultimately increases their exhaustion.

The related direct and indirect costs are only beginning to be quantified. In Europe the estimated cost of work-related depression is €617 billion a year, which includes the costs to employers of absenteeism and presenteeism (€272 billion), loss of productivity (€242 billion), healthcare costs (€63 billion) and social welfare costs in the form of disability benefit payments (€39 billion). In Spain, the direct health cost of mental and behavioural disorders attributable to work was estimated at between €150 and €372 million in 2010. In the same year, 2.78 million days were lost to sick leave caused by work-related mental illness, equivalent to a loss of €170.96 million.

4. What is the existing legal framework on work-related stress and mental health at work?

4.1. International labour standards

The core values reflected in ILO standards on occupational safety and health are expressed in three main principles: (i) work should take place in a safe and healthy working environment; (ii) conditions of work should be consistent with workers' wellbeing and human dignity; and (iii) work should offer real possibilities for personal achievement, self-fulfilment and service to society. In particular, the ILO core Convention on Occupational Safety and Health, 1981 (No.155) and its accompanying Recommendation (No.164) provide for the adoption, implementation and review of a coherent national policy on OSH and measures for its application at national and workplace levels with the aim of protecting workers' physical and mental health and wellbeing.

The Occupational Health Services Convention, 1985 (No. 161) and its accompanying Recommendation (No. 171) define the role of occupational health services as multidisciplinary services with essentially preventive and advisory functions, responsible for assisting employers, workers, and their representatives in establishing and maintaining a safe and healthy working environment, including the adaptation of work to the capabilities of workers so as to facilitate optimal physical and mental health at work.

The Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187) and its accompanying Recommendation (No. 197) complement the previous core standards and describe the requirements and functions of a national structure, relevant institutions and stakeholders responsible for implementing a national and enterprise level policy for safe and healthy working environments, as well as the steps to be taken to build and maintain a preventive safety and health culture at national level.

Other International Labour Standards that can be pertinent in the area of psychosocial risks and mental health are those related to equality of opportunity and treatment, working time and night work.

4.2. Regional standards

Few regional organizations have developed legally binding instruments covering psychosocial risks and the protection of workers' mental health for their member States.

In Latin America, the Southern Common Market (MERCOSUR) adopted in 1998 the Social and Labour Declaration, which includes provisions for health and safety at work, providing for workers' right to the protection of their physical and mental health, and calls member States to formulate, implement and update policies and programmes on OSH, with a view to preventing occupational accidents and diseases.

In the EU, the Framework Directive on Safety and Health at Work (89/391/EEC) governs the implementation of OSH within member States. Even though the Directive does not refer explicitly to "workrelated stress" or "psychosocial risks", it provides for employers to ensure workers' health and safety in every aspect related to work.

A number of EU member States do not explicitly mention psychosocial hazards or stress, keeping the text of their OSH laws close to the EU Framework Directive, e.g. Spain, while others refer to the need to take psychosocial risks or mental health into consideration when addressing OSH (e.g. Austria, Denmark, Estonia, Finland, France, Greece, Italy, Norway, Slovakia and Sweden). The EU Directive on the minimum safety and health requirements for work with display screen equipment (90/270/EEC) states that "employers shall be obliged to perform an analysis of workstations in order to evaluate the safety and health conditions to which they give rise for their workers, particularly as regards possible risks to eyesight, physical problems and problems of mental stress". The EU Directive on prevention from sharp injuries in the hospital and healthcare sector, requires employers to ensure the safety and

health of workers in every aspect related to their work, including psychosocial factors and work organization. Other EU Directives that can be relevant to the field of psychosocial factors are those focusing on working time, equal treatment and discrimination.

4.3. National legislation

Legal provisions covering psychosocial hazards and risks, workrelated stress and workers' mental health and wellbeing can be included in Labour Codes, OSH Laws, OSH Acts, specific OSH regulations, codes of practice, technical standards, decrees and collective agreements. It should be noted that reference to psychosocial hazards and risks or work-related stress has frequently been included in a non-unified and fragmented manner, in many national legal frameworks. The Nordic countries have led the way in recognition of psychosocial risks in the workplace and development of relevant legislation.

Many other countries have successively incorporated provisions in these areas in their legislation. Some countries refer to the protection of mental health and wellbeing within the scope of OSH Acts and regulations (e.g. Algeria, Argentina, Belize, Bolivia, Colombia, Costa Rica, Cuba, Haiti, and Venezuela) or within the objectives of OSH institutions (e.g. Canada and the Dominican Republic).

Certain countries also provide in their OSH legislation a detailed legal definition of psychosocial hazards and risks (e.g. El Salvador, Estonia, Mexico and Peru).

Specific regulations on psychosocial risks are not very common, and only a few countries have drafted them; for example, the Belgian Royal Decree on the prevention of psychosocial risks at work (2014) defines psychosocial risks, along with the preventive measures to be adopted, the role of the prevention and protection services, and workers' rights to participation.

A number of countries explicitly refer to mental health or psychosocial factors within the aims or the functions of OSH services or as part of workers' health surveillance (e.g. Algeria, Angola, Argentina, Costa Rica, Germany, Japan, Libya, Mexico, Namibia, Paraguay, Senegal, Venezuela, and Zambia).

4.4. Employers' responsibilities and workers' rights

In several countries the protection of mental health and wellbeing is covered in OSH law as a worker's right or as a general duty of employers, including their responsibility for safe working environments, working conditions and work organization (e.g. Algeria, Angola, Benin, Burkina Faso, Bolivia, Costa Rica, Cuba, Denmark, Equatorial Guinea, Eritrea, Estonia, Finland, Honduras, Japan, Republic of Korea, Mexico, Mozambique, Norway, Peru, Somalia, Venezuela and Zambia).

Some national legislation refers to the employer's responsibility for the prevention and control of psychosocial risks, workrelated stress, mental fatigue, or psychological workload (e.g. Bulgaria, Comoros, Dominican Republic, El Salvador, Mexico, Namibia, the Netherlands, Republic of Korea, Turkmenistan, and Uruguay).

In addition, some national OSH laws explicitly require employers to carry out risk assessments of psychosocial hazards (e.g. Australia, Denmark, Germany, Hungary, Italy, Lithuania, Mexico, Peru, and Slovakia).

Some national legislation also incorporates provisions related to coping behaviours. In some countries the prohibition of drug and alcohol consumption at work is covered by law (e.g. Angola, Benin, Bolivia, Chile, Congo, Haiti, and Niger), and most countries forbid smoking in the workplace. In a few countries OSH legislation provides for health promotion in the workplace.

Workers' rights to information and training are recognized in most countries; however, only a few specifically refer to psychosocial risks, work-related stress or mental health as issues to be covered (e.g. El Salvador, Niger, Rwanda and Venezuela). For example, in Niger the Labour Code requests employers to raise awareness of emerging health risks (such as work-related stress, alcohol and drug consumption, and smoking), and to inform workers and provide them with psychological assistance.

4.5. Workplace violence

The prevention and management of psychological harassment and violence at work were the first areas in this context in which public awareness of the impact on workers' wellbeing stimulated development of legislation on corrective measures and penalties. Most of such legislation was developed in the 1990s. A considerable number of countries addressed workplace violence in Labour Codes, OSH Laws, specific regulations, codes of practice

and guidelines, as well as in criminal law, in particular concerning reactive or protective actions and penalties. Bolivia represents a rare case in which the prohibition of any form of work-related harassment is covered by the Constitution.

All the Nordic countries have both legislation and guidance for managing workplace bullying. They also have legislation ensuring the individual's right to a safe working environment, requiring the employer to prevent bullying from occurring and ensuring firm handling of bullying when a complaint is made. Sweden was the first country to introduce anti-bullying and anti-mobbing legislation in 1993, affording protection of workers from physical and psychological harm.

4.6. Inclusion of workrelated stress and mental disorders in national lists of occupational diseases

A national list of occupational diseases (together with a set of well-established diagnostic criteria) can facilitate their recognition and compensation. In the majority of countries the notification of occupational diseases is regulated, often using international or regional standards as a reference.

ILO Convention No. 155 is complemented by the Recommendation on the List of Occupational Diseases, 2002 (No.194), which provides for regular review and updating of the ILO list of occupational diseases contained in the Annex of the Recommendation through tripartite meetings of experts. The ILO list, updated in 2010, covers mental and behavioural disorders, including post-traumatic stress disorders (PTSD), thereby creating for the first time the possibility of other such diseases being recognized as having an occupational origin if a direct link is established scientifically (or determined by methods appropriate to national conditions and practice) between the exposure to risk factors at the workplace and the mental disorder.

The ILO periodically revises its list of occupational diseases in order to keep abreast with international development and meet the increased demand for an international reference reflecting today's world of work. A regular review and updating process is of particular value. The "open items" in the list, which allow for recognition of new diseases, rely on active contributions by hygienists and physicians, as well as employers, workers and national authorities.

A report published by the European Commission in 2013 reviews the situation concerning occupational diseases in EU member States and EEA/EFTA States. Mental and stress-related disorders are included in national lists of

occupational diseases from the following EU countries: Denmark, Hungary, Italy, Latvia, Lithuania, the Netherlands, Romania, while in Finland mental and behavioural disorders are covered in the national disability registers (F:ICD-10) and its open system. Work-related mental disorders are also compensated in the Swedish open system and through the complementary system in some other EU member States, such as Belgium, Denmark (for stress-related disorders other than PTSD), and France.

In the Americas, a number of countries include in their lists of occupational diseases mental health diseases or some specific related disorders; for example, Argentina, Brazil, Chile, Colombia, Mexico, Nicaragua and Venezuela. Ecuador and Paraguay adopted the ILO semi-open list of occupational diseases.

In the Asia-Pacific region, the Republic of Korea and Malaysia include mental disorders in their national lists of occupational diseases, in New Zealand covers mental injury caused by sexual violation. In Japan, workers compensation for work-related mental health disorders has been provided since 1999, and the Labour Law has incorporated criteria for the recognition of death from overwork (*karoshi*) and work-related suicide (*karojisatsu*) for compensation to the family of a worker who dies in this way.

Most countries in Africa and the Arab States do not include stress or associated mental disorders in their national lists of occupational diseases.

4.7. Non-binding technical standards on psychosocial risks prevention and management

Non-binding technical standards, codes of conduct and protocols recognized by governments can also play an important role in promoting harmonised action in this field. In many countries authorities have implemented non-binding solutions to address psychosocial risks, including technical standards, voluntary guidelines, codes of practice and other guidance on how to apply general OSH principles in this area. Some authorities have opted to describe methods of carrying out assessment and corrective measures rather than to impose them.

4.8. Social partners' agreements

According to the ILO, legal provisions include, in addition to laws and regulations, arbitration awards and collective agreements on which the force of law is conferred. Collective agreements respect minimum standards set out in national legislation and complement them or go beyond for the benefit of workers represented in the negotiations.

Therefore, collective agreements can only improve on the requirements established in the law of the country; never can they diminish the binding obligations of employers and workers under those collective agreements.

At EU level, actions taken by social partners within the European Social Dialogue Framework have played a significant role in recognizing the relevance of psychosocial issues and work-related stress over the past years, concluding a number of agreements (ratified by the Council of Ministers and now part of European legislation) covering such aspects as parental leave (1996), parttime work (1997) and fixed-term contracts (1999). The social partners have also concluded framework agreements on telework (2002), work-related stress (2004), harassment and violence at work (2007), and third-party violence and harassment related to work (2010).

According to the EU Framework Agreement on Work-related Stress, factors causing work-related stress may be addressed within an overall process of risk assessment. Measures can be collective, individual or both. They can be introduced in the form of specific measures targeted at identifying stress factors or as part of an integrated stress policy encompassing both preventive and responsive measures. The responsibility for determining the appropriate measures rests with the employer, but these measures should be carried out with the participation and collaboration of workers or their representatives. The Agreement represented a starting point for a related social dialogue at EU level in five sectors: education, central government administration, private security, construction and electricity.

4.9. Labour inspection

According to ILO Labour Inspection Convention, 1947 (No. 81), the main functions of the system of labour inspection should be: (i) to secure the enforcement of the legal provisions relating to conditions of work and the protection of workers while engaged in their work; and (ii) to supply technical information and advice to employers and workers concerning the most effective means of complying with the legal provisions.

Labour inspectorates can receive explicit complaints about psychosocial risks, particularly with regard to lack of assessment or the measures to prevent or reduce them, where relevant provisions are reflected in national law. However it is also not unusual to receive complaints which implicitly involve these risks, such as those relating to violence, fatigue, working time, work overload, frequent changes, bad atmosphere or an offensive environment.

Labour inspectorates and OSH Authorities have increasingly developed guidelines, tools and campaigns on psychosocial risk assessment for labour inspectors. At EU level, the Senior Labour Inspectors' Committee (SLIC) promoted a campaign on psychosocial risks in 2012, developing a toolkit for psychosocial risk assessment that was used during inspections in 26 EU member States and Iceland.

At national level, the Nordic countries were among the first to include psychosocial factors in risk assessments of working conditions conducted by the labour inspectorates. In Denmark, Finland, Norway and Sweden all newly-employed inspectors must complete basic introductory training (including theory and practice) on the psychosocial working environment. In recent years several labour inspectorates from other countries have developed guidance and models to help inspectors handle psychosocial risks, for example, in Australia, Austria, France, Germany, the Netherlands, Spain and the UK.

5. Strategies for the prevention and management of psychosocial hazards and risks

5.1. International organizations

The ILO developed two complementary tools for addressing mental health concerns in the workplace. The *Stress prevention at work checkpoints* is an ergonomic tool based on good practice, with which to audit and intervene by means of a checklist and a set of guidelines focusing on workplace improvements for the prevention of psychosocial risks and workrelated stress. The training package *SOLVE: Integrating health promotion into workplace policies* focuses on promoting health and wellbeing at work through OSH policy design and action to offer an integrated response addressing the following areas and their interactions: (i) psychosocial health, (ii) potential addictions and their effects on the workplace, (iii) lifestyle habits. This training tool is part of a programme implemented in different regions of the world in collaboration with ILO constituents, NGOs and Universities.

In addition to the ILO a number of international organizations such as the World Health Organization (WHO), the International Social Security Association (ISSA), the Organization for Economic Co-operation and Development (OECD), the World Bank and the World Economic Forum (WEF) have been active in the prevention and management of psychosocial hazards and the promotion of mental health at work through research and advocacy, including the development and implementation of specific initiatives.

The WHO has contributed to the prevention of psychosocial risks through the publication of research, guidelines, tools and other resources. The work of the WHO on occupational health is governed by the *Global Plan of Action on Workers' Health 2008-2017*. The plan specifies actions “to protect and promote health at the workplace”, and states that “the assessment and management of health risks at the workplace should be improved by defining essential interventions for prevention and control of mechanical, physical, chemical, biological and psychosocial risks in the working environment”. In April 2010, the WHO launched the *Global Framework for Healthy Workplaces*, aimed at providing guidance on protection and promotion of the health, safety and wellbeing of all workers and the sustainability of the workplace. The WHO has also developed relevant guidance on how to address psychosocial risks and workrelated stress through a number of publications.

In 2008 WHO launched the *Mental Health Gap Action Programme* (mhGAP) to address the lack of care for people suffering from mental, neurological, and substance use disorders, especially in low and middle income countries. In 2013 the 66th World Health Assembly adopted the *Comprehensive Mental Health Action Plan 2013-2020*, with the aims of: (i) strengthening effective leadership and governance in relation to mental health; (ii) providing comprehensive, integrated and responsive mental health and social care services in communitybased settings; (iii) implementing strategies for promotion and prevention in mental health; and (iv) strengthening information systems, evidence and research on mental health.

Proactive and preventive social security is one of the pillars of the vision of ISSA. It recognizes that while prevention efforts over recent decades have resulted in many positive outcomes, numerous challenges to workers' health remain, such as the growing prevalence of psychosocial factors which are increasing the complexity of prevention, calling for a more holistic approach by social security institutions in promoting health and safety.

The OECD *Mental Health and Work Project* examined how broader challenges concerning mental health at work have been tackled in the areas of education, health, social and labour market policies in a number of OECD countries. The report *Sick on the Job: Myths and Realities about Mental Health and Work* (2012) estimated the total cost of mental illness to be around three point five per cent of GDP in OECD countries and highlighted the need to keep people with mental ill-health in employment or bringing those outside the labour market back into it. OECD governments increasingly recognise that tackling the mental ill-health of the working population is becoming a key issue in labour market and social policies. Other relevant OECD documents on this topic include the working paper on *Mental*

Health and Work: Achieving well-integrated policies and service delivery (2014) and the report on *Mental Health Policy Framework* (2015) adopted by the OECD High-Level Policy Forum on Mental Health and Work.

The World Bank efforts are focused on ensuring that mental and psychosocial health are incorporated into operations within the development of more long-term policies, strategies, plans and resources to ensure sustainability. The World Development Report 2015 *Mind, Society and Behaviour* aims at guiding researchers and practitioners who can support the advancement of a new set of development approaches based on broader consideration of psychological and social influences.

The WEF's Global Agenda Council on Wellbeing and Mental Health plans to include mental illness in health and development agendas at global level by raising awareness on the importance, prevalence and burden of mental disorders; making the business case for positive mental health and wellbeing for business and society; and reporting on progress in the annual reports. In addition, the WEF produces a series of research reports on several topics, including mental health, working conditions, gender equality, and others.

5.2. Regional organizations and institutions

A number of regional organizations have been established to foster cooperation and political and economic integration or dialogue between governments in a particular geographical area. Some have adopted policies related to promotion of mental health and wellbeing and prevention of stress and related disorders, with the aim of integrating or coordinating national activities at regional level.

On the African continent, the Southern African Development Community (SADC) adopted the *Protocol on Health* (2004), according to which member States should coordinate efforts to prevent diseases and promote wellbeing, implementing policies and providing guidelines on health promotion and education, healthy lifestyle and reduction of substance abuse.

The Executive Board of Health Ministers of the Cooperation Council for the Arab States of the Gulf (GCC) developed a number of technical programmes, covering mental health, occupational health, tobacco control and prevention of non-communicable diseases. In addition, the League of Arab States adopted in 2004 the *Arab Charter on Human Rights* which recognizes the right of everyone to enjoy the highest attainable standard of physical and mental health. It also states that every worker has the right to enjoy just and favourable conditions of work.

In the Asia-Pacific region, the Association of Southeast Asian Nations (ASEAN) adopted the *Regional Action Plan on Healthy ASEAN Lifestyles* (2002-2020) with the objective that ASEAN citizens lead healthy lifestyles consistent with their values, beliefs and culture in supportive environments.

The *Programme of Work on Promoting Healthy ASEAN Lifestyles* calls member countries, in conjunction with appropriate partners, to take immediate action on priority policy areas including mental health and lifestyles, collaborating in such a way as to providing environments that promote social participation, minimize discrimination, and enhance economic opportunities, work settings and lifestyles, as well as promoting the adoption of healthy workplace initiatives.

In the Americas, the Organization of American States Ministers of Labour adopted the *Declaration of Medellin* (2013) in which they committed to strengthening tripartite national strategies on occupational health so as to foster a culture of prevention and develop workers' health programmes in the region. The Caribbean Community (CARICOM) established the *Caribbean Cooperation in Health Initiative* (1984) to optimize utilization of resources, promote technical cooperation among member countries, and develop and secure funding for the implementation of projects in priority health areas. The *Caribbean Cooperation in Health Phase III* (2009-2015) sets the direction and goals for public health for that period and includes mental health as a priority area.

The EU has also developed a number of relevant initiatives such as the *European Pact for Mental Health and Wellbeing* (2008) and the related *European Parliament Resolution on Mental Health* (2009). The EC 6th Framework Programme of the EU Commission funded a collaborative project, for the development of a European framework for psychosocial risk management with a special focus on work-related stress and workplace violence. The EU has several agencies, institutes and committees working on OSH. The European Foundation for the Improvement of Living and Working Conditions (Eurofound) runs two regular surveys on working life issues: the *European Working Conditions Survey* (EWCS) and the *European Company Survey* (ECS). The European Agency for Safety and Health at Work (EU-OSHA) is the EU information agency for OSH. In 2009, EU-OSHA launched the *European Survey of Enterprises on New and Emerging Risks* (ESENER), which is the first Europe-wide survey on health and safety at the workplace. EU-OSHA also produced several reports on psychosocial risks and work-related stress. Finally, the 2014-15 *Healthy Workplaces* campaign organized by EU-OSHA was on the management of stress, providing support and guidance for workers and employers in managing psychosocial risks.

5.3. National strategies and initiatives

5.3.1. Strategies

In several countries, governments have explicitly included the prevention and management of psychosocial hazards and risks within their OSH national strategy. Often psychosocial risks or work-related stress are mentioned in the OSH strategy as priorities. Sometimes national strategies also provide for specific measures to address them such as the adoption or revision of legislation; design of protocols, guidelines and other tools; cooperation with social partners and other institutions.

For example, in Argentina the *II National Strategy for Health and Safety at Work 2015-2019* adopted by the Superintendence of Occupational Risks (SRT) from the Ministry of Labour includes several provisions related to psychosocial hazards and risks, such as development of protocols and guides for their assessment; design and validation of diagnostic instruments for their early detection and prevention; development of specific regulations in consultation with social partners; establishment of procedures and definition of responsibilities regarding the identification, evaluation, prevention, intervention and on-going monitoring of exposures; study and determination of the origin of diseases caused by work-related stress.

In Australia, the *Work Health and Safety Strategy (2012-2022)* promotes a vision of healthy, safe and productive working lives, highlighting those categories of work-related disorders to be considered as a national priority (one of them being mental disorders) and sets the objectives to be achieved by 2022. In Denmark, psychosocial risks have been included as one of the priority areas in the national strategy for OSH for the period 2012-2020. The strategy adopted quantitative targets and aims at a twenty per cent reduction in the number of psychologically overloaded workers by 2020. In Finland, the *Policies for the Work Environment and Wellbeing at Work 2011-2020* adopted by the Ministry of Social Affairs and Health pay special attention to the work environment and wellbeing at work, including psychosocial risks. In France, the government adopted the *Emergency plan for the prevention of stress at work* in October 2009, in the context of a wave of suicides. In Germany, the *Joint German Occupational Safety and Health Strategy* sets out three goals to be achieved between 2013 and 2018: (i) to improve the organization of occupational health; (ii) to reduce work-related illnesses arising from musculoskeletal disorders; and (iii) to better protect workers from psychological strain at work. In New Zealand, the *Workplace Health and Safety Strategy to 2015* envisioned a healthy workforce in safe and productive workplaces, where the term "healthy" encompasses physical, mental and

social wellbeing. Some countries shaped specific national strategies on mental health, which include promotion of mental health at work and the prevention of psychosocial risks. For example, the Mental Health Commission of Canada (MHCC) designed the first national mental health strategy, working to reduce stigma, advancing knowledge exchange on mental health, and examining how best to help people who are homeless and living with mental health problems. In Spain, the *Spanish Strategy on Mental Health of the National Health System* adopted in 2006 and updated in 2009, also includes objectives relating to occupational health, recommending in particular that regions should support the prevention of work-related stress, burn-out and mental disorders associated with work.

5.3.2. Research and the evidence-base

In many countries, national OSH institutes are in charge of conducting research and surveys in the field of psychosocial risks and work-related stress. For example, the Finnish Institute of Occupational Health (FIOH) has a team producing information on psychosocial factors and changes that have significant health effects, determining the mechanisms that influence health, studying the significance of social capital for wellbeing, and assessing the effectiveness of the methods used by organizations to prevent health problems and promote health. In France, the Directorate for Research, Studies and Statistics (DARES) conducts the national survey on *Medical Monitoring of Risks* (SUMER) which includes psychosocial exposure measurements. The National Institute of Research and Safety (INRS) aims at improving knowledge of psychosocial risks and their health effects,

5.3.3. Guidelines

The first guidelines on the psychological and social aspects of the working environment (*Psykiska och sociala aspekter på arbetsmiljön*) were introduced in 1982 by the Swedish Working Environment Authority (AV). Since then several countries have developed guidelines on prevention of work-related stress, protection of mental health and assessment of psychosocial risks.

The tripartite Economic and Social Council (CES) of Luxembourg has developed guidelines on work-related stress. The CES guidelines describe the negative individual and organizational impact of work-related stress. They provide a step-by-step approach to procedures for identification and management of psychosocial hazards and define the duties and rights of workplace actors. In Mexico, the Directorate on OSH from the Ministry of Labour in consultation with the National Tripartite Committee on OSH (COCONASH) is developing technical guidelines on psychosocial risks to complement the new OSH Act.

In Spain, the National Institute of Safety and Hygiene at Work (INSHT) adopted several preventive technical factsheets (NTP) on psychosocial risks and work-related stress, which help in identifying the risks and establishing preventive measures to address them.

5.3.4. Intervention tools

National institutions from a number of countries have developed monitoring models, risk assessment and management tools, and other awareness-raising initiatives to help understand and prevent work-related stress.

Among the monitoring models, the Copenhagen Psychosocial Questionnaire (COPSOQ) developed in 1997 by the National Research Centre for the Working Environment of Denmark, was the first to include population-based reference values to assess the need for action and to support the decision-making process on preventive measures at workplace level.

Since its initial development in Denmark, COPSOQ has been adapted and applied by researchers in several countries. The Spanish National Institute of Occupational Safety and Hygiene (INSHT) developed its own method for evaluation of psychosocial risks in the workplace (F-Psico) to facilitate identification and evaluation of psychosocial risks. Examples of risk assessment and management tools developed by national institutions in collaboration with universities include the *Australian People at Work Project* launched in 2007 to help enterprises identify and manage psychosocial risks. Another example is provided by the HSE in the UK that developed a process based on a set of Management Standards to help employers, workers and their representatives manage and reduce work-related stress levels.

5.4. Employers and workers joint activities

Several European social partners from different sectors (e.g. public administration, education, private security, construction, electricity sector) have included work-related stress in their social dialogue.

In 2004 the European Trade Union Confederation (ETUC), the Union of Industrial and Employers' Confederations of Europe (UNICE, now known as BUISNESSEUROPE), the European Association of Craft Small and Medium-sized Enterprises (UAEPME) the European Centre of Enterprises with Public Participation and of Enterprises of General Economic Interest (CEEP) signed the EU Framework Agreement on Workrelated Stress. In 2008 the European social

partners (ETUC, BUSINESSEUROPE, UAEPME and CEEP) issued a report on implementation of the Agreement, based on joint national reports from member organizations in 21 EU member States, Iceland and Norway.

5.4.1. Employers' organizations initiatives

The International Organization of Employers (IOE) supports national business organizations in guiding corporate members on matters of International Labour Standards, business and human rights, corporate social responsibility (CSR), OSH, and international industrial relations. BUSINESS EUROPE is committed to ensuring a safe, healthy and productive workforce, including protecting workers from psychosocial risks and work-related stress. BUSINESS EUROPE is engaged in developing expertise and tools which can be adapted to different realities to help enterprises address psychosocial risks.

5.4.2. Trade union initiatives

The International Trade Union Confederation (ITUC) in its Congress Resolutions on Decent Work of 2010, called its member organizations, partners and affiliates to work with the ILO to campaign for the extension of social protection to all, and for improving OSH in all countries, including prevention of exposure to hazardous chemicals, psychosocial hazards and occupational injuries and accidents.

During its 16th World Trade Union Congress in 2011, the World Federation of Trade Unions (WFTU) issued a report on the *health and safety of workers in our time*. The report states that the extension of the working day and the increase in the pace and intensity of work have serious consequences for the physical and mental health and social involvement of workers; that the increase in workers' exposure to harmful physical, chemical, psychosocial and biological factors will lead to multiple changes in their health; that each type of flexible working arrangement limits the capability of workers to reclaim their free time; and that in this context regularity of working hours is essential for the normal social life of workers and is thus directly related to their state of health.

Building and Wood Worker's International (BWI) and IndustriALL Global Union are addressing specific psychosocial risks within the framework of promoting gender equality, advocating *inter alia* reduced segregation and discrimination, closing of the pay gap, tackling of violence (both physical and psychological) against women and an improved work-life balance. UNI Global Union is also active in the field of psychosocial risks. Its 2010 report, *From Work-Life*

Balance to Work-Life Management identified the key work-life management issues faced by many professionals and managers, such as long hours, loss of talent, and flexibility.

At regional level, the African Regional Organization of ITUC (ITUCAfrica) in its *Report to the African Union Labour and Social Affairs Commission* (2013) highlighted that globalization had given rise to new OSH challenges in the region, such as work-related stress, violence at work, drug abuse and alcoholism.

The European Trade Union Confederation (ETUC) produced two guides for interpretation of the framework agreements on work-related stress (2004) and on harassment and violence at work (2007). They expect to support member organizations in the implementation of these agreements and allow better monitoring and evaluation of the results achieved after their adoption.

The European Trade Union Institute (ETUI), the independent research and training centre of ETUC, organized the first European trade union seminar on psychosocial risks in June 2013. A European trade union network focusing on psychosocial risks at the workplace was officially set up during this meeting. In the last decade, some national trade unions started to consider psychosocial risks and work-related stress as critical areas of work, developing awareness-raising materials and campaigns along with questionnaires and assessment tools.

The Spanish General Workers Union (UGT) created in 2004 the Permanent Observatory of Psychosocial Risks, aiming at sharing of information and development of new initiatives to prevent psychosocial risks in collaboration with institutions, public administration and universities.

6. Global trends and foresight of future scenarios

Two studies were carried out by the ILO to assess trends and forecast future scenarios in relation to the impact of psychosocial risks and work-related stress: an expert opinion survey to detect drivers, barriers and needs in relation to the prevention and management of work-related stress; and a two-round Delphi survey to identify and assess future scenarios and contributory factors (facilitators or inhibitors) in this area.

6.1. Expert opinion survey

6.1.1. Concerns and priorities

The highest concerns reported were work overload (in the Americas, Asia-Pacific region, Europe and Central Asia) and poor organizational culture (in Africa and the Arab States). Work-life balance was identified as a concern across regions and there was overall a substantial consensus that work overload and time pressure are high concerns (except in the Arab States). Poor organizational culture, poor management, low reward and low recognition feature high in Africa and the Arab States

Physical violence, discrimination at work and harassment were perceived by the experts as the most prioritized areas in their countries, eighty-seven per cent agreeing that psychological violence is considered a priority by policymakers.

6.1.2. Drivers and barriers for managing work-related stress

The following elements were highlighted as the most important drivers facilitating development and implementation of initiatives: availability of resources (such as staff, time or money); integration of measures at the workplace level; understanding and awareness of psychosocial risks and work-related stress; and availability of appropriate tools and methods of intervention. These findings are generally consistent across regions (with the exception of the Arab States in some cases).

Regarding the main barriers, experts highlighted conflict and competition between different governmental departments and lack of clear complementarity of roles as factors which can hinder communication and collaboration between key stakeholders. The findings are generally consistent across regions and most of the barriers were rated as important or fairly important.

6.1.3. Development of competences to deal with work-related stress

According to the experts' opinion survey, the key following elements should be taken into consideration in the development of competences to address work-related stress: capabilities for psychosocial risk management (at both national and workplace levels); adequate knowledge of key stakeholders; relevant and reliable information to support decision-making; availability of effective and user-friendly methods and tools; and competent support

structures (specialists, consultants, services, institutions and research). Across a range of countries there are differences in existing knowledge and competences, especially in developing countries.

6.2. Foresight of future scenarios

6.2.1. Delphi round 1

The first round of the Delphi was based mostly on open-ended questions that were thematically analysed. A total of 80 experts from 45 countries across the world covering all ILO regions responded to this survey.

The first four questions were presented within the framework of a SWOT analysis. As regards the identified strengths, there were differences depending on the context in the country; for example, in countries where both regulations and voluntary policies existed, participants considered the strength of voluntary approaches as more relevant. However, legislation, social dialogue initiatives, a strong evidence-base, awareness-raising, workplace interventions and appropriately-trained occupational health services were highlighted as strengths across countries wherever they existed. Many of the issues reported as strengths were also highlighted as weaknesses in countries where they were lacking. Additional concerns expressed were the inadequate evaluation of initiatives and a high prevalence of malpractice by consultants or practitioners. Exclusion of stress-related illnesses in lists of occupational diseases was identified as a weakness by the majority of respondents.

In terms of opportunities, the following were mentioned: increased experience and sharing of good practice across countries, international policies and codes of practice aimed at promoting responsible business practices, increasing emphasis on organizational sustainability and competitiveness, and coverage and inclusion of these issues in the national OSH system, the public health system or the social security system. Finally, several of the threats identified were common to respondents. These included a poor economic climate and increased unemployment, organizational restructuring and downsizing, lack of political will, lack of financial resources at national or organizational level, an aging workforce, an increase in new forms of work organization, precarious work and nonstandard work.

6.2.2. Delphi round 2

The second round Delphi was mostly based on closed questions. Experts were asked to report on the likelihood of a number of scenarios in the key areas for the prevention and management of psychosocial risks and work-related stress identified in round 1, as well as the main contributory factors.

Awareness and engagement of policymakers, social dialogue, and the usefulness of translating the evidence-base into practice feature prominently as contributing factors across scenario options. Concerning the key areas of awareness-raising and guidance development, workplace level initiatives and the evidence-base, other strong contributory factors identified included resources and expertise availability, tools and sharing of good practice, and awareness and engagement of stakeholders at enterprise level (e.g. managers, workers). Respondents also highlighted a culture of prevention at country level as an important contributory factor in relation to workplace level initiatives and the suitability of scientific evidence on the impact of psychosocial risks to health, safety and productivity for translating evidence-base into practice.

6.3. Findings and global trends

Regarding legislation and policies, experts generally agreed that as awareness increases, there will be further national OSH laws, regulations, technical standards and collective agreements, as well as OSH policies and strategies addressing psychosocial risks and work-related stress.

Experts also identified as areas for further improvement the harmonisation and adequate enforcement of legislation across countries, the recognition of stress-related disorders as occupational diseases, and the constraints on enforcement of legislation. In addition, the following key elements of the ideal scenario were also highlighted: focus on prevention of psychosocial risks and promotion of mental health in the workplace as essential elements of policies; sharing of good practice; and capacitybuilding of key stakeholders. Awareness and engagement of policymakers, improved social dialogue, the evidence-based knowledge and resource deployment were reported to be key contributory factors, either facilitating action towards achieving the ideal scenario or inhibiting change; a link with the Sustainable Development Goals agenda was mentioned as an opportunity.

With reference to key areas to be addressed, a high level of consensus can be observed on the following issues: organizational culture (including poor management and leadership); workload, time pressure and work intensity;

work-life balance; organizational change and restructuring; job security; precarious work; working time arrangements (including shift work, flexible schedules and rest from work); reward and recognition; control of work; harassment (including mobbing or bullying); physical violence (and threat of physical violence); and discrimination at work.

7. Why is it necessary to have a collective approach to preventing and controlling the causes of workrelated stress?

The magnitude of the negative impact of work-related stress and its health outcomes in an important part of the global working population is very evident owing to the wealth of the evidencebase on the prevalence of associated physical and mental health disorders at country and regional levels collected over more than 20 years. Unfortunately, evidence also shows that the incidence and severity are increasing in the present context.

The associated economic costs at national level, even if they only represent the tip of the iceberg, illustrate how work-related stress and its health outcomes also have a considerable impact in organizational safety, productivity and overall performance.

While acknowledging the role played by researcher and policymakers in Nordic countries in leading the way, in most countries policymakers and social partners have only recently become involved in the design of legislation and concrete interventions to tackle the causes at their origin.

Employers should be aware of the negative effects of the psychosocial hazards that may affect workers as a result of overwork and lack of control over their tasks, with the consequences of work-related stress and related coping behaviours and health outcomes. Unfortunately, many people are only conscious that a harmful stress level has been reached once its negative effects have affected their work and wellbeing. Making employers and workers aware, informed and competent to address these new risks creates a safe and healthy working environment, builds a positive and constructive preventive culture in the organization, boosts engagement and effectiveness, protects the health and wellbeing of workers, and increases productivity.

The ideal response to stress is to prevent its occurrence. This may be achieved by tackling the core of the problem, namely its causes. However, as multiple psychosocial factors can cause stress, it cannot be assessed and managed in isolation.

An effective workplace programme to prevent work-related stress requires proper identification of psychosocial risks and assessment of work performance and personal problems resulting from stress.

This implies conducting an occupational health practice with a multi-faceted approach involving the following:

- Preventing occupational and other work-related diseases, as well as occupational injuries;
- Improving working conditions and work organization;
- Incorporating psychosocial hazards and risks into risk assessment and management measures, and implementing collective preventive measures (as done with other workplace hazards and risks) by adapting work organization and working conditions;
- Increasing the coping ability of workers;
- Building up social support systems for workers within the workplace; and
- Assessing the needs of the organization by taking into consideration organizational, individual and individualorganization interactions when evaluating workers' health requirements.

Workers in a safe and supportive environment feel better and are healthier, which in turn leads to reduced absenteeism, enhanced motivation, improved productivity and a positive organization's image. The prevention of occupational accidents and diseases, the promotion of a healthy working life and the building of a preventive culture is a shared responsibility of governments, employers and workers, health professionals and societies as a whole.

8. Concluding remarks

For the ILO, mental health is a state of health and wellbeing (both individually and collectively) in which workers realize their own abilities, work productively and contribute to their community. In this context, occupational health should "aim at the promotion and maintenance of the highest degree of physical, mental and social wellbeing of workers in all occupations". The fundamental right to the highest attainable standards of health at work and to a working environment that enables every woman and man in every workplace to live a socially and economically productive life is one of the ILO's main objectives. ILO's contribution to the design of workplace policies and preventive programmes on OSH takes into account global knowledge gained through the evidence-base and good practice. In times of change in the world of work coping successfully with psychosocial risks in the workplace is essential for protecting the health and wellbeing of workers while enhancing the productivity of organizations.

As a result of the assessment carried out for this report, ILO future action in this field will aim at:

- Supporting research initiatives and strategic partnerships in coordination with other international organizations, national and regional policymakers and experts networks to support research, awareness raising, education, sharing of good practices, and development of global competencies.
- Supporting competencies development of key stakeholders and translation of research into practice, by means of promoting education and training through wider application of ILO tools such as SOLVE and the Stress Checkpoints, and additional guidance and training tools including e-learning programmes in collaboration with key experts.
- Supporting the harmonisation of national lists of occupational diseases by providing further guidance on the basis of the ILO list of occupational diseases.
- Supporting integration of psychosocial risk assessment and management in OSH management systems, and linking with sustainability of interventions.
- Facilitate social dialogue at global level for the prevention of work-related stress and its outcomes between ILO constituents.
- Globally promote an integrated approach to prevention and well-being, combining occupational health and health promotion in collaboration with WHO.



LABOUR TECHNOSTRESS STRESS RESULTING FROM THE IMPLEMENTATION OF NEW TECHNOLOGIES



José María Martínez Selva
University of Murcia

Summary

1. Work-related stress and technostress
2. Problems arising from the work timing
 - 2.1. Flexibility and elongation of working hours
 - 2.2. Permanent connectivity and interference with leisure time
 - 2.3. Problems to disconnect
 - 2.4. Immediacy of response
3. Excess of labour demand
 - 3.1. Subcontracting of memory
 - 3.2. E-mail: increase of the workload and information overload
 - 3.3. Information security
4. Changes in the occupational level
 - 4.1. Stress arising from technical problems: changes in systems and platforms
 - 4.2. Loss of process control and decreased autonomy in the workplace
 - 4.3. Mismatch between skills and job requirements. Generation gap
 - 4.4. Online job search
5. New problems
 - 5.1. Loss of attention. Interruptions and distractions
 - 5.2. Computer misuse in the company
 - 5.3. Excessive dissemination of information
6. Changes in social relations in the company. Depersonalization
 - 6.1. Computer-mediated communication and depersonalization
 - 6.2. Teleworking and depersonalization
 - 6.3. Excess of supervision
7. Bibliography

Abstract

The most important areas and areas where the deployment of information technology and communications directly or indirectly cause or promote job stress are reviewed. All the classic factors that are attributed a role in workplace stress are affected by new technologies: *physical conditions* in which tasks are performed, their *temporal distribution*, such as increasing the pace of carrying out, the overload or excess demand at work, changes in the occupational level and in social relations or social environment.

Here are exposed the problems associated to the temporary distribution of the work, in special with the extension of the labour day and the interferences with leisure and rest time. Also, the problems arising from overwork, as well as training and the mismatch between skills and job requirements. Finally, it's addressed the depersonalization increase favoured by communication through computers and remote work.

Here are identified new specific problems as the interruptions at work, the dissemination of the information by Internet or the excess of supervision based in the management of digital information of the worker obtained on the network.

Most of these problems are preventable and treatable. In order to do that companies, need training and sensitization activities, together with existing treatments for stress, in addition to individual performances of advice and general recommendations of different type. There are also problems of more draught of economic, social and cultural fields with many areas to address to which shouldn't be strange for the Administration.

1. Work-related stress and technostress

Against the advances of other times limited to very specific areas (telegraph, telephone, automobile, aviation, radio, television), the implementation of new technologies of information and communication has special characteristics: it has been and is very fast, covers almost all domains of life (information, communication, family, work and leisure *life*), causes enormous socio-economic changes and, in contrast to previous advances, it requires a learning or adaptation effort more or less intense.

The idea in society that new technologies everything is done better and faster it's widespread. The companies experience an incessant pressure to adopt and upgrade its technological means and thus increase their productivity,

competitiveness and profits. For their part, employees must strive to use them to play their role better than before. The digitization of great part of the tasks in the environment labor brings countless advantages: speed and saving of time, improves of the productivity and quality of the work, less physical effort, simplification of processes, flexibility in the schema and in the functions assigned, teleworking, greater ease for collaborate, instant and cheap communications with any place of the world and an apparent increase of free time. Many people boast that they do everything or almost through the internet, where it's operated an important part of their lives and lie many of their data and memories. It's highlighted to this regarding the new native digital generation that use new technologies as a habit, also called generation Y or "Millennials", born between 1980 and 2000 and especially after 1988, who consider themselves as the more productive thanks to their use of the new technologies. However, there is a psychological price for these improvements in form of stress since some of the traditional office health threats are accentuated and it creates new ones.

The stress is a biological and psychological reaction by which the body tries to adapt to an external challenge or threaten, resorting to his energy, physical and psychological faculties and others, between them the help from the others. If it's not adapted successfully there can appear with the step of the time psychological disorders, somatic diseases and even the death (Martinez jungle, 1995; 2004; 2016). People try to control the situation and respond to it in an adaptive successful way, but it is not always achieved. In such a case an imbalance that if lasts in time it's produced, the so-called *chronic stress*, that can be very damaging. The reaction to a threat depends on numerous factors. Thus, perceptions, attitude, personality and experience of the individual involved in how he evaluates the situation, and this assessment modulates, attenuates or amplifies the reaction.

Work-related stress is which occurs as a result of working and environment conditions and is due to different factors, most of which are also affected by new technologies. These, except in very few cases, they do not directly generate stress, but their combination with other factors causes *technostress* or stress induced or influenced by new technologies. Appears, therefore, by the conjunction of several factors, ones inherent in the individual and others in the organization of the work that can reinforce the stress labour or cause it directly.

Technostress is not a disorder or a specific disease. This term, in use since 1984, covers the problems arising from the massive and rapid use of new technologies of information and communication in all areas of post-industrial society and the service sector. It also refers to problems such as excessive dependence, addiction (techno addiction) or

harassment via network. Some of the factors that cause it are: an extension of the derived from the traditional work of office (ergonomic, sedentary lifestyle and its consequences). Others are new and they can come, for example, from how to deal with excess or loss of information, the greater demands of load and pace work, inability to disconnect during break time, the lengthening of the workday and continuous availability, including sleeping problems and interference with family life and leisure. It tends more and more to depend on new technologies which accentuates the difficulty in relax and unwind from the work. Relationships with others tend to be through the computer and will depersonalize. Some of the problems that arise do not stop being tolerable discomfort compared to the enormous cited advantages, while others can get to seriously affect health and adaptation to the social environment of the person suffering them.

The most of these adverse circumstances can be prevented and dialled with success both in individual and company level (Institute national of safety and hygiene in the work, 2007). Others need global changes more cultural and socio-economic. General recommendations for their prevention would be to make a rational use of new technologies, regain control of behaviour and promote face to face communication. A good time management is important as it is not to fall into the trap of new technologies: It makes all more quickly but one has less free time.

It must be emphasized that stress that the labour stress, and the technostress, are caused by the interaction between the employee and the conditions of the since of work. All people do not react equally to the same circumstances and what for some is stressful for others can be motivating or stimulating. Thus, individual differences in personality or to have experienced serious life events (loss of loved ones, dismissals or divorces, for instance) influence in a marked way on the propensity to suffer from stress. Other personal characteristics that have a decisive influence on the stress that you may experience are the perception of the situation, attitudes towards work, motivation and commitment to the organization.

The main sources of stress interact in a complex way and may enhance the effects of each. Among them there are the *physical conditions* under which tasks are performed, its *temporal distribution*, such as the pace increased in execution, the *overload* or *the excess demand* at work, changes in the *occupational level* and in the *social relations* or social environment, such as bad relations with co-workers and the boss or because of the lack of support or poor oversight. An important aspect is the degree of autonomy or control the worker possesses over the performance of the tasks.

The new technologies introduce a series of news in these sources of stress, as for example the interactive features, portability, broadcasting mass and connectivity permanent of the new stands and systems, the excessive use of communication through the computer, to what it's added the great capacity of adding and processing data. They contribute, as we'll see, to a greater interference of work in leisure time and personal life, the depersonalization of labour relations and an excess of supervision arising from information that the entity can own of the employee. Teleworking, or telecommuting based on new technologies, is also an important innovation, not without problems. There are also technical difficulties: excessive dependence, slowness of applications, continuous changes in them, network fails and data loss. They take the subjective feeling of more work load and less control.

The incidence of labour stress and technostress are, in general, difficult of study since its definition and detection is subjective since it's based mainly in the complaints, feelings and impressions of who it suffers. Studies point to a 40%-50% the number of European workers who are stressed or for whom the stress in the workplace is a common or usual condition (European Agency for safety and health at work, 2013). In Spain, the numbers are higher, possibly due to the strong economic crisis. High or very high stress at work affects more than half of the workers, and an average level of stress to 28.7%, in all, almost eighty percent of the workers. The economic impacts of the stress are enormous. According to the website of the American Institute of Stress (www.stress.org), in the United States are worth 300,000 million euros of annual cost.

The influence of new technologies in the different dimensions and aspects of work-related stress is little known. There is much theory and little research, except in regards to muscle problems caused by working with the computer. Survey studies, systematic observations of its direct and indirect effects and more or less generalized complaints abound. According to the cited American Institute of Stress, the overall effect of the new technologies is reflected in an increase in the working day, the pace of work, shift work and allocation tasks not provided for after-hours. In specific fields, as in commerce, is extended the expectation of the client of receive services twenty-four hours with impact in the effects cited. However, the methodology used to measure stress may increase the amounts, for example when using surveys, or decrease them when they are computed the absence from work because of them. Work-related stress, and technostress, figures may be also oversized because the word stress has positive connotations: is best seen say that it suffers from stress because of the work that you are depressed, or simply exhausted. This difficulty is added to the fact that the transition to the intensive use of the computer, complex applications and tasks online was accompanied in the beginning and during years of important settings and the first

problems of technostress, understood as a maladaptive or mismatch between skills and requirements of the job. It was a combination of: difficulty of the task and lack of skills or preparation. Some of the cited sources of stress have changed and are attenuated with the arrival of the generations trained in new technologies. However, and as you will see, not always is so and many problems persist.

In this review, there are not considered the negative consequences of the *physical conditions* of office work that intensify in the electronic workplace: sedentary lifestyle, repetitive movements when handling the keyboard and the mouse of the computer, poor posture and problems with equipment or instruments of work, its design, location or usage, bad regulation of temperature, poor lighting, noise and ventilation and inadequate humidity. As specific disorder, it highlights the *eyestrain*, to which are added muscular pains and consequences of sedentary.

It can't be separated, however, the physical conditions to the psychological. The most important point to keep in mind is that stress and mood influence in the frequency and intensity of physical symptoms and discomfort. Exposure to psychosocial risks (high labour load or demand, time pressures, control or autonomy, monotony, poor social support from colleagues and managers) increases the physical symptoms, such as fatigue and back, hand and wrist pain. Temporary pressure can increase write speed and increase the biomechanics load. Reduced control of work, or the capacity to regulate it, and little rest can affect muscle recovery of the affected area. Moreover, a low social support may cause anxiety and feelings of frustration which can increase the risks and physical complaints (Devereux et al., 2002;) (Smith et al., 1999). For example, we can mention that the most prevalent pain in our country is the back pain, which affects 60,53% of people suffering from chronic pain. This is related to the sedentary lifestyle and the bad posture, it has a strong impact on the quality of life, the labour absenteeism and *presentism* and is accompanied by an important comorbidity with sleeping difficulties, anxiety and depression (Langley et al., 2011). Below there are explained some of the most obvious effects of the implantation of the new technologies that cause job stress.

2. Problems arising from the work timing

2.1 Flexibility and elongation of working hours

The schedule flexibility and the greater control of the employee on their work time provided by the new technologies possess important positive aspects. Among them, the balance between work and personal life, as well as an increase

in productivity and commitment to the organization that is often reflected in higher incomes. Telework, in its different modalities, also provides a high degree of autonomy and is highly valued by the majority of workers and many employers. Flexibility is good and wanted approximately for about 90% of the workers (CITRIX, 2015;) Fundación Másfamilia, 2012; Workplace Trends, 2015). We must also highlight the comfort and the feeling of freedom of being able to organize his own time and agenda, and not to feel a strict, continuous control about what one does. All this should result in a higher motivation of employees and greater satisfaction.

Flexibility is or can be very good, but not always. For example, it does not guarantee family life (Ochs et al., 2006). The inconvenient refer mostly to the fact that there're more working hours, developed with greater intensity. Many freelancers and telecommuters work longer hours if they are not able to disconnect. Numerous studies confirm that the tendency to work more hours is caused by different reasons, among which highlights the use of the new technologies and the permanent connectivity. 45% of European workers "have had to work in their free time to meet labour needs" throughout the year, and 23% do so several times a month (Eurofound, 2015). 35% of working Americans says that the use of the Internet makes them increase the hours they work (Purcell & Rainie, 2014). Other American studies point that 45% of employees with access from the outside to the computer system of the company works two to three hours more a day and 20% of the interviewed passes more than 20 hours weekly working out of the office, deduced from personal life, what interferes in it (Workplace Trends, 2015). There are gender differences in this more time spent. In Germany, men work more hours when there is labour flexibility. Apparently, they identify themselves more with work than with family, following the stereotype of the head of the family that gives priority to win the sustenance of their own. Women, on the other hand, tend not to work longer and spend more time with family (Lott and Chung, 2016).

Therefore, the beneficial effects of flexibility and teleworking are not universal. Autonomy can be harmful for a workaholic. For years, psychologists have studied those psychological functions that meet the performance of a working activity and that go beyond earning a living and exercise an occupation and a profession. Thus, work increases the feeling of being useful to the society, gives meaning to life and provides a social return that indicates that what one makes has value. It serves also to learn and acquire better training, know more of the profession itself or others, increase the general knowledge, gain experience and refine skills that one already possess. In the same vein, holding office is a milestone in the development of a career that goes beyond the present. With luck, the current work projects one into the future as one stepping stone to improve.

One aspect of these various functions assaulted by the telework is the time organization function. The labour activity provides the daily, weekly, monthly and annual rhythm of activities. Everything in this life conforms to a calendar based mainly on work: entertainment, free weekends, holidays, occasions for all kinds of events, from the most important as weddings, travel or family reunions, to the less important ones, but not expendable, as the schedule of meals, when to buy or see friends. Telework gives more flexibility, but breaks with these organization functions of live activities whether or not everyday. Possibly, stable work in house or remote can only be carried out for certain types of tasks, and can only be taken by certain type of people with self-discipline, organization and motivation. The recommendations of the experts include that the teleworker autoimposes himself a work schedule that contemplates making pauses, and that disposes of a stay in the housing dedicated in exclusive to the activity labour. Worker must be provided training and appropriate media, that include learning how to organize himself in a different way than in the headquarters of the company.

2.2 Permanent connectivity and interference with leisure time

The portability of devices and permanent connectivity often lead to be reachable at any time, and ready to respond from anywhere. Positive aspects are, among others, increased productivity, improved customer care and who profit periods once considered "inactive", such as displacement or waits. They also lessen the apparent loss of performance that carries the continued mobility of some jobs.

To be connected all the time can favour the conciliation between the life work and the family, but that isn't always the result. It is expected that it cause interference of work at married life or relationships with the children, and it can favour discussions and personal problems. The intrusion of the work in private life and family already exists by circumstances special as extra hours or short-term peaks of work, but the technology accentuates this effect. The limits of the time of work is blurred and disappear, and flow into a day labour without end. Total availability, 24 hours a day, can be also a condition to promote and even for not losing their jobs. 65% of employees says that their bosses expect them to be accessible outside of the hours of work (Workplace Trends, 2015). The problem is that to separate the work time of leisure time it's increasingly harder, making it less easy to rest and recover, which is not good for mental health. In the scenario of the current economic crisis, unemployment and job insecurity, the company's requirements are stronger. It should be noted that the situation of being always located and mixing leisure and work is assumed as a natural part of many people lifes and, in particular, by those belonging to the above-mentioned generation Y (Cisco Systems 2014).

The elongation of day, permanent availability and immediacy of response causes more fatigue and less rest, necessary for the well-being of the people and to work better. Also decreases the time to reflect enough to take perspective and make plans: everything can not be nor is it necessary to do so quickly. In the long run it generates stress and can make one become more unproductive to increase the likelihood of making mistakes.

2.3 Problems to disconnect

Different studies show that many people may not relax or rest during the weekend and this difficulty in disconnecting is attributed to competitiveness, labour conditions, personal factors such as ambition and the desire to advance in the career, combined to the permanent connection through new technologies. If you work too many hours during the week labour, when it reaches the weekend it remains a high level of activation and is not easy to disconnect. It is noted that around the 50% of employees not get recover is and feel rested during the weekend (Ragsdale et al., 2016). The greater or less easy to unwind and recover depends on factors such as mood; the most positive the more recovers, and on the tasks that are carried out during the weekend. 14% of European workers remains concerned for their work during their free time always or almost always. 11% of workers don't devote time to the family because of the work (Agency European for safety and health at work, 2013). In the United States, 45% of employees claim to not having enough time to their personal activities every week (Workplace Trends, 2015).

The implementation of the new technologies doesn't increase the free time, as it tends to be filled with other tasks. In the United States work labour is increasing more and more. Employees with more skilled jobs increased weekly hours of work from 2000 to 2006. This phenomenon is emphasized in men between 25 and 64 years and, surprisingly, in people with higher education, the most prepared and with higher wages in all the occupations and industries. This trend runs counter to the overall reduction in working hours observed throughout the 20TH century (Kuhn and Lozano, 2005). Another study shows that, while in the United States the weekly hours of leisure time have increased in the past 40 years, since 1985 the men with higher education have fewer weekly hours of leisure (Aguiar and Hurst, 2009). There is no clear explanation for this phenomenon. The desire to win can lead to think that leisure time is not productive and do nothing "costs" or makes you lose money. Leisure time is no longer something distinctive of the wealthy classes.

Experts agree that the ability to disconnect and to make decisions related to work are factors that relieve stress. While speaking of disconnection is observed that it is damaged by the use of new technologies and their effect on

the extension of the working day. The equation more technology equals more free time is not met, is not the same for everyone and requires a cultural and formative change, not only in the handling of new technologies, but in the time management. The Administration and the companies must contribute to this change.

These harmful effects can be fought by setting limits or, rather, temporary borders between work on the one hand and family and leisure on the other. By not resorting to technology, and actually "disconnect" during free time. Some companies like Google and Intel establish "digital naps" without email to enhance the productivity of their employees. The car manufacturer Volkswagen agreed imposing "digital curfew" to favor the "disconnection" and the rest. It consisted on blocking the smartphones of its employees so that they would only receive messages from work between seven o'clock in the morning and quarter past six in the afternoon. In this context it fits the measure proposed in France in 2014 on the limitation to eleven hours a day of connection between companies and employees through phones and computers. During the weekend the disconnection would be 35 hours. Such measures can contribute to decrease the weight of technology on work-related stress.

2.4 Immediacy of response

The new technologies speed up our lives and reinforce the effects of the permanent connection. It's expected to do everything faster, works at a faster pace, communications are instantaneous and often expected immediate response for messages and instructions. It's a kind of "technological contagion", attached to the depersonalization, that leads to a greater demand on people. Is expected that workers are always available and that are as an artifact that is putted to work from the moment in that is plugged to the network and that should do it all in the act, with precision and without committing errors. Ultimately, the temporary pressure leads to worse performance.

It exists the possibility to locate the employees, knowing if he has received or not a call or a message and demanding an immediate answer. There are phone applications that allow knowing where a person al all time, twenty-four hours of the day, even out of the work schedule. There are known dismissals of employees in the United States, whom the company asked to always have the phone on, by have overruled that application (www.cnn.com, May 13, 2015 CNN). These applications are unacceptable interferences in private life and as we will see later are not the only ones.

This kind of situation creates stress living always ready and prepared to act in a mental condition that does not ease rest, and much less psychological "disconnection" from job. The feeling of not having enough free time and not be able to enjoy it joins the feeling of being controlled.

3. Excess of labour demand

The overload or increase in *work demand*, one of the most frequent factors of occupational stress, is due to different circumstances in addition to those already described of increase rate of work and lengthening of the working day. On the one hand, more is expected of the worker and that makes it, in addition, faster. 66% of Spanish worker's attribute stress in the work to the number of hours worked and to the overload of tasks (Ministry of work and immigration, 2010). It is an universal evil to be compensated for being aware of it and giving more autonomy to the worker.

3.1 Subcontracting of memory

An effect of new technologies is the abundance of information necessary to perform daily tasks, management and selection, which is joined by difficulties arising from the loss of information and, consequently, the hours of work and effort invested in its compilation and processing. More information is handled, it's easier to get it and is received in abundance, often without requesting it. There are more difficult to distinguish between what is relevant and what is not, with the added problem of filtering the information. Also, the risk of losing information is higher, which poses new problems of security and custody. The overabundance of information and an excess of confidence in new technologies has important consequences in our mental processes and contributes to stress.

The storage and handling of huge amounts of digital information causes aside effect, that is, the subcontracting of memory. Text, numbers, images, sound and video are stored in electronic devices. Trust in personal memory in paper is decreasing, while trust in digital memory, whether using physical devices or "cloud" services is increasing. The current essential skill is how locate and retrieve the information. This makes sense because the information is abundant and there's not the possibility of storing it in the brain. The new mnemonic science continues being spacial, as the old technical of "houses" or "palaces" of Greek and Roman speech, in the sense of that it pursues identifying where is located the information.

At the cognitive level the problem is that which is exercised is a limited form of memory, i.e. where are the things and how to reach them. Is a simplification and convenience of the process that leads to recover data with less effort; we tend to easy and to invest the minor amount of energy in what we do. Memory is only used when you know the data will not be able to be consulted in a digital format (Bohannon, 2011; Sparrow et al., 2011). We just strive in storing when we know that the information can't be retrieved in any other way, and it will be lost. As a result, one becomes more dependent on machines and applications.

Trusting for everything in computers exposes us to the problems caused by technical failures, that cause feeling of loss of control and feelings of discomfort and impotence. Other technical difficulties that favour stress come from the lack of security in communications and the risks of loss of information in its transmission or while transferring the physical devices. It's confirmed that teleworking increases the potential of loss of data and information leakage due to the access to business information or to the use of the computer by third parties. The fourth part of respondents ensures that the losses and robberies of the devices provided to the employees during the last year were frequent. 70% let people not related to the company to use their devices and 20% acknowledge having lost once any device of the company (Cisco Systems 2011). It exists the risk of losing a large amount of information, achieved with much time and effort, and that is very difficult of recover. The lack of control or distance to data require safeguards. One has to be protected or insured against unavoidable mistakes that happen day by day.

3.2 E-mail: increase of the workload and information overload

Computer communication systems allow an exchange of information faster and more precise, greater accessibility to colleagues and greater participation and collaboration. It is also true that it carries a greater centralization of the control from the managers about the activities of the employees (Kiesler et al., 1984).

E-mail is the dominant media in organizations: affordable, comfortable, versatile and immediate and is used both in formal and informal environments. It is a passive form of communication that requires less effort than the face-to-face contact. In the latter, non-verbal signals facilitate the understanding of the messages and the information received is considered to be more clear. This may be also due to the fact that who transmits the message strives more. In theory one has more time to process the information that it's sent and received and there are less distractions than in face to face interactions.

E-mail tends to impersonality and also to informality and disinhibition, depending on the speaker and the context. In informal use occur more lack of standards or less subjection to them. This versatile character facilitates mixing private and professional affairs in its use, which it's explained below.. Prudence, switching places with receiver(s) and thinking twice before sending them is required.

One of their negative aspects is the saturation caused by the continuous arrival of e-mails. Meet e-mails occupies great part of working time. Many messages are received daily and the greater part of productive hours are passed

discarding e-mails, opening the essentials, responding the urgent ones, selecting which ones we have to devote more time, archiving and deleting. Saturation of e-mails contributes to work-related stress by increasing the workload and require immediacy of response which leads more likely to make mistakes. They generate an excess of information, often not relevant, and a loss of control of the work situation. Also, it can affect to personal life and relations with the work colleagues.

We can suggest several solutions: schedule the emails from the company or not opening incoming emails until a certain time, which allows you to concentrate on delicate tasks; take advantage of the time without opening the mail to perform tasks that require concentration or are more delicate; adjusting strictly to professional priorities for deleting, answering or archiving, not losing control and let us lead by the immediate response. They're useful, whenever is possible, the so called "digital naps": not opening the mail during certain hours, or set days without email. Principles of effectiveness and good sense in its use must be followed.

3.3 Information security

Information is more vulnerable than ever, and its custody and protection is a general problem of companies and institutions which relates both to managers and employees. It is important that managers make known which are the criteria or guidelines about the data found in digital media. In companies and institutions, it can produce some difficulty to separate public and private information and to classify it according to its endangerment or secret. The company must limit the sensitive information to which the employee can have access. Also it should be aware that workers are people and so not take measures that dehumanize work.

A current problem is that the interconnection of systems and applications facilitates the mixing of the use professional and personal of electronic media. To many people it is difficult to separate the professional and private information and media in terms of time, use and content. Employees must separate the private from the public sphere, including the email accounts and so do not mix the mail for private use with the professional. Breaking these rules can cause legal problems, that will be explained later, and increase the vulnerability of the information reserved facing attacks of third parties. Many companies prohibit both the use of work computers for personal purposes as the access to social media during working hours.

4. Changes in the occupational level

New job demands arising from the introduction of new technologies may cause maladjustment to the workplace and dramatic changes in the *occupational level* which takes the form of an inaccuracy or discrepancy between what you know and what you should do, what generates feelings of frustration and futility. In the most serious cases, imbalances lead to many people to feel stocked in their professional career, or displaced from labour market, because of the need to be familiarised with the new technologies in order to be hired and not to be dismissed. In digital economy in which live, most of the jobs of the immediate future will be for people with high qualification, which includes to have high studies, knowledge of languages and management of new technologies. As these changes are fast and subject to continuous innovation, the effort of adaptation becomes permanent. It should be mentioned in first place the requirement of continuous training and adaptation, that is not as easy for everyone and in some cases, can lead to the so called "digital gap". In other cases, it causes a change in the way of doing things which translates into a loss of control of the process of performance of tasks involving real and perceived expertise.

4.1 Stress arising from technical problems: changes in systems and platforms

Many employees complain that the company frequently change software, applications or computing platforms. Sometimes the excessive aggressive commercial behaviour of the software companies is which leads not only to change computers, but to develop continuous updates of the operating systems or of the programs that not always bring relevant improvements.

This all leads one to feel summed on a process of continuous learning during all his life. Which is not all bad because learning and updating characterize a good professional and nourish the curriculum, raising, if this is the case, the possibilities of promotion and future jobs. It is also good for mental health and optimum maintenance of intellectual faculties and satisfaction with one's self. Said this, lacking of ease enough in programs that are continuously updated, puts people in a situation of tension and continuous adaptation that commit their psychological and, perhaps, labor stability. The continuous need of training can be stressful in different stages of working life, when by family reasons there's no time enough for this or when the age of retirement is near, for example.

Many times, companies and institutions change just for change. Not to stay behind, pushed by the offer of companies that know how to sell the need of being always updated. Equipment and computer systems providers tend to offer always new things, that often it's advantages that are not significant, but take advantage of that everyone wants

to keep up with the latest. The consumerism that rule over society is a great ally of the new technologies and of the companies that produce them: forces to change and expenditure. In the most of new devices, systems or applications that are presented to the public, it can weight more the incitement to consumption that the genuine technological advance.

The need of updating and adapting to systems and applications that are constantly renewed leads to an excessive dependence of the technical stuff, so that part of the cntrol on the own work is lost. The professionals of technologies of the information and communication are in our days one of the essential pillars of the management and operation of companies and institutions. The loss of control of the process tilts the balance of power in favour of the computer specialist organizations. The people who largely decide the form in that we work, is who solve the greatest part of everyday problems, but also the responsible of the greatest part of the new problems described. Finally, there is a non-minor issue that is requiring employees to collaborate in solving problems of the machines as if it were an expert, which also requires more training.

The strategy of implementation of the new technologies can affect the stress level when including a wide variety of functions: necessary information and formation, and participation of the employee in the decision making. The company must take into account when addressing the changes, which process or work processes need to be improved, or what innovations must be introduced into the existing procedures to be more productive and more competitive. It is an attitude driven by demand or need, which leads to find the existing equipment or systems on the market to cover it effectively and economically. A company or institution can do much to alleviate the problems caused by the implementation of new systems, including:

- Study well the existing need and market equipment and systems. Knowing first hand other similar places where it's been applied, what were the difficulties of implementation and how have them been overcame, if there are hidden costs, and how is the day-to-day use.
- Prepare well the organization and staff, especially to users. Seeing ahead is necessary for employees to accept better the change. The most effective way to overcome the resistance usually is to make them see concretely and clearly that the new systems will improve their work.
- Implementation of internal communication campaigns that emphasize the need to update to work better. The operational advantages in the performance of functions, time saving, flexibility, simplifying

procedures, increasing productivity, impact on the development of the career, and all the factors that are relevant in each case are highlighted.

- Investing in training and not letting the effort of adaptation to rest only on the employee.
- Opinion is requested to users and negative attitudes and resistance to change are tackled. An important aspect is the support of the organization in the form of increasing participation in decision-making regarding their work. Greater participation increases control and autonomy in performing tasks, which is one of the factors that relieves stress.
- Errors that may occur in the process of change and improvement in what it can to make more manageable the new system or the new facility are corrected.

4.2 Loss of process control and decreased autonomy in the workplace

The technological dependence causes, in many professions, a loss of autonomy or control the process of service delivery. Heavy reliance on the system to work and, in addition, and as mentioned, technicians. Often, you cannot work outside the network, and one becomes a peripheral device. It's no longer enough to know the office and, while learning the profession, whatever it is, and their specific skills are exercised, one becomes user of information and communication technologies. It is understood that a good professional knows how to handle a minimum of applications.

Many traditional professions are reluctant to use new systems, as in the case of primary care physicians. The new systems that allow the digitization of medical records, write prescriptions, immediately arrange for the patient's appointment with the specialist or for a diagnostic test, they have important advantages. But many doctors haven't received training or adequate explanations. It is not uncommon to have physicians who ask the sick leave for depression and argue their inability to work with these systems while suffering equal to or greater burden of care than before, with a very short time to care for their patients. One goes to the doctor and the doctor does not look at him: most of the time is spent locating and scrutinizing medical history, recent diagnostic tests, interactions or contraindications of the medication. They are all important issues but that ignore the human side of the profession and reinforce depersonalization. Using these systems, in addition, slow down the work, you have less time to explore the patient, and consultations already saturated become an inferno. This is an example that technostress main cause is not only the use of new technologies, but its combination with other factors, such as workload and problems of temporal ordering it.

This loss of control of the process of providing the service, which is the essence of the work of a professional, is an important factor of job dissatisfaction that reinforces the lack of identification with the institution and involvement with the objectives of it. The professionals are no longer on behalf of the client or user, but the machine technology and technologists. This condition reinforces the general feeling of being controlled, but also of professional detachment, which, on the other hand is one of the factors contributing to the fact of professional *burnout*. In this case, we have a problem both training and cultural change.

4.3. Mismatch between skills and job requirements. Generation gap

The introduction of new technologies is uneven and unevenly distributed according to age, level of education, income and gender. This creates an inequality or “digital gap” between users and non-users of information and communications technologies, which brings significant impact on the workplace: both in accessing to a job, as in the maintenance and progress in career. It directly affects the first stressor at work for Spanish people: reorganization and safety at work (Ministry of Labour and Immigration, 2010).

To a large extent this is a generational problem, which is cornering people of a certain age, educational level or resources. Similarly, one can speak of people who are not incorporated into the digital world and are in the situation of “digital exclusion”. The digital gap particularly affects the elderly: major effects of age are observed from the age of 44. The older, the less use of the Internet (National Institute of Statistics, 2014). Age also accentuates gender inequality, especially in women over 55 years. The growth of the digital economy and many procedures with the administration are carried out through the internet endangers social exclusion in our country several million people (Orange Foundation, 2010; Varela Ferrio, 2015).

However, the use of Internet and new technologies among older people is growing. In the US about 60% of people over 65 are regular users. Almost 80% have mobile phones, but only 18% have a smartphone (Smith, 2014). The gap follows the parameters of inequality targeted: the adult population is divided into two: the richer, younger and more affluent and better educated are common users, even more so than the general population users and have very positive attitudes towards new technologies; the poorest and with health difficulties are the least likely to use new technologies. They have several difficulties or barriers, starting with physical problems and difficulties in learning management of new technologies. Only 18% feel comfortable to learn to drive a Smartphone or tablet by themselves. Nearly 80% say they need someone to help them learn using a device.

There are a variety and growing complexity of the tasks required to stake a wider range of skills. It is a complex problem that affects age, culture, training and resources. In less qualified people, lack of training causes stress. This situation will change with the arrival of new generations of digital natives.

Older people are especially vulnerable. On the one hand, we must take into account physical limitations due to age, their visual abilities (visual acuity, ability to distinguish colours), hearing (difficulties in the perception of high-pitched sounds), and motor coordination. It also appears articulation problems that hinder their movements. There are also limitations in their mental capacities, especially in focusing attention, memory and decision-making, which are accentuated when tasks or systems require quick response. Also, it takes them more time to learn younger people, who transfer or generalize what they learn (for example, through the controls of the console) to other devices (smartphone) with some ease. Older people have more problems in extending learning to new situations. The brain regions involved in this transfer process lose flexibility over the years (Dahlin et al., 2008). If this inflexibility occurs spontaneously and in a natural environment, it manifests itself more strongly in a technological environment in where mutations are fast. The styles or ways of reacting to perform tasks are also different between young and old people. The latter tend to be slower but seek more certainty or security responses, sacrificing speed for accuracy.

Designers of equipment and systems can do much to compensate these difficulties: increase the contrast between the bottom of the screens and letters or pictures, use or facilitate the use of fonts of ideal size, give more time to choose between options and introduce more support programs that make it easier to use. New systems and applications should be tested before being marketed not only for young people but for older people.

4.4 Online job search

Increasingly Internet is used to search for job vacancies and to submit a CV. The use to offer and request vary daily, but is high. In the United States, up to 80% of people have used the Internet to find a job. 45% of job seekers have applied online. A significant minority complains of difficulty accessing content, read well the offer, create a digital CV and send it. 18% of smartphone owners have used it to find a job (Smith, 2015b, 2015b).

The ease of finding employment is linked to Internet use. In addition, the digital economy is making strides and mastering new technologies is an added value. According to recent data between the unemployed and inactive people is the highest percentage of those who use little or never the Internet (Ferrio Varela, 2015). Not using the

Internet makes fewer job opportunities known and is more difficult to access any position and applying: most large companies only accept CVs through the Internet and this practice is spread. In addition, their selection is often electronic, through search engines that analyse keywords in it. Many companies track potential candidates in users of general social networks like Facebook or professional ones like *LinkedIn*. An unemployed person who manages the technologies of information and communication and seeks employment through the Internet maximizes the chances of finding a job. The digital gap is also evident by age: those over 55 use the Internet the least to find a job (Valera Ferrio, 2015).

Job offers go beyond appearing on company websites or job search portals. Are social networks those seeking candidates for companies. Facebook guides Human Resource Companies that hire their services to candidates whose profile fits their job offers. This system has been criticized for its lack of transparency and being open to discrimination. The offers are directed to people according to a profile that may contain biases gender, age or race.

91% of human resources managers use general social networks like Facebook or Twitter or professionals like *LinkedIn* to review and get to know candidates to a job position better, and so completing their personal profile. There is also a downside: 69% have rejected a candidate for any information they have seen online. Is this normal? Searching for information on the Internet can reveal sensitive information (photos, videos, court records) that can be used in an applicant's demerit.

5 New problems

5.1 Loss of attention. Interruptions and distractions

The annoying interruptions are a factor of psychosocial risk, they impede concentration and reflection, force to do things quickly and potentially contribute to job stress. Studies indicate various conditions of the new technologies that, according to described, impair attention, affect performance and cause stress.

The use of mobile phone at work is widespread and, less frequently, entering social networks is too. In the US, 57% of smartphone users consider them a source of distraction. They are considered a productive tool that gives them pleasure and joy (about 80%), but 36% leads them to feel frustrated (Smith, 2015b).

By its widespread use at work, email is one of the main factors of distraction. There is more subjective pressure when automatic e-mail is received via distribution lists. It causes loss of control over the performance of tasks and increases distraction. The more emails received, the more psychological pressure is experienced, but the important thing is not the quality of the mail, but the type and content (Future Work Centre, 2015). Email outside of work hours' interference also with family life.

Instant messaging (especially WhatsApp and similar systems of Facebook and Twitter, among others) is very intrusive. Interrupts, distracts and annoys more than email. Continuous consultation of the instant messaging application WhatsApp is an important factor of distraction in the workplace, according to several surveys.

Access to social networks during work, as with all personal activities, is associated to a reduction in the performance perceived by the worker himself (Andreassen et al., 2014). Employees enter social networks during work for several reasons. The main ones are to take a break, contact with family and friends, make or maintain professional links or get information to help them at work. They believe that it increases productivity and allows them to connect with people around the world.

But voluntary interruptions, including entering social networks, are not positive and may also be a cause of stress. Internet usage in the company increases productivity, labour flexibility and ease to contact other people, but is also a source of distraction. On the positive side, half of users claim to help them unwind, relax and take strength to go on. 56% of workers say that even when using "social media" (Internet and social networks) for work, not for personal use, these activities distract them from the work they have to do and 22% believe that the net effect using social media at work is negative (Olmstead et al., 2016, Purcell & Rainie, 2014).

5.2 Computer misuse in the company

One of the problems is the use of applications, especially social networks, email and instant messaging for personal and non-business purposes, as we have seen often. The chiefs are concerned because they think they do not fulfil their obligations. Also by the possibility of expressing opinions that may give a bad image of the company.

Often the organization establishes standards of use of social networks, or preventing access to them. They also limit the use of the mobile phone. When this happens, their use is less. The computer and Internet are owned by the

company and working means to fulfil their purposes, just as working time should be devoted to the work activity. The employer has the right to control the means of work of his property, and may impose limits or prohibit the use of such media for different purposes. In return, there must be rules on its use that are concrete, clear and well known. Instruments and measures used by the employer to ensure proper use of information technology must respect the right to privacy and confidentiality of employee communications, including the content of messages sent and received, but not the identity of recipients or visited web pages as well as the time and cost of access and visit these pages. The right to privacy may be lifted with judicial authorization or consent of the employee.

But in any case, the company must ensure that all staff knows the precise rules of use of the Internet and other media, and is warned of the possible forms of verification and sanctions. It is best to use technical limitations regarding the possibilities of web browsing and proper, improper or prohibited use of applications. There must be prior information that there can't be personal use of electronic means and the scope of the data.

5.3 Excessive dissemination of information

For most office workers, their working life is spent online. Email and the Internet have become the most important tools of communication and information. Given the degree of interconnectivity between applications (email, social networks) and devices (computers, smartphones, tablets) it is easy that a mixture of work and leisure activities in the office occurs and also the rise or worsen of problems that didn't exist before, and that may have serious consequences for the employees and the company.

What is published online is accessible to almost everyone and remains forever. Typewriting is faster than handwriting and easily things will be said and regretted later. What the employee does or say online may affect their relatives, family and the company. The reputation of an entity on the Internet also depends on each of its employees and how they communicate. They are often, and especially in their messages to the outside, the image of the company and its unofficial spokesman. Communicate things related to work requires establishment and knowledge of standards and corporate culture, and maybe of the manual or style book. Errors can prove costly.

Express opinions freely can disturb the company. There is a work interference in personal life that limits the ability to communicate. One is not free to say whatever they want, because the audience is unlimited and the company can be affected by what is said. The human resources managers can track past and present extensive data of an

employee or applicant for employment. There is always a "fingerprint" on the network that can go beyond hobbies and friendships and may extend to attitudes or opinions of a political nature.

6. Changes in social relations in the company. Depersonalization

The *social relations* in the company are affected by the decline in personal contacts, new forms of communication between employees and superiors, and employees with each other, and the resulting *depersonalization*. There may also be an aggressive use of them for personal attack and harassment.

6.1 Computer-mediated communication and depersonalization.

The intensive use of new technologies causes changes in interpersonal relations and especially in the way we communicate. The abuse of email and online job leads the communication to be carried out mainly online and not personally. But communicating almost exclusively electronically renouncing the direct, personal contacts decreases, misunderstandings increase and is more difficult to correct them. In an increasingly interconnected world, it seems that there is more distance and isolation among people.

Using too much email and instant messaging in the workplace, even to contact people close can weaken and undermine the establishment and maintenance of trust relationships between colleagues and between managers and employees. Often they don't permit to express nuances. They can stir in times of crisis feelings of fear, distrust, insecurity, rejection or "bias of evil" (attribution of bad intentions to others). They reinforce the feeling of being controlled. The happier you are at work, the more productive you are, the better time is spent and the work is more effective.

The main problem is that these systems limit the communication of feelings and complex issues, both by the absence of nonverbal cues and emotional limitations such as message length. The decreasing of social clues meets a greater focus on the content of the messages. According to experts, it serves less the caller and the risk that the interaction becomes cold and impersonal. This is accentuated because the email communication and computer and instant messaging, there is a tendency to communicate more negative data than in face-to-face communication, which tends, for example, to avoid negative evaluations (Hebert and Voraner, 2003). This bias favours depersonalization in relationships in the workplace. It seems easier to transmit negative emotions through computer communication, leading to be easier to fire and give bad news. Asynchrony and depersonalization, specific of email sometimes

foster cowardice, lack of commitment and not sticking up. In an increasingly interconnected world, it seems that there is more distance and isolation among people. In this sense, the unpleasant examples of communications of sanctions and dismissals through SMS (“Short Message System”) abound, which is unacceptable.

Among the existing problems there’s also the expectation of immediate answers. The lack of return signals, which does not occur in face-to-face communication, can create problems about whether the message has been received or has been read, and if it has been understood. In personal encounters one is more aware of what he says and how he says it, as well as the return signals of the speakers. One can feel shy but ends better assessing the other person (Kiesler et al., 1984).

The *depersonalization* resulting of this form to communicate consists of a deterioration of the interpersonal relations, in a deficient emotional communication, with difficulties for the expression of the own emotions and for the understanding of the emotions of the others. All this increases with distance, the exclusive use of a communication channel, not being more effective by the fact of being faster, and not face to face to the other. That a person receives a message via email does not mean that we understand better or you know how we feel, in the same way or with the same wealth of nuances than face to face.

6.2 Teleworking and depersonalization

A disadvantage of telecommuting or teleworking is that it can lead to isolation and loss of contact with the company and colleagues. Work is performed in *solitude*, which is not always beneficial, as there are people who do not do well with isolation. It goes against the need of direct human contact and contributes to depersonalization. The creation and maintenance of contacts and social networks, called “networking” suffers. Some telecommuters can relax and not find enough motivation to perform their tasks. For them the atmosphere of the company and contact with colleagues can be essential. There is fear of prejudice or delay of the promotion, not to be taken into account and miss opportunities for advancement, not to be present at the headquarters of the company and not to have direct contact with colleagues. 60% of executives believe that telecommuting can lead to professional stagnation, invisibility and limited career opportunities (Korn Ferry Institute, 2013). The threat to go unnoticed causes uncertainty, discomfort and also contributes to job stress.

Is important that people know each other well in daily activities and teamwork so that there is fluid communication and trust between them. In addition, the company must ensure access to career progression (promotion) on an equal basis as the other employees.

It can develop social and emotional detachment. Working power social relations, allows to meet more people and contributes to weaving the web of formal and informal contacts, “networking”, in which we rely on dozens of tasks, from the most relevant, such as changing jobs, buying or sell or find a home or look for a medical specialist, to the more trivial, like looking for a plumber or someone to help in household chores. We depend on this network, we build over time, and which together with family, friends and neighbours, co-workers play an important role. Social networks are based on trust and reciprocity, so it is impossible to build them or to have some permanence without the direct contact and without feedback. Some contact and physical presence are essential.

There is still a hidden risk to mental health, the rarest but not negligible. Psychologically, working alone, like loneliness generally, contributes to depression and it’s even noted as one of the factors that promotes suicidal thoughts. Being alone means not having anyone on hand to consult difficult decisions or seek support face to major or minor daily tasks.

Experts say that the crisis has diminished the appeal of telecommuting: there is a prejudice that if you are seen, you won’t be fired so easily. The ideal is a mixed model combining teleworking with physical presence in the company, and this is the majority choice in the Spanish companies that adopt it. Employees working at home a minimum of hours or days per month, or a weekly day, but most days perform their duties at the office. Teleworking, understood as alien to the physical location of the company, is bad if not complemented by the presence in public facilities, at least for regular meetings.

6.3 Excess of supervision

Facing increase of autonomy and flexibility in the workplace, greater control over employee activity is observed in numerous orders. In large organizations, we can talk about an excess of supervision supported by technology. It is, initially, an aseptic process that can favour the work organization but which can be abused.

In some companies, there’s a track of the usage of communications, and even the content of the emails are regularly reviewed. There are algorithms with techniques of “text mining” and ability to read, sort, organize, analyse

and interpret the state of individual and collective workplace morale. They catch everything that's made in the employee's computer: what's typed, messages sent and received or visited webpages, time spent on each task, which webpages are visited and what documents are downloaded on them, interesting data for the company and worrying for employees. One reason for this is security, for example for avoiding leaks of confidential information or trade secrets (Baker, 2009).

These systems can be combined and cross data with the professional background of the company or previous jobs related, for example, wages and promotions. They provide a wealth of information and indicators of motivation, working environment, likely to leave the company, and maybe very specific, to human resources departments. The analysis of issuers and email recipients can identify who send more messages, the recipients and who, according to Baker (2009), are the less "social" who do not send any. An unsuspected "metric" indicator or of the ability to team working or "to collaborate" of an employee is developed therefore. The introduction of social networking tools (forums, chats, wikis) in business will follow the participation of employees and identify those providing comments or content of different types. The degree of collaboration on the Web can be used with little basis as an indicator of motivation and employee commitment to the company. This can hurt those who are not comfortable with new technologies, or prefer traditional and more humane forms of communication. Other relevant data may refer to texts or incorporated messages into corporate platforms that can give an idea, for example, of the leadership of the candidate. You can also develop digital *socio-grams* that inform both internal climate and the communication channels and sources, including data on closeness, friendship or enmity between colleagues.

This analysis and exploitation of data can be extended to previous work activity and participation and personal information in social networks: who are the friends or followers, what does one do in their free time or what are their hobbies, for example. The human resources managers can track past and present extensive data of an employee or applicant for employment. Their attitudes and hobbies are in their "fingerprint" on the network.

Positively, these systems allow us to know more about the workers, their potential in the company, training opportunities according to their ability and interest for professional development and better adjustment to the position they occupy. In the negative sense, we are talking about a potential over control of the employee favoured by the interconnection of applications and the information contained therein. In sum, an excess of supervision advanced by writers of science fiction and controlled by private companies that develop very intrusive applications.

The preparation and aggregation of this data is a step beyond the mere control of the content of the messages of employees and requires appropriate legal safeguards. There are sentences that give the company the right to monitor employee activity so that the control of the email account is not a violation of the right to privacy of the employee. In this area there may be a conflict between the fundamental right to privacy and self-image and the right of the company to control the productivity and organization of work activity. Logically, procedures and control means must be proportionate and reasonable (suitable or appropriate, necessary). In any case, the company must notify the employees of their installation, the specific information that can be collected and processed, and for what purpose that's performed. The employee, meanwhile, has to be aware that there is no privacy on the use of means of the enterprise or the use of social networks.

BIBLIOGRAPHY

European Agency for Safety and Health at Work (EU-OSHA) (2013) *European opinion poll on occupational safety and health*, www.osha.europa.eu.

Aguiar, M and Hurst, E. (2009). "A summary of trends in American time allocation: 1965-2005 ". *Social Indicators Research*, 93, 57-64.

Andreassen, CS, Torsheim, T. & Pallesen, S. (2014). "Use of social network sites online for staff purposes at work". *Comprehensive Psychology*, 3, 18.

Ariely, D. (2008). *Predictably Irrational*. London: Harper Collins.

Baker, S. (2009). *Numerati: Lo saben todo de ti*. Barcelona: Seix Barral.

Bohannon, J. (2011). "Searching for the Google effect on people's memory". *Science*, 333, 277.

Cisco Systems (2014). *Cisco Connected World Report*, www.cisco.com.

CITRIX (2015). *Tiempos y hábitos en los desplazamientos al puesto de trabajo de los españoles*, www.citrix.es.

Dahlin, E., Stigsdotter Nelly, A., Larsson, A., Bäckman, L. & Nyberg, L. (2008). “Transfer of learning after updating training mediated by the striatum”. *Science*, 320, 1510-1512.

Devereux, JJ, Vlachonikolis, IG & Buckle, PW (2002). “Epidemiological study to investigate potential interaction between physical and psychosocial factors at work that may increase the risk of symptoms of musculoskeletal disorder of the neck and upper limb”. *Occupational and Environmental Medicine*, 59, 269-277.

Eurofound (2015). *Europa Working Conditions Survey*, EWCS, www.eurofound.europa.eu.

Fundación Másfamilia (2012). *El libro blanco del teletrabajo en España*, www.masfamilia.org.

Future Work Centre(2015). *You’ve got mail*, www.futureworkcentre.com

Gale, A. y Christie, B. (Eds.) (1989). *Psychophysiology and the electronic workplace*. Chichester: Wiley.

Hebert, B. G. y Voraner, J. D. (2003). “Seeing through the screen: Is evaluative feedback communicated more effectively in face-to-face or computer-mediated exchanges?” *Computers in Human Behavior*, 19, 23-38.

Ijmker, S., Huysmans, M. A., Blatter, B. M., van der Beek, A. J., van Mechelen, W. & Bongers, P. M. (2007). “Should office workers spend fewer hours at their computer? A systematic review of the literatura”. *Occupational & Environmental Medicine*, 64, 211-222, doi: 10.1136/ocm.2006.026468.

Instituto Nacional de Estadística (INE) (2014). *Encuesta sobre equipamiento y uso de tecnologías de la información y la comunicación en los hogares*. Madrid: 2014.

Instituto Nacional de Higiene y Seguridad en el Trabajo (2007). *Tecnoestrés: Concepto, medida e intervención psicosocial*. Nota Técnica de Prevención 730.

Kiesler, S., Siegel, J. y McGuire, T. W. (1984). “Social psychological aspects of computer-mediated communication”. *American Psychologist*, 39, 1123-1134.

Korn Ferry Institute (2012). *Executive Survey on Telecommuting*. www.kornferry.com.

Kuhn, P. y Lozano, F. (2005). “The expanding workweek? Understanding trends in long work hours among US men”. *National Bureau of Economic Research (NBER) Working Paper* No. 11895.

Langley, P. C., Ruiz-Iban, M. A., Tornero Molina, J., De Andrés, J. y González-Escalada Castellón, J. R. (2011). “The prevalence, correlates and treatment of pain in Spain”. *Journal of Medical Economics*, 14, 367-380.

Lott, Y. & Chung, H. (2016). “Gender discrepancies in the outcomes of Schedule control on overtime hours and income in Germany”. *European Sociological Review*, 1-14, doi: 10.1093/esr/jcw032.

Martínez Selva, J. M. (1995). *Psicofisiología*. Madrid: Síntesis.

Martínez Selva, J. M. (2004). *Estrés laboral. Guía para empresarios y empleados*. Madrid: Prentice Hall-Financial Times.

Martínez Selva, J. M. (2011). *Tecnoestrés: Ansiedad y adaptación a las nuevas tecnologías en la era digital*. Barcelona: Paidós.

Martínez Selva, J. M. (2016). *¿Por qué los toreros se afeitan dos veces? 12 enigmas del cerebro y la conducta*. Murcia: Diego Marín. Capítulo 12 (pp. 273-299).

Martínez Selva, J. M. (2016). *¿Por qué los toreros se afeitan dos veces? 12 enigmas del cerebro y la conducta*. Murcia: Diego Marín.

Ministerio de Trabajo e Inmigración (2010). *Encuesta de calidad de vida del trabajo*, www.empleo.gob.es.

Ochs, E., Shohet, M., Campos, B. & Beck, M. (2010). “Coming together at dinner”. En K. Christensen & B. Schneider (Eds.) *Workplace flexibility. Realigning 20th-Century Jobs for a 21st-Century Workforce*. Cornell: ILR Press.



Olmstead, K., Lampe, C. y Ellison, N. B. (2016). *Social media and the workplace*. Pew Research Center, www.pewinternet.org, 22 de junio.

Purcell, K. & Rainie, L. (2014). *Technology's impact on workers*. Pew Research Center, www.pewinternet.org.

Ragsdale, J. M., Hoover, C. S., Wood, K. (2016). "Investigating affective dispositions as moderators of relationships between weekend activities and recovery experiences". *Journal of Occupational and Organizational Psychology*, doi:10.1111/joop.12150.

Smith, A. (2014). *Older adults and technology use*. Pew Research Center, www.pewinternet.org, 3 de abril.

Smith, A. (2015a). *Searching for work in the digital era*. Pew Research Center, www.pewinternet.org, 19 de noviembre.

Smith, A. (2015b). *U.S. Smartphone use in 2015*. Pew Research Center, www.pewinternet.org, 3 de abril.

Smith, M. J., Conway, F. T. y Karsh, B.-T. (1999). "Occupational stress in human computer interaction". *Industrial Health*, 37, 157-173.

Sparrow, B., Liu, J. y Wegner, D. M. (2011). "Google effects on memory: Cognitive consequences of having information at our fingertips". *Science*, 333, 776-778.

Varela Ferrío, J. (2015). *La brecha digital en España. Estudio sobre la desigualdad postergada*. Madrid: Unión General de Trabajadores.

Workplace Trends (2015). *Workplace Flexibility Study*, www.workplacetrends.com.

TECHNO-ADDICTION AT WORK? A VIEW OF WORK STRESS FROM THE PSYCHOLOGY



María Dolores Vallellano Pérez
Jose María Prados Atienza
University Complutense of Madrid

Summary

1. Introduction

2. Is the techno-addiction a real thing?

2.1. Key features of the problematic use of ICT

2.2. Some research subject

3. Improper use of ICT in work contexts

3.1. On worker's initiative

3.2. On company initiative

4. Conclusions

5. Bibliography

1. Introduction

The Information and Communication Technologies (ICTs) are changing, not only the outline but also the structure of the workforce. Since the first human tools associated with hunting, gathering, farming and crafts, through the large and increasingly heavy machinery of the Industrial Revolution, every technological innovation emerged to produce objects or relate people to the world, implying also positive consequences and negative impacts on society, in an incessant flow of creation and change never free from harmful elements.

Currently is a special thing the miniaturization of many tools, the automation of work and connecting between workers. There are still more than four billion people without connection, as it is considered by the founder of Facebook, Mark Zuckerberg, at Mobile World Congress 2016 (elEconomista.es, 2/23/16, p. 14). This has meant that, for some people, working from home is already a reality today (Davis et al., 2014). This has meant that, for some people, working from home is a current reality. And thanks to the massive interaction that contributing ICT, the constant threat of dismissal, so characteristic of our society, is increasing to those who believe that the network is a tool for finding other work activity (although studies suggest underuse in that sense, like Feuls, Fieseler And Suphan, 2014).

But despite the advantages that imply ICT, we want also to advise of issues, which are often underestimated because we are in a phase that has more than childhood fascination that a mature use (Keen, 2016). Being into a “smartphone effect “ (Armayones, 2016), the new devices, so-called “smart” live with us in a very intrusive form, and many people cannot resist the temptation to look at your phone-computer, even in situations where they should not. If our life passed between screens, as long chided Turkle (1995), currently it appears that even he does “through” them.

Focusing at workplace, ICT involve at least two disadvantages partly related (Chen et al., 2014). On the one hand, some people, in their jobs, say they feel more stressed than before, as a result of ICTs. Not for nothing, the term “techno-stress” has coined referring to this affliction (Brod, 1984; Llorens, 2011; Martínez Selva, 2011). As new technologies require learning constantly new things and produce a lot of information and communication that must be processed very quickly, it is easy to burden us. But additionally they supposed to be always located, which means that many people have the feeling of not having rest time even in the weekend, apart from the extension of working hours for nothing. The informal “work off” becomes increasingly necessary.

On the other hand, there are also many complaints about excessive reliance on new technologies, which is contradictory to the reputed independence that aims to encourage our current society. In that sense, some people claim even be “techno addicted”. This paper focuses on this last point. Does it real techno-addiction? It could be the current working environment inducing some kind of dependence on new technologies, harmful personal consequences?

To analyse this matter from prevention of occupational risks, it is important Psychology of Work as a discipline. Aided by the Health Psychology and the Basic Psychology, it should not stop studying the effects produced by ICTs and being a raising voice on all those working conditions that can be improved. But as always, the main obstacle is that technological innovation is often far ahead of the ability of science to study the effects that this produces; So, many problems come into being before our myopic eyes, that are unable to prevent all the negative consequences. As an example, we can remember the harmful consequences for employees from the monotonous and repetitive tasks that led the Fordist production model, started to not be studied until many years after set up the model (Terkel, 1974; Tolliday y Zeitlin, 1986).

Let us hope that does not happen the same with the negative results of ICTs. Fortunately, they have been appeared s specialized magazines aout all these concerns *Computers in Human Behavior*; *Cyberpsychology, Behavior, and Social Networking* (anteriormente conocida sólo como *CyberPsychology and Behavior*); y *Journal of Media Psychology*, are some of them.

We are two objectives in this work: the first one is to review the concept “techno-addiction” and expose some of the most relevant studies up to now, especially in connection with workplace. The second one is to list some suggestions to prevent the negative consequences of inappropriate use of ICTs.

2. Is techno-addiction real?

From the initial proposals and during two decades, both Professor Mark D. Griffiths, of Nottingham Trent University (Griffiths, 1995), and Kimberly S. Young (1996), is very common to read or hear the term “techno-addiction “or” addiction to new technologies “(Becoña, 2006; Schimmenti and Caretti, 2010), as well as other more concrete concepts, as “Internet addiction” (Gamito et al, 2016.), etc. In addition, the proliferation of scientific papers about it, may suggest that it is a particular group of psychological disorders. But the truth is that it is not so clear. For

example, for the American Psychiatric Association (American Psychiatric Association; APA), the techno-addiction do not exist; At least not for now.

The APA is one of the most important international references in mental health issues.. At the beginning, in 1844 with the association of different managers of psychiatric hospitals, and especially since 1921, when it acquired its current name, one of the main objectives of this organization has been to describe the psychological problems and to have an agreed classification. Therefore, since 1952, the APA published a manual to help mental health professionals in the difficult task of diagnosing psychological disorders. This one is DSM, *Diagnostic and Statistic Manual*.

In its latest version, the DSM-5 (APA, 2013), a group of experts who analysed the matter, did not find enough scientific evidence to come up with “techno-addiction” and its specific variants such as Internet addiction, as a particularly psychological disorder, as some authors came proposing for some time (p. ej., Block, 2008; Griffiths, 1995, 2000; Young, 1998). However, it is included (at least online game), along with many other conditions that need further study before establishing a new diagnostic category in mental health

The main reason that led to the DSM-5 to dismiss these diagnostic categories is that they are controversial concepts, involving an extensive variety of behaviours, which translates into a lack of valid and totally accepted opinion (Starcevic, 2015).

In our opinion, we believe this caution attitude by the DSM does not at all excessive. Especially because there is a tendency to make an unappropriated use of the diagnostic labels. For example, it is too well known that the DSM insists again and again that what is named and classified are problems, not people. In other words, although a diagnostic category is established, for example, the “specific phobia”, this expression should be used to describe a particular problem that can occur in anyone, never the other way around: we should not label anyone in social phobic. Well, the truth is that we find many examples of this error So, it is easy to hear, or read, the word “paranoiac” to refer to a person suffering from delirium of pursuit, or “depressed” to describe someone suffering from a depressive disorder; for example, Ralph Collins (1963: 157) writes that “*the occupational physician should be familiar with the adaptation of the neurotic worker, psychopathic and psychotic in the workplace*”.

Although this is a big mistake, taking the part for the whole, the most serious is that these labels have been used to “stigmatize” and discriminate against people, as the sociologist Erving Goffman denounced (1963). For example, in the book “Manual of Neurology and Psychiatry in Occupational Medicine”, it reads that addiction “*usually appears in susceptible individuals, weak-willed, dependent, passive and immature*” (Collins, 1963:192). This wrong way to label people and not to label problems, damage in any social setting, especially in the workplace, for example aborting recruitment or favouring a non-legal dismissal. Therefore, before proposing any new diagnostic label, we must be very careful, and should be the norm and not the exception, given our tendency to misuse this matters.

But unfortunately, there are a lot of technology neologisms that label people and not their problems (e.g., some call “Geek” the fascination with technology person, or “Techno-silly” the person who falls into no longer appear technological compulsive consumerism). We emphasize once again: the scientific discourse on mental health should be to classify problems, if that possible and appropriate, but never to tag people. A diagnostic category can never be an adjective of personality.

On the other hand, to spread a new expression, can also imply other serious problem: to “sobrepaturlogizar” everyday life (Billieux et al., 2015). That is how we differentiate an inordinate fondness for ICT with a problem?. It is not easy, especially without taking into account the full context in which each behaviour occurs. An interesting question was presented to us recently: a marriage consulted us separately, and if for her, he had an “addiction” to Internet games, for him, she had an “addiction” to social networks; the funny thing is that both denied having a problem. Perhaps for this reason, the DSM-5 is also cautious about what has been called “behavioural addictions” (vs. authors like Guerreschi, 2013; Piquet-Pessoa et al., 2014, etc.).

Moreover, unlike previous versions, the DSM-5 is also very cautious with the concept of “addiction”. In fact, currently to label “substance use disorder” is preferred. It is hoped to better help people who have problems relate to certain drugs but until now did not meet the criteria of dependency.

The word “addiction” is a vague word, because in everyday language is used both to discuss the enthusiastic interest and devotion to something (as in the phrase “at home are addicted to the sun”), to refer dependence that a person has a particular substance (as in the phrase “I’m addicted to snuff”). In this last sense, the word put into

psychiatry to displace the old concept of *instinctive monomania* which qualified problems with alcohol or gambling in the early twentieth century.

Therefore, if the word “addiction” is currently being reviewed (although we doubt no longer utilized, in the 60s of the last century there were many researchers who advocated the deletion of anxiety, and because the case is that they he has done), with more reason to be sceptical with the word “techno-addiction”. Alternative expressions, which raise more consensus among mental health professionals, are “inappropriate use of ICTs” and “problematic use of ICTs”. Although many practitioners tend to confuse these expressions they could be used as ends of a continuum. There may be people who do simply improper use of ICT, and this usage will become problematic or pathological. This axis is enough to enable research and, incidentally, to help many people with difficulties with ICT.

2.1. Main keys of the problematic use of ICT

In the expression “problematic use of ICT,” the adjective “problem” refers to a number of features that often occur together in a prototype way. That is, the “prototype” example of the problematic use implies compliance with all these conditions, although in each case there may be more or less the same distance. Much more easily, it is easy to talk about problematic use if given all these features, and difficult when only comply with some of them. If only if they meet one or two, it should be used rather the term “inappropriate use of ICTs”.

a) Use over the top

First, one of the central features of what we call a problematic use of ICT is to spend many hours a day with them. Although previously we are talk about the necessity to be cautious with the word addiction, the research has found that the “perceived addiction” of a person, that means the perception that it has of whether or not addicted, it is usually related to the number of hours using ICT. Specifically, some studies, such as Grubbs et al (2016) have observed this relationship in a large sample of participants: more of hours per day consuming pornography on the Internet, more self-perception of addiction

But one problem that immediately arises is what we mean by “many hours” is. Although to set a limit in adults may be difficult because of many and different obligations related to ICTs to work, regarding children, the American Academy of Paediatrics (American Academy of Paediatrics, AAP) has adopted the criterion to consider “excessive” more than two hours a day in front of screens.

One question that often arises in researching what is the frequency that can be risky. In a study, Gamito et al (2016) observed no relation; therefore, it is necessary to have other indicators to talk about a problem with new technologies

b) Pressing need of consumption

Another important feature lies the person with the anxious desire to use ICT.

This desire tends to increase during periods of stress or discouragement, which has suggested that consumption is used as a search for emotional relief (Caplan, 2007; Young, 1998). But as the desire is dominant, also it entails that behaviour takes place in inappropriate situations: for example, when ICT is consumed in a gathering of friends or at work. In that sense, they are famous political scandals surprised playing or “memes” with ICTs in the exercising their duties.

But again, considering only the consumer desire it is not enough to talk about a problem with the new technologies

.

c) Loss of control over consumption

A relevant condition also lies in the loss of control that appears when trying to resist the urge to use of ICT, or to stop using, despite negative consequences that may arise for it So either you cannot resist them, or even you cannot leave.

d) Negative reaction to remove consumption

Another important feature seems to be the dysfunctional emotional response that occurs with the removal of consumption of ICT. This reaction can range from irritability and anger, to anxiety or depression.

Many people live with anguish to loss connectivity, for fear of missing something (this has led to coining the term, more! One of FoMO acronym for Fear of Missing Out), and in the most extreme cases people believes simply they cannot live without technology. In this sense it is when the person is often said that it is impossible to separate ICT (Caplan, 2007; Chak y Leung, 2004).

But although the anxious feeling is the most common, also they react in a depression, which tend to arise after losing control, for example, after viewing pornography on the Internet or play too, once initially resisted the temptation to.

e) Interference with social relations

The problematic use of ICT is often associated with some type of alteration in the normal social behaviour.

This feature is usually very obvious to others, but not to the own person. For example, consumer craving leads some people to voluntary social isolation. That is, they prefer to stay at home consuming ICTs instead of going to a social event (e.g. children who do not attend birthday parties because they prefer to stay at home playing video games or, if they come, are isolated from others because they continue playing with a mobile device).

In other cases, ICTs are just becoming a social actor able to influence the environment. In a study at the University of Essex, the presence at the table of a mobile phone, influenced the depth of the conversations that were had; in particular, they were more superficial, perhaps for fear of being interrupted.

The interference also occurs in family relationships, as many people feel in first person. In fact, ICTs have produced a real intrusion, at the expense of the couple or children. In a study by the Boston Medical Center, 55 groups of parents with their children were observed while they ate in fast food restaurants; well, 40 out of 55, i.e. 72.7%, they used a device meantime; It was also noted that 40% of them remained absorbed, and therefore indifferent to the needs and questions of the children; in this case, if they had to answer them, they did so with the hardness that is being disturbed (Radesky et al., 2015).

These results indicate that, under these conditions, parents are not representing suitable models for social education of their children, to which must be added, the feeling of states to be “competing” with a machine for the affection of their parents .

f) Cognitive disturbance

Even though some studies have shown cognitive improvements with appropriate use of ICT, however, improper use can have negative consequences for attention. And by extension, it is easy interference occurring at work, as we shall see. Or accidents.

g) Health damage

Health could be weakened, when person neglects your personal hygiene, nutrition or sleep. Specifically, insomnia because of ICTs is high (according to some surveys, 20% in women and 15% men). The immune system would be one of the most affected when these changes occur.

And perhaps we should mention, if an obsession occurs by having everything new, this will entail high economic costs, which in some cases lead to debt and therefore to do without basic needs that cannot be paid.

2.2. Some researching subjects

In the previous section we have listed the general characteristics of what could be a problem related to ICTs. But we must not forget each technology may have its specific nuances, and that each behaviour may be different. In recent years, research seems to focus on four types (although there are many more): video games and online gaming, cyber pornography, social networks and smartphone. Let's look at a few touches of each separately.

a) Video games and online gaming

The interest of psychology in video games is almost as old as them (Trinkauss, 1983). Since then, we know that the proper use of action video games can have positive consequences for selective attention (Green and Bavelier, 2003, 2006), for memory and executive control (Boot, Kramer, Simons, Fabiani, y Gratton, 2008).

But they have used different procedures for trying to evaluate cases where a problematic use of gaming occurs. One instrument is the Problem Video Game Playing Questionnaire (PVP), nine questions, which must be answered with a dichotomous response ("yes" or "no") (Tejeiro-Salguero y Bersabé-Morán, 2002).

b) Cyber pornography

For research, one of the most widely used tools is *Cyber Pornography Use Inventory-9* (CPUI-9), made by Grubbs et al., (2015). This tool has three different dimensions: 1) Compulsive ("Even when I do not watch porn, I let myself go"), 2) Striving to access ("Sometimes, change the agenda to be alone and to see pornography"), 3) stress or negative emotions ("I usually feel depressed after watching pornography").

Using this tool, in a recent study, Grubbs et al., (2016) found no association between consumption of cyber pornography and instability personality called "neuroticism" or emotional instability, that contradict previous studies (eg. Egan y Parmar, 2013).

c) Social networks

Even though people who show problematic use of social networks (Facebook, Twitter, Instagram, Snapchat, Tumblr...), often want to connect, no matter where and with whom they are, a study of California State University has observed brain patterns of people who felt anxiety when using these social networks. The results were very similar to the patterns of people with substance-related disorders.

d) Mobile o Smartphone

In the "smartphone effect" (Armayones, 2016), where almost 80% of teens use them, and even children, it is not surprising that numerous research arose about, using the *Mobile Phone Involvement Questionnaire* (MPIQ; Walsh et al., 2010), and other tools.

Some authors have used the expression Non-Mobile-Phone Phobia, to refer to the problematic use of this particular technology. But as we said in section 2, the proposal for inclusion in the DSM-5 (Bragazzi and Puenete, 2014), has not been successful. We emphasize once again: it is necessary to be careful before adopting new diagnostic labels, because our tendency to stigmatize people for their emotional ailments or their abnormal behaviour.

However, research has to move forward. From the outset, we know that more and more people may be susceptible to have problems with mobile; in a study of 547 students, 23% were classified as having a problematic use of this. People with an anxiety disorder may be more prone (Bianchi y Phillips, 2005). Because the main emotional reaction related to mobile is anxiety. Specifically, in a study by the UK Post Office in 2010, 2,163 surveys, 53% of people reported feeling anxious in some way: for fear of leaving the phone at home, losing access to lose mobile to consume all the battery, or not having coverage.

The main negative consequences of inappropriate use of mobile are: a) performing unnecessary calls, and therefore high bills if they do not have a flat rate; b) non-realization of rewarding activities or no experience of them, being busy with mobile; and c) social problems (such as isolation, interference, etc.).

3. Inproper use of ict at workplace

In this section, we will focus on some of the most interesting studies that have emerged in recent years regarding the inappropriate use of ICTs in the context of paid employment.

3.1. Worker initiative

In paid employment, sometimes they attend certain beliefs that may raise conflict between workers and their employers. One of these beliefs is to spend time working hours to ICTs is something negative. This phenomenon has been named “cyberslacking” (Lavoie & Pychyl, 2001), or “ciberloafing” (Jia, Jia, & Karau, 2013). So, the inappropriate use of ICTs in the context of paid employment has been generally regarded as a departure from the labour obligations. And in this regard they have already been implemented numerous restrictive policies (Henle, Kohut y Booth, 2009). But, is it true?

It is undeniable that yes, it is at times; for example, when consumption is done in an inappropriate context and may result in some kind of physical danger. For example, in the summer of 2016 the first Galician media, and national then unveiled a bus driver who seemed to play the popular Pokemon Go while doing his usual route (La Voz de Galicia, 27.7.16). By extension, for any job that requires a high degree of vigilance, it is absolutely counterproductive distraction involving ICTs. Also it will be when the demands of the game and the time dedicated to it are a lot, or if it causes conflicts with colleagues and supervisors.

But thinking that you have to limit the private use of ICT during working hours only considering that it is unproductive, it is not a real true. Leonard Reinecke, University of Hamburg, has spent several years proving the opposite. First of all, he conducted a study where he observed to play after a demanding task can help to improve concentration at work and reconnect (Reinecke y Trepte, 2008). And in 2009, he made a comprehensive survey of German workers who used to play online during work hours; the sample had an average age of 35.1 years and the ratio between men and women was similar. The data suggested that one of the main justifications to game during work hours, is that it helps to recover, especially when fatigue is excessive (Reinecke, 2009).

But the private use of ICT not only focuses on the games. They also often respond private couriers, read news, watch videos, listen to music, purchased, etc. Recent research suggests that all distractions can also have positive consequences. First of all, they are an important source of recovery from fatigue, but also of work stress and

boredom (Ivarsson & Larsson, 2011). In fact, some workplace’s theorists, suggest that the recovery of work be effective it needs at least four necessary dimensions (Sonnentag y Fritz, 2007):

- 1 The first is the requirement of the mental “detoxify” from work. And, especially, when one disconnected from the concerns related to the difficulties encountered throughout the day.
2. The second one is that the person can relax. That is, the person re-experienced a return to the previous physical and mental work levels.
3. The third one is person can live an experience of accomplishment. Ideally, you even get to build new internal resources or new skills by an alternative task.
4. Finally, the individual feels that he controls the activity and not the activity monitor him.

Therefore, far from demonizing the use of ICT at work, and in all jobs, they could have, in many cases, a recover function of fatigue or stress at work, which is absolutely necessary. We must remember that the Law 31/1995 of 8 November on Prevention of Occupational Risks (LPRL) says that job stress is a more psychosocial risk at work, and therefore must be considered in the General Prevention Plan the companies.

But it’s not just that. Some data suggest that ICTs can be distracted at work, even they can be correlated with greater job satisfaction. On the other hand, it is obvious that, they expect workers to answer work emails from home, it is because private ICT distraction during working hours could be a compensatory reaction. In a study published in 2014, König and Caner analyzed responses from 190 Swiss office workers to different questionnaire and observed that Internet use for non-work purposes, was positively correlated with the number of private lawsuits, that is to say, with the number family and personal daily chores. Also it associated negatively with identification with the job, using the scale of nine questions of Kanungo (1982). That is, to use the Internet at work for own affairs depends on both the number of private obligations are, and the similarity of beliefs, desires and goals that are shared with the organization

It is usually thought that the work and family domains are independent, but we know some time ago by theorists balance between the two areas, such as SC Clark, a domain can affect the other, but also cross voluntarily, depending on the existing needs In each one (Clark, 2000).

3.2. Company initiative

As many individuals do, many companies are also taking advantage of new technologies, and rarely consider the possible damage result in this.

Since our working life is no longer being, in general, without a screen, there exist a continuous exposure to such radiation that it is cause trade unions concern (Vázquez y Zamarrón, 1990), and medical too. In that sense, a pioneering doctoral thesis was made by Retuerta Perez at the Complutense University of Madrid in 1992; in it, he analysed the health aspects of VDT work, distinguishing between purely environmental (electromagnetic emissions, lighting, noise, air conditioning, temperature, humidity, etc.), and “human factors” (visual, postural and psychosocial problems). After the analyses he noted an association between refractive error and fatigue.

Although monitors and screens are no longer based on both CRTs, as occurs in other technologies (liquid crystal devices or LCD, plasma, field emission or EDF, LED, etc.) they must continue assessing their risks because the time spent in front of them is increasing (e.g. 76.9% of the day in office workers, Konig and Caner, 2014), this knowledge that must be taken into account by the different collective agreements.

But leaving aside the negative physical consequences involving ICTs, the environmental current work could be dangerous by inducing some kind of dependence on new technologies?

Some companies require their employees to use smartphone and be always connected. At the same time, usually organizations where work stress is easy to develop because of their structure, the company culture, the environment, etc. But according to this research, these two conditions, stress and ICT should not go together. In a study, Chen et al (2014), assessed over time a sample of 2,550 engineers of technology and they founded that stress at workplace is one of the elements that could be associated with the risky use of Internet.

On the other hand, one might think that a disorder related to ICT does not have direct consequences for the company. But it does, especially if the job involves making decisions. In a study published by the University of Pittsburgh in Pennsylvania (USA) and various Korean universities (Seok et al., 2015), some functional changes in the brain were observed, with the help of a brain scan; specifically, people who trends to problematic Internet use, in compared with control group participants, had less activation in the ventrolateral prefrontal cortex (associated with

the control and regulation, among other functions); similarly, the first persons also shown a big tendency to risky decisions.

Although this study has been criticized for its small sample size and lack of rigor in control all the variables (Starcevic, 2015), it is true that it shows negative effects related with ICT (Grau et al, 2001; Salanova, 2003). In that sense we agree with the great guru of the media and inventor of the term “global village”, Mashall McLuhan, returning us to remember that that “we who we shape our tools, but then they give us way to us “ (McLuhan, 1994, Keen, 2016).

4. Sugestions to conclude

In this paper, we have tried to answer the question if current work context might be inducing some sort of dependence on new technologies. The issue is controversial from the point of view of mental health, because the idea of dependency. Instead, using an axis between misuse and problematic use of ICT, we can conclude that the employment context can induce different alterations, especially when the abuse of technology and job stress are chained. However, more experimental research is needed to confirm this provisional conclusion.

Meanwhile, with the intention of preventing the risky use of ICTs at work and, by extension, in other areas, some suggested time could be taken:

1. First of all, creating contexts to prevent and to face work stress, such the LPRL obliges. Within these contexts, a specific objective will be to overcome our fear to be disconnected. To this, it would apply all that we know to live with fear and anguish (Prados, 2008).
2. Secondly, the company or organization has to book a time off ICTs. Especially it is important that both meals and bedtime are free of technologies. And this time must be as longer as possible. Some companies are testing no connections like this with very good results. For example, Laszlo Bock, vice president of personnel management at Google reports in his book “The new formula work”, that the office in Dublin had created in 2011 a program called “Dublin is disconnected,” exhorting workers to stay off-line once the daily is finished, and also on weekends, even leaving the laptop in the company, with the goal of forcing workers to not answer e-mails related to work (Laszlo, 2015: 169).

3. Rise in value relationships and genuine emotional ties.

According to the book “The digital diet” by Daniel Sieberg, technology expert CBS and confessed to ICTs “ex-addict,” (Sieberg, 2011), it is a technological coarseness put the mobile on the table when we are with someone.

In any context, if we meet other people, we should ward off devices, if they hinder us to establish a good relationship. And if we are more able to say nice things by a device instead that in person, we should learn to control such inertia, and reverse it.

4. To increase the value of important things

In a survey ordered by Intel consultancy Harris Interactive, made public in The New York Times and made to 2000 smartphones users in the US, 46% of women and 30% of men said to prefer two weeks without sex before two weeks without Internet.

We must not allow the screen to be our only connection to the world. We must connect with it, live in it and not waste too much time with ICTs, unless strictly necessary to work, learn or relax. If in private sector many people loss experiences by the desire to make a video, at employment context we should not depend on technology to make the essence of our work

5. In job descriptions they should be reflected the functions and tasks related to ICT, and collective agreements should be including good practices in the use of ICTs at work.

For example, if a person is required to attend email or phone after daily work, this should be considered as an extension of working hours, or overtime work. The need between union monitoring and technological innovation is obvious. We hope that psychological research contributes to a greater awareness of all parties involved.

Conclusions

1. Without wishing to deny at any time the positive aspects of ICT in the workplace, we have focused on the improper use of them, which sometimes becomes a risk.
- 2.. We have adopted this expression by the scientific argument raised by other terms, such as techno-addiction.
3. Specifically, this article highlights the potential danger of abuse of ICT in paid employment, especially in contexts where there is a risk of occupational stress.
4. Businesses, employees and trade unions, should be aware of this, as well as prevention mechanisms.
5. More experimental research is needed to continue advancing in knowledge of this subject.

BIBLIOGRAPHY

American Psychiatric Association (2013). *Diagnostic and statistical manual of mental disorders* (5^a Ed.) Washington, DC: Author.

Armayones Ruiz, M. (2016). *El efecto smartphone*. Barcelona: UOC.

Becoña Iglesias, E. (2006). *Adicción a nuevas tecnologías*. Vigo: Nova Galicia.

Bianchi, A., & Phillips, J. G. (2005). “Psychological predictors of problem mobile phone use.” *CyberPsychology & Behavior*, 8, 39–51.

Billieux, J., Schimmenti, A., Khazaal, Y., Maurage, P., & Heeren, A. (2015). “Are we overpathologizing everyday life? A tenable blueprint for behavioral addiction research.” *Journal of Behavioral Addictions*, 4(3), 119-123.

Bock, L. (2015). *La nueva fórmula del trabajo*. Barcelona: Conecta.

Block, J. (2008). “Issues for DSM-V: Internet addiction.” *American Journal of Psychiatry*, 165, 306–307.

Boot, W. R., Kramer, A. F., Simons, D. J., Fabiani, M., & Gratton, G. (2008). "The effects of video game playing on attention, memory, and executive control." *Acta Psychologica*, 129, 387–398.

Bragazzi, N. L., & Puenete, G. D. (2014). "A proposal for including nomophobia in the new DSM-V." *Psychology Research and Behavior Management*, 7, 155-160.

Brod, C. (1984). *Technostress: The human cost of the computer revolution*. Reading, MA: Addison-Wesley

Caplan, S. E. (2007). "Relations among loneliness, social anxiety, and problematic internet use." *CyberPsychology & Behavior*, 10, 234–242

Chak, K., & Leung, L. (2004). "Shyness and locus of control as predictors of internet addiction and internet use." *CyberPsychology & Behavior*, 7, 559–570

Chen, S., Gau, S. S., Pikhart, H., Peasey, A., Chen, S., & Tsai, M. (2014). "Work stress and subsequent risk of internet addiction among information technology engineers in Taiwan." *Cyberpsychology, Behavior, and Social Networking*, 17(8), 542-550.

Clark, S. C. (2000). "Work/family border theory: A new theory of work/family balance." *Human Relations*, 53, 747–770.

Collins, R. T. (1963). *Manual de neurología y psiquiatría en medicina del trabajo*. Madrid: Espasa-Calpe (Orig. 1961).

Davis, S. N., Shevchuk, A., & Strebkov, D. (2014). "Pathways to satisfaction with work-life balance: The case of Russian-language internet freelancers." *Journal of Family and Economic Issues*, 35(4), 542-556.

Egan, V., & Parmar, R. (2013). "Dirty habits? Online pornography use, personality, obsessionality, and compulsivity." *Journal of Sex and Marital Therapy*, 39, 394–409.

elEconomista.es (2016). Martes 23 de febrero, p. 14.

Feuls, M., Fieseler, C., & Suphan, A. (2014). "A social net? Internet and social media use during unemployment." *Work, Employment and Society*, 28(4), 551-570.

Gamito, P. S., Morais, D. G., Oliveira, J. G., Brito, R., Rosa, P. J., & de Matos, M. G. (2016). "Frequency is not enough: Patterns of use associated with risk of Internet addiction in Portuguese adolescents." *Computers in Human Behavior*, 58, 471-478.

Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. Englewood Cliffs, NJ: Prentice-Hall.

Grau Gumbau, R. M., Salanova Soria, M., Schaufeli, W. B., y Llorens Gumbau, S. (2001). "Exposición a las tecnologías de la información, burnout y engagement: el rol modulador de la autoeficacia profesional." *Revista de Psicología Social Aplicada*, 11, 69-87.

Green, C. S., & Bavelier, D. (2003). "Action video game modified visual selective attention." *Nature*, 423, 534–537.

Green, C. S., & Bavelier, D. (2006). "Enumeration versus multiple object tracking: The case of action video game players." *Cognition*, 101, 217–245.

Griffiths, M. (1995). "Technological addictions." *Clinical Psychology Forum*, 71, 14–19.

Griffiths, M. (2000). "Does internet and computer "addiction" exist? Some case study evidence." *Cyber Psychology and Behavior*, 3, 211–218

Grubbs, J. B., Exline, J. J., Pargament, K. I., Volk, F., & Lindberg, M. J. (2016). "Internet pornography use, perceived addiction, and religious/spiritual struggles." *Archives of Sexual Behavior*, doi:10.1007/s10508-016-0772-9

Grubbs, J. B., Volk, F., Exline, J. J., & Pargament, K. I. (2015). "Internet pornography use: Perceived addiction, psychological distress, and the validation of a brief measure." *Journal of Sex and Marital Therapy*, 41, 83–106.

Guerreschi, C. (2013). *Las nuevas adicciones: Internet, trabajo, sexo, teléfono celular, compras*. Buenos Aires: Lumen Humanitas.

Henle, C. A., Kohut, G., & Booth, R. (2009). "Designing electronic use policies to enhance employee perceptions of fairness and to reduce cyberloafing: An empirical test of justice theory." *Computers in Human Behavior*, 25, 902–910.

Ivarsson, L., & Larsson, P. (2011). "Personal internet usage at work: A source of recovery." *Journal of Workplace Rights*, 16, 63–81.

Jia, H., Jia, R., & Karau, S. (2013). "Cyberloafing and personality: The impact of the Big Five traits and workplace situational factors." *Journal of Leadership & Organizational Studies*, 20, 358–365.

Kanungo, R. N. (1982). "Measurement of job and work involvement." *Journal of Applied Psychology*, 67, 341–349.

Keen, A. (2016). *Internet no es la respuesta*. Barcelona: Catedral.

König, C. J., & Caner de la Guardia, M. E. (2014). "Exploring the positive side of personal internet use at work: Does it help in managing the border between work and nonwork?" *Computers in Human Behavior*, 30, 355–360.

La Voz de Galicia (26.07.2016). Recuperado de http://www.lavozdeg Galicia.es/noticia/galicia/2016/07/26/trafico-investiga-conductor-bus-jugaba-pokemon-go-volante/0003_201607G26P8991.htm

Lavoie, J. A. A., & Pychyl, T. A. (2001). "Cyberslacking and the procrastination superhighway: A web-based survey of online procrastination, attitudes, and motion." *Social Science Computer Review*, 19, 431–444.

Ley 31/1995, de 8 de noviembre, de Prevención de Riesgos Laborales. Recuperado de <https://www.boe.es/buscar/doc.php?id=BOE-A-1995-24292>.

Llorens Gumbau, S. (2011). *Tecnoestrés*. Madrid: Síntesis.

Martínez Selva, J. M. (2011). *Tecnoestrés*. Barcelona: Paidós.

McLuhan, M. (1994). *Understanding Media: The extensions of man*. Cambridge, MA: MIT Press.

Pérez Retuerta, G. (1992). *Aspectos sanitarios del trabajo ante videoterminals*. Madrid: Universidad Complutense (Tesis doctoral).

Prados, J. M. (2008). *Ansiedad generalizada*. Madrid: Síntesis.

Radesky, J. S., Schumacher, J., & Zuckerman, B. (2015). "Mobile and interactive media use by young children: The good, the bad, and the unknown." *Pediatrics*, 135(1), 1–3

Reinecke, L. (2009). "Games at work: The recreational use of computer games during working hours." *CyberPsychology & Behavior*, 12, 461–465.

Reinecke, L., & Trepte, S. (2008). "In a working mood? The effects of mood management processes on subsequent cognitive performance." *Journal of Media Psychology*, 20, 3–14.

Salanova, M. (2003). "Trabajando con tecnologías y afrontando el tecnoestrés: el rol de las creencias de eficacia." *Revista de Psicología del Trabajo y de las Organizaciones*, 19, 225–247.

Sánchez, V., y Zamarrón, M. A. (Eds.). (1990). *Nuevas tecnologías, sociedad y trabajo*. Madrid: FUNDESCO/Unión de Técnicos y Cuadros de UGT.

Schimmenti, A., & Caretti, V. (2010). "Psychic retreats or psychic pits? Unbearable states of mind and technological addiction." *Psychoanalytic Psychology*, 27(2), 113–132.

Seok, J., Lee, K. H., Sohn, S., & Sohn, J. (2015). "Neural substrates of risky decision making in individuals with Internet addiction." *Australian and New Zealand Journal of Psychiatry*, 49(10), 923–932.



Sieberg, D. (2011). *The digital diet*. New York: Three Rivers.

Sonnentag, S., & Fritz, C. (2007). "The Recovery Experience Questionnaire: Development and validation of a measure for assessing recuperation and unwinding from work." *Journal of Occupational Health Psychology*, 12, 204–221.

Starcevic, V. (2015). "Problematic Internet use, reward sensitivity and decision making." *Australian and New Zealand Journal of Psychiatry*, 49(10), 937-938.

Tejeiro-Salguero, R.A., & Bersabé-Morán, R. M. (2002). "Measuring problem video game playing in adolescents." *Addiction*, 97(12), 1601-1606.

Terkel, S. (1974). *Working: People talk about what they do all day and how they feel about what they do*. New York: Pantheon/Random House.

Tolliday, S., & Zeitlin, J. (1986). *The automobile industry and its workers: Between Fordism and flexibility*. Cambridge: Polity Press.

Trinkaus, J. W. (1983). "Arcade video games: An informal look." *Psychological Reports*, 52, 586.

Turkle, S. (1995). *Life on the screen: Identity in the age of the Internet*. New York: Simon & Schuster.

Walsh, S. P., White, K. M., & Young, R. (2010). "Needing to connect: The effect of self and others on young people's involvement with their mobile phones." *Australian Journal of Psychology*, 62(4), 194-203.

Young, K. S. (1996). "Psychology of computer use: XL. Addictive use of the internet: A case that breaks the stereotype." *Psychological Reports*, 79(3), 899-902.

Young, K. S. (1998). *Caught in the net*. New York: Wiley.

TECHNO-STRESS AND TECHNO-ADDICTIONS: THE PROBLEMATIC LEGAL CATEGORY AS A PROFESSIONAL CONTINGENCY



María Rosa Vallecillo Gámez
Lecturer
Labour Law and Social Security
University of Jaén

Summary

1. Introduction

2. The analysys framework: psychosocial risks

2.1. Work stress and its variation: the techno-stress

3. The techno-stress as professional disease and its fixing in social security system

3.1. The evolution of the concept of occupational disease

3.2. Models to define the concept of occupational disease

3.3. The current market application proposals

4. The social security system coverage

4.1. The silence of the chart of occupational diseases with regard to psychosocial risks

4.2. The reparation of psychosocial risks

4.3. The relaxation of the judge-made law as an alternative to the rigidity of the closed list system

4.4. The relaxation of the judge-made law in assessing the causal link

4.5. Framing of the infarct and its connection with techno-stress

5. Conclusions

Bibliography

Abstract

In recent years, psychosocial risks have become an important source of workplace accidents, both in Spain and in Europe, and everything seems to be in line with the increasing use of ICTs in work environments.

These technological phenomena have triggered the identification of new pathologies associated to them and that ave as a common identifier the stress, reason why the common denomination that relates origin and pathology has been denominated “Techno-stress”.

It is not indifferent the impact that, in the specific area of Social Security, these phenomena have. In this context, the reflections of this work are framed, especially by the doctrinal and jurisprudential treatment that the consideration of this new disease, in any of its more specific modalities, has the power to be qualified as an occupational accident or illness.

1. Introduction

The decision of the French Senate to remove psychosocial diseases from the list of occupational diseases has triggered a barrage of criticism from the doctrine, believing that this decision represents a huge setback in the inclusion of psychosocial diseases associated with the job, such as occupational diseases. This decision is the origin of the approach of this work in which we analyse the consideration of the psychophysical pathologies as a professional contingency.

The problem arises because labour stress is a harm that increases with force due to the changes that the working conditions suffer by the introduction of new ways of working based on the use of the technologies and of electronic devices that limit the worker disconnection of the labour activity, and it make difficult to establish the working time limits.

The consideration of stress as a work-related illness is not new. For more than a decade the courts have been recognizing work-related stress, in its different appearance - post-traumatic stress, heart attack, attempted suicide, stroke ... - as a work-related illness.

In this sense, the Spanish Strategy for Safety and Health at Work is articulated around the design of occupational safety and health policies in the sense of “integrating the whole set of risks” to which workers are exposed, And especially the so-called emerging risks, whose main exponent are the psychosocial risks with origin in work organization, which increase their weight in the set of work-related risks.

This is because inadequate and poorly structured or perverted working conditions can become the source of pathogenic situations. The work organization usually creates a framework of relationships that can be harmonious or, on the contrary, can lead to demands in which the disorganisation of the company creates psychopathological attitudes in some people to which the environment or working conditions make psychologically dysfunctional (Díaz Franco, 2002: 29).

Protection of these diseases is framed only within the coverage of the accident in its completely sense. Its protection is basically due to the widespread “legal awareness” of the need for its protection, which has been finding its support in the Courts.

In this work, we review the main arguments that are made to be able to maintain, *de lege lata*, such a qualification, without overlooking the technical-legal difficulties that we find in the way because there is no explicit and clarifying normative about the treatment of psychosocial work-related diseases (Olarte Encabo, S., 2005). But we can advance that the current judicial decisions, despite the general evolution in favour of the consideration as contingency of professional origin, still do not offer a standardised answer.

2. The framework of analysis: the consideration of psychosocial risks

Concern about occupational risks of a psychosocial nature is already a constant not only in Europe but also in the Spanish business legal landscape. The alarm against these professional pathologies is acquiring pandemic notes evidenced by the interest of a lot of doctrines (Molina Navarrete, 2007, Martínez Barroso, 2007, Igartúa Miró, 2007, Olarte Encabo, 2005) and the generation of a good number of judicial decisions, as well as some important legislative initiatives¹.

¹ Sobre uno de los riesgos psicosociales más característicos, el acoso, la Ley Orgánica 3/2007 para la igualdad efectiva de mujeres y hombres, la Ley 7/2007 del Estatuto Básico del Empleado Público y la Ley 20/2007 del Estatuto del Trabajador Autónomo.

Phenomena such as social and economic globalization and, in this case, the application of new technologies at work, are provoking important changes in the organizational models, so that a world marked by innovations of the technologies of Information and knowledge, makes the new kind of society inseparable from the new type of business organization, and which implies the development of new labor pathologies associated with these changes.

The set of risks to which the worker may be exposed in his job is increased with the mental health damages. These psychosocial risks have a direct connection with the way in which the directive function and the management of human groups are exercised within the current organizations (Serrano Olivares, 2005: 105). It is, therefore, new labor pathologies generated by the models of work organization prevailing in modern companies that are associated with structural variables or are connected with interpersonal relationships at job. Its importance is due, fundamentally, to the virulence with which they are present in all the organizations, to the serious consequences that they cause in the health of the employees and to the state of knowledge, in permanent update, of the specialists involved. The most frequent pathologies associated to work, is stress, which includes common stress, post-traumatic stress, burnout and techno-stress.

The damages associated with these pathologies are in different nature. They are depressive and anxiety and most of physical or biological injuries. But in spite of the symptomatology that they accuse, they are not properly considered as diseases and less as accidents, but rather as relational situations - risks - whose lack of prevention does cause damages that deserve the qualification of professional contingency and not common when it is linked in a prevalent way to work environment (Molina Navarrete, 2007: 27). It is clear that these repercussions can be objectified and result in a temporary, permanent incapacity or, in extreme cases, in the death of the worker, because the damage is credited.

It is not a question of new risks but of risks on which there is greater social awareness in advanced democratic societies about the relevance of the fundamental rights affected and their consequences for the victim. The European Commission has considered that the “increasing incidence of psychosocial disorders and diseases poses new challenges for health and safety at work and compromises the improvement of well-being at work ... and is currently a problem Which justifies legislative action “(Commission of the European Communities, 2002)

2.1. The work-related stress and its variant: the techno-stress

Within the definition of work stress, the mental disorders that a worker presents are just motivated by incidents in his work and prevent his correct performance, being his only cause the performance of a job for someone else. Thus it is recognized for those who present the “burn syndrome” or who suffers a depression caused by a business decision to substantially modify their working conditions, who presents an anxiety reaction triggered by labour problems, who presents an adaptive disorder with mixed alteration of the emotions and the behaviors derived from pressures, threats, insults or aggressions... but this qualification does not fit when the incapacity for the work is motivated by a psychic alteration generated in a person with previous psychic pathology, in which the labour problems acts as mere triggers of such incidents (SSTSJ País Vasco, July 15, 2004, June 3, 2003, AS 2472).

In these kind of risks, several factors have to be considered:

- The circumstances in which the activity takes place: content of tasks, time pressure, ambiguity and role conflict ...
- The structure and direction of the company: rigidity or neglect in management, activity control, interpersonal relationships, emotional work
- The personal characteristics of the worker: singularities of his personality, changes of work, age, lack of preparation before problematic situations, professional expectations ...
- Environmental conditions: physical environment, violence in the target place, psychological harassment ...

From this perspective and the introduction of new ways of working in which ICT plays the main role, the dividing line between work and personal life is increasingly being diluted, in fact, the unstoppable development of technology has given rise to the phenomenon of e-work which implies a translation of the minds and not of the bodies, so that a tacit space of occupation is created - the virtual office - where virtually all the components can coexist and allows the emergence of new labour relations - networking - and the configuration of a different organization model.

This new working model can lead, in a difficulty to disconnect, since ICTs allow the worker to remain permanently connected and locatable, on workdays, holidays, home, travel ..., 24 hours a day. The individual responses to this situation are very varied and range from the frontal rejection - technophobia - to an over-identification, even

addiction - technophilia -, leaving in the center the correct adaptation. hTechnophilia is even more intense when its appearance originates in the pursuit of high levels of productivity, giving rise to “work addiction” or “workaholism”, which implies a compulsive and uncontrollable need to work incessantly. The extremes obviously have negative consequences on the subjects and can become an important source of occupational risk. In the case of those who feel threatened by ICTs, due to the anxiety that their use causes them, generating a specific type of stress, the so-called “Techno-stress”. This, like any other addiction, ends up being harmful to the sufferer and those around them, preventing the full enjoyment of personal and family life.

The answers to these situations range from the adaptation to the addiction:

- People who are forced to use them choose to minimize their use, limiting it to what is essential and for the shortest time as possible
- Some ones do not have problems accepting ICT in their position, but adapt them to their needs, for example, use the computer and the Internet to send personal e-mails
- Those who feel trapped by the facilities provided by ICTs, even enjoy employing them, but are able to disconnect without any problem
- And the group that gets to hyper-identify with both technology that becomes an addiction, that even comes to infer and hinder the development of a balanced personal life. This situation is especially common in workaholics, finding ICTs as the ideal tools for achieving their job success.

Thus, techno-stress can be defined as a modern adaptation disease, caused by a lack of ability to deal with new technologies. Most of the symptoms are similar to those of stress. Fatigue, insomnia, depression, headaches and muscular tensions, although the first symptom that can alert of the presence of techno-stress are episodes of irritability or stubborn resistance to receive instructions on the operation of any technological element.

This disease identifies with the mental effort involved in adapting to change, multitasking and the overabundance of information and data that forces sufferers to a job that involves a reduction of free time in the rest periods. The consequences imply that body and mind suffer negative reactions related to this overstimulation and inability to disconnect. It is, therefore, a specific kind of stress that arises as a consequence of our dependence on new technologies, the panic to failure of these, a constant state of over-stimulation and the need to always be connected.

They are identified (Brillhart, 2004), four sorts of techno-stress:

- Data smog. Overload information we experience when using the internet. It even hurts our performance by forcing us to analyze and shape too much information, with the consequent added stress to our lives
- Multitasking madness. While computers can run multiple tasks at once, the human mind is not ready for that pace. For this reason, the more tasks one wants to perform at the same time, the less efficient one is achieved in each one of them, which favors the appearance and increase of stress, reduces the perception of control and causes physical problems such as headache and stomach.
- Computer problems (computer hassles). One of the main causes of the tecnoestrés and affects almost all the users of the ICT's. The main problems are usually caused by slow system breakdowns, the number of emails received, viruses and losted files.
- Burnout syndrome. It is the most important form of techno-stress and occurs as a consequence of a cumulative process that leads to emotional exhaustion. The consequences are numerous and harmful: emotional fatigue, wear, exhaustion, fatigue, irritability, negative attitudes, lack of personal fulfillment, negative responses to oneself and work.

In the same way that different forms of suffering of the techno-stress are identified, different types of users are also identified:

- Those suffering from technophobic anxiety, translated into anxiety reactions when using technology and producing sweating in the hands, palpitations and headache
- Those who suffer from cognitive technophobia, whose appearance is calm and relaxed worse than internally tortured with ideas like “everyone is able to do this except me ...” or “I will touch the wrong key and I will load the computer”
- Uncomfortable users, who use technology and only show slight reactions of anxiety and negative thoughts.

Therefore, it is demonstrated the consideration of techno-stress as pathology and its origin in performance. It is a known fact that a stressed worker is a less motivated and less productive worker and, of course, more exposed

to accidents at work. In 1995, the ILO already identified work-related stress as a serious threat to the economy of industrialized and developing countries, which also affected productivity by affecting the physical and mental health of workers.

In addition, there are a number of problems related to the impoverishment or over-enrichment of jobs or health problems with origin in the continued use of computers. The implementation of computer systems induces other potential factors of stress, such as: increased control and performance monitoring, security-related aspects and passwords that cause a lot of tension in people handling important data they must protect, invasion of privacy, reduction of social contacts and social interaction, lack of support systems for learning and updating of new systems and programs and changes of roles in the organizational system.

So, the term techno-stress refers to a new disease produced by the inability to deal with new technologies in a psychologically healthy way, being the product combination of anxiety, information overload, role conflict and organizational factors. Technology can never be completely removed, but its impact can be minimized if we know the causes and possibilities to deal with.

The economic benefits of the introduction of ICT are indisputable, so its use is constantly increasing. ICT significantly contributes to increased productivity to a greater extent than other factors, so investment in them is important, but without neglecting investment in the prevention of techno-stress.

In prevention of risks caused by ICT, we can act on the control of potential situation stressors, or on the subjective appreciation of people. Both refer to a primary prevention - reducing the incidence of a problem in people at risk, potential users of ICT - and secondary - reduce the duration of a problem by fast intervention, is the intervention after the first signs of alarm”. With regard to prevention, from a socio-technical approach, one can speak of prevention in the social system - at individual or group level - or in the technical system.

This continuous technological renewal means that workers are exposed to constant recycling with adaptation and learning need. This pressure is one of the elements that increases the level of stress of the workers, although this situation is not new. In 2005, the European Framework Agreement on Work-related Stress, signed by UNICE, EUAPME, CEEP and the European Trade Union Confederation, was introduced for the first time in the Inter-

Confederation Agreement on Collective Bargaining. The negotiating parties incorporated it as an annex to make it known, considering it to be “*an especially useful instrument, as it provides reference guidelines and criteria for action that can be useful both to raise awareness and understanding of this subject as to prevent, eliminate or reduce the problem of labour stress*”.

3. Techno-stress as professional disease and its framing in the spanish social and security law

Worker, besides being exposed to the work accident, has also been able to suffer other pathological disorders of a slow and progressive nature, linked to the performance of a task. In systems, such as French, Italian or Belgian, it is required that the force of injury is sudden, violent or traumatic and external to appreciate the existence of a labour accident, having no space for injury caused by slow and progressive action. So, professional disease has needed its own insurance rules, unlike the Spanish system.

In addition, the causal relationship between the injury and the performed, and in our case, the means employed, can be complex, which raises a special difficulty to elucidate whether is the exclusive or prevalent cause of the pathology. The difficulty in these cases is the delimitation of the labour aetiology of the psychic or psychophysical pathology, given that it can be developed over a long period of time and can be attributed to different reasons (González Cobaleda, E., 2015).

It is known that the protective action of the Social Security system is not uniform and differs depending on the applicable regime and the kind of contract or professional relationship, as the content and conditions change depending on the contingency that provokes the situation of protective need.

It is not indifferent the qualification of a contingency as normal or professional, being these in the Spanish legal system, those derived from work accident - art. 156 TRLGSS - and occupational disease - art. 157 TRLGSS -. The differentiation between normal and professional contingencies transcends the purely conceptual and translates into a differentiated legal regime that is extremely important in the qualification of an occupational accident as a occupational disease, as a work illness assimilated to a work accident or as a normal illness.

3.1. Evolution of the concept of occupational disease

If we consider the concept of occupational disease, it is defined as the damage, medical or traumatic pathology, caused by some physical, chemical or biological factors or agents that deplete the health of the worker, in the working environment. However, although the concept of occupational disease was originated in jurisprudence and essentially linked to the work accident, thanks to the broad notion of injury adopted by the jurisprudence that allowed occupational diseases to be included in the concept of occupational accident, it was progressively dissociated from the concept of work accident, mainly due to the need to apply special measures of prevention and diagnosis, and to facilitate their identification.

The first general formulation of the protection of occupational diseases will not occur until the Decree of January 10, 1947 and its regulations of development of July 19, 1949, establishing a special insurance for them and a list of occupational diseases that are included in the annex to the Decree. The list system has been maintained in successive regulations until the current article 157 of the current Legislative Royal Decree 8/2015 of October 30, which approves the Revised Text of the General Law of Social Security.

In Spanish system the professional disease is taken care of from three normative and institutional sets: the prevention of occupational risks rules, the sanitary regulation and the rules of social security. It is the latter that provides the legal definition of occupational disease. According to the TRLGSS, it is considered as such “*the contracted as a result of the work for the account of others in the activities that are specified in the table that is approved by the provisions of application and development of this law and that is provoked by the action of the elements or Substances specified in that table for each occupational disease*”.

Regarding this legal concept, STSJ Cataluña of December 23, 2002 (rec.164272002) ruled that “*it is not enough, therefore, for a certain disease or injury to be classified as a result of an occupational disease that it originates from work, but That the peculiar legal regime of this contingency also requires, in a specific way as to its origin, by a slow and progressive action, a logical consequence of being a disease, and a specific place in which it contracted or originates.*” Consequently, not all diseases of labour etiology can be considered as occupational diseases in a legal technical sense. To be qualified as such, three requirements must be obeyed:

- Illness is contracted as a result of being employee
- That the disease is a consequence of the activities specified in the chart that is approved by the regulations implementing and developing the law
- That the pathology comes from the action of elements or substances that are indicated in the regulation chart for each occupational disease.

The different law configuration, more flexible for the work accident than for the occupational disease, has caused an unequal evolution of the judicial doctrine, reducing the margin of judicial interpretation by constraining the own system of list definition, although it is true that some jurisprudence has been favourable to the interpretation by the adaptation to the characteristics of an illness or of a professional activity or the different qualification (Blasco Lahoz, 2009).

3.2. Models to configure the concept of occupational disease

According to the ILO, the determination of the existence of an occupational disease can tend to three systems or models (Lantarón Barquín, 2008; 419):

- The list system by which professional disease is attributed to all those included in a list that also contains the substances and professional fields in which it is present.
- To an open system or judicial determination.
- In a mixed system that combines the two previous models.

The first is the adopted by the Spanish system. This has the advantage of ensuring a high degree of certainty, since the inclusion in the table acts as a presumption “iuris et de iure” of its labour aetiology, not requiring proof of the causal link, unlike what happens with the others occupational diseases not included in the list, where such evidence is necessary.

As an inconvenience, it is pointed out that it is an insufficient method because it does not cover all labour pathologies (López Gandía, 769), and also its ease to be outdated and the difficulties and delay to incorporate news occupational diseases, with the consequent mismatch related to technological evolution, ways of working or new substances and agents used in production processes (Igartúa Miró, 2695).

The increasing complexity in the way of life and work, as well as the constant evolution of technical progress, adds difficulties to establish a line of delimitation between professional and common risks. Jurisprudence admits the theory of multi causality based on the presumption contained in art. 156. LGSS. This concept of multiple causality, adopted by doctrine and jurisprudence, offers the advantage of adapting in a more adequate way to the medical scientific doctrine in which the concurrence of diverse causes in the majority of diseases is admitted (Areal Calama, Rio Puigjermanal , Castejón Castejón, 1997: 86).

3.3. Proposals to apply in current market

In these cases, damage or injurious consequences do not always have a clear relationship with an activity due to the lack of knowledge of the cause of the disease or the multicausal nature. To this we add the current working conditions dominated by labour flexibility and nomadism in employment, provoking situations in which the lack of legal certainty frustrates the preventive, repairing or sanctioning objectives that the legal system contains. Hence the difficulty of regulating the preventive and restorative actions of the pathologies related to work stress, and in particular, technological addictions.

The exclusion of psychosocial risks from the closed list of occupational diseases obliges us to redirect consideration and framing through occupational diseases, therefore, in a somewhat artificial way. This forced situation leads to a situation that reaches several perspectives: on the one hand affects the preventive aspect to the extent that through this legal qualification prevents the application of medical examinations provided for in Article 244 LGSS for listed occupational diseases; On the other hand it affects the reparative environment, reducing or preventing the protective guardianship for a situation of necessity whose logic would require a equivalent protection to the diseases linked to the professional performance.

In order to qualify as occupational diseases, by reformulating the closed list system, it would be possible to resort to the mixed system advocated by the ILO by a list of occupational diseases which, together with a general clause, could qualify as other unlisted diseases, especially for those whose causal link with the work will be credited in court, allowing a more adequate qualification adjusted to the current reality.

Another option would be to turn to the EU proposals that would establish a new system based on a double list of occupational pathologies: a basic list that would integrate all the laws and a complementary list made up by those

diseases that are considered added by the legislator. What is obviously desirable is to update the list in order to include new pathologies related to the new organization of work and that it is not a judicial obligation to classify them as occupational accidents (Sempere Navarro , 78). In this way, occupational diseases would quit their work-accident condition and would be treated as what they really are. For this hypothesis to be viable, it must prove the existence of causality between professional activity and pathology, thus overcoming the dysfunction that causes the diversion of its consideration as an accident at work.

4. Framing in social security system

4.1. The silence of the professional diseases chart with respect to psychosocial risks

One of the legal repercussions of the emergence of new occupational risks in social protection field is the effort to determine its framing in Social Security system in order to establish the coverage it has to provide for damages by this risks. Therefore, the existing protection law must be able to accommodate them by having a flexible model. It is therefore an issue that affects both the protective model concept and its possibilities to adapt to the new realities as well as the design of the public health and safety policies and that must integrate the whole set of risks the worker is exposed in his job.

It is possible, therefore, to maintain, without forcing hermeneutical criteria, that the general obligation of protection must integrate evaluation, planning and protection against psychosocial risks, according to what can be inferred from the national and European² laws and the approach of some more generalist laws, already mentioned.

The debate is focused on the difficulty of framing the protection of these injuries within the possibilities offered by Social Security law, since although any damage is protected regardless of the common or professional nature of the risk that proceeds, (Rojas Rivero, 2005: 137 and Montoya Melgar, 2008), according to what is articulated in our legislation to such an object. It is also true that there are important differences in the protection dynamics according to whether the harm arises from a common or professional risk.

² For example, and noting that it is not such a novel issue, the STJCE of November 12, 1996, clarifies that the concepts of “means of work ... refer to all physical or other factors that may affect health And the safety of the worker in his work environment “

From a general approach and starting from the acknowledgement of psychosocial risks professional aetiology, to promote an appropriate fit of the ailments that cause these risks has to do with the possible cataloguing of these damages as either an occupational accident or a professional illness. The difficulty lies in the lack of an explicit and clarifying legality on the treatment of psychosocial pathologies related to work, which has been translated into many judicial decisions that did not offer a unified answer, despite of the general evolution in favour of professional contingency (Navarro Nieto, 2007: 243).

More and more, judicial and academic doctrine considers the consequences from the different kinds of psychosocial risks as work diseases in accordance with the art. 156.2 e) TRLGSS which regulates a kind of work accident, namely the illness contracted in the performance of work, provided that this is the “exclusive clause” of the damage, and when it is not included in the concept of professional illness (ex Article 157 TRLGSS), and consequently is not included in the chart legally approved for this purpose (Montoya Melgar, 15).

This formula to classified occupational diseases by our legal system, has been labelled as antiquated, not very dynamic and excessively rigid, because it does not allow a rapid update of the ailments and alludes to that before certain health alterations, as psychophysical ailments with complex and diverse origin. It is not possible a simple catalogue because it requires an uncontroverted and unique labour aetiology (Molina Navarrete, 2007: 23 and 24). This is because the Community Recommendation which gave rise to the current list of 2006 advised Member States to promote “*research into diseases related to a professional activity, in particular ... for psychosocial disorders related to Work* “, although we have already shown that it is not yet collected in our country. Anyway, this absolute mutism of the new list in relation to the psychosocial pathologies contrasts with the boom that the preventive guardianship has regarding them.

Related to the possible future qualification of psychosocial risks as occupational diseases, the law approach that goes in the sense of understanding that psychosocial risk factors are in the basis of a good number of physical pathologies is correct (STS 29.9.2000). It would only be to contemplate that this type of psychosocial pathologies provokes physical ailments as a consequence of which the psychological alterations in the health of the worker who is exposed to these situations because they externalize and provoking frequent symptoms.

4.2. Repairing psychosocial risks

The situation of psychosocial risks in the restorative scene fluctuates between two possible formulas, which in turn constitute two models of legal treatment different from this subject. In the first place, it is possible to choose for an adequate fit of the ailments that provoke these risks by means of a permanent adaptation and updating of the existing regulation in this respect to allow to welcome as occupational diseases the new realities of risks and the new ailments to develop after. On the other hand, another option would be to maintain an all-embracing concept of a labour accident that would include “*any pathology that, regardless of its origin, was caused or manifested in a singular way in the employment relationship*” (Molina Navarrete, 2007: 24). The latter is the choice that is maintained currently in our legal system and which coincides with the most widely geographically based model as it emerges from the comparative law.

Faced with this situation, the assumption of the advantages and disadvantages of both options, including the economic derivations of each alternative, that must be balanced from different perspectives in order to achieve an appropriate and complete treatment of the protection of psychosocial risks.

The explicit or non, inclusion of occupational psychosocial risks in the list consolidates a specific line on how to address its prevention and the specific obligations generated by the employer because if they had been classified as occupational disease, they would dissipate all the doubts about its consideration as labour risk and, therefore, the existence of company obligations in prevention.

Thus, “*it is the legal concept of work sickness, of eminently judicial construction, that is serving to deal with this group of ailments. For the umpteenth time is the resort to the broad concept, increasingly and more diffuse, if we want, more useless, work accident, the only one that allows us to adapt the operation of our system to the new realities, both social demand for preventive guardianship and reparative, as of change of the world of the work*” (Molina Navarrete, 28).

The legal understanding to work accidents of numerous diseases - generated or derived from stress or new forms of work organization - is and is called, with the current legal framework, to have an extreme relevance, taking into account the privileged treatment of the work accident against pathologies of extra-labour origin (Sobrino González, 2005: 11). Although greater emphasis should be placed here on the prevention of these risks and this does not favour

their return to work-related accidents, it should be more convenient to catalogue their psychological or psycho-physical consequences such as occupational diseases.

4.3. The flexibility of case law as an alternative to the rigidity of the closed list system

As a reminder of the background of the Spanish Social Security System, based on the idea of ensuring objective social responsibility, the current system continues with a distinction according to the origin of the need, and distinguishing between professional contingencies and normal contingencies.

Such a distinction is not a trivial question, because it is known that professional contingencies retain a wide repertoire of particularities and privileges (Sempere Navarro, 2001), both in terms of financing and contribution, and related to the protective management action.

The art. 116.1 LGSS defines occupational disease as “*contracted as a result of the work performed by others in the activities specified in the table that is approved by the provisions of application and development of this law, and that is caused by the action of the Elements or substances indicated in that table for each occupational disease* “. Definition that rests on the picture of occupational diseases established by the current RD 1299/2006, of November 10.

Thus, not every disease by labour aetiology is classified as a professional disease, only those diseases contracted making activities included in the list of occupational diseases and caused by the elements or substances indicated in this chart. It is therefore a closed list system, not a mixed system, as recommended by the International Labour Organization (ILO).

This system has the great disadvantage of preventing the identification of occupational diseases, which, despite their aetiology, are not included in the list of occupational diseases, and it is not taken into account that diseases rarely have a single origin. Foreseeing its updating through the establishment of a procedure that has the mandatory report of the Ministry of Health, the truth is that the reform did not meet the doctrine expectations.

Given that rigidity of this closed list system has been necessary to search for other alternatives so that certain assumptions are protected with the particularities and privileges that the qualification of “occupational disease” entails, a problem that has been solved in greater or lesser degree As a result of the case-law flexibilities in the assessment of the causal link in the illness-profession-agent relationship, but fundamentally in the concept of occupational disease, a clearly imperfect solution in that it entails other types of inconvenience, contrary to what the reality principle demands, that is, the consideration as a true professional disease to the pathology that arises as a consequence of the performance of a work (Sempere Navarro, 2001).

4.4. The flexibility of jurisprudence in the assessment of the causal link

From these situations, social benefits can be born whose professional or common origin must be determined, and this is where the causal link between the health effects and the motivating reason for them is key to the application of Article 115 LGSS.

The Gordian knot of the discussion is to prove the causal relationship between the work and the suffering, so that the greatest difficulty lies in the proof of such nexus when we speak of psychological ailments that are much more complex. For this reason, it is proposed that the presumption of work with regard to injuries suffered by the worker during the time and at the place of work can be flexibly used.

The extension of the virtually of the presumption to the pathological processes identifiable like illnesses so that the presumption of workmanship reaches to the diseases of the work (STS 10 of April of 2001, RJ 2001, 4906).

The most specialized doctrine has had occasion to reflect on the subject lucidly when it has been stated that the work of the cause motivating the pathology in which the situation lived by the worker can be translated in the context of a working relationship, it allows to connect the qualification with the contingency that corresponds to that pathology with the work environment, as regards the legal concept of work accident is linked to indirect labour circumstances “on occasion and consequently.” This connection is the one that will allow to qualify the contingency as an accident of work, so it will be convenient to transfer to the doctrine in the interpretation of this precept to this new psychosocial risk (Rivas Vallejo, M.P., 2005: 51).

The position held of the majority scientific and judicial doctrine is due to the consideration that the pathological contingency is to be considered as labour, when the legal causal link between the phenomenon of violence in the workplace and the sequelae detected in the health of the employee is proved. The key is to esteem the causal link between the employment relationship and the psychological or physical damages suffered by the harassed person, as required by the LGSS (STS 22 October 1999, RJ 1999, 8738 and STSJ Galicia dated January 24, 1999). 2000, AS 2000, 60). There is no doubt that the techno-stress fulfils these conditions.

Another flexibilities element has been caused by the lack of concretion of the causative agents, in which case part of the judicial doctrine has been recognizing the pathology as a professional disease (STSJ de Galicia, June 30, 1993, AS 2946). Similarly, judicial doctrine has made a flexible interpretation of the occupational diseases chart, understanding that this list is not exhaustive and, therefore, opens the door to the consideration of similar diseases (Moreno Caliz, 2007: 18).

However, the use of such inaccuracies and gaps as flexibles elements in the assessment of the causal link in establishing the disease-profession-agent relationship has not been the most common solution in judicial doctrine (STSJ de Asturias, January 5, 2001). As a consequence of these judicial interpretations, if the lack of one of the three elements that are part of the definition of occupational disease is not understood by majority judicial doctrine as a flexible formula in the assessment of the causal link, probably the most convenient would have been the list would have had three columns in which were related the disease, the profession or activity developed and the substance or triggering agent, as has been demanded by scientific doctrine (Moreno Cáliz, 2007: 8).

This situation continues to give rise to the most diverse solutions, ranging from the most restrictive or conservative ones, which do not admit a jurisprudential flexibility, to those that envisage a mixed system or an open character in the field of occupational diseases, so that the alleged legal certainty of the listing technique is largely blurred (Lantarón Barquín, 2012: 451).

4.5. Framing the heart attack and its connection with techno-stress

A pathology that enjoys the presumption of a work accident is myocardial heart attack and by assimilation, heart disease that manifests suddenly and violently. In civil jurisprudence, heart attack is considered “a consequence of work-induced stress, an exogenous cause” (Salas Carcelar, 2004: 11-13). Therefore, we are not far away if

we request an equal consideration of techno-stress and of the other psychophysical pathologies associated to a situation of work stress.

We insist that a pathology that has the presumption of work is that occurs in the time and place of work, especially in those cases usually associated with normal pathologies. Cardiovascular diseases are one of the most frequent causes of mortality and morbidity, because the average of the active population suffering from a cardiovascular disorder at some point in their working life³ is 15-20%. Working conditions are determinants of the multifactorial process that originates those diseases. To considerate as an occupational accident began to arise in the 1970s, with the presumption established for that purpose by art. 84.6 LGSS of 1966.

That is not only in Spain, most countries in Europe admit that occupational exposure contributes to the development of cardiovascular diseases, thus being considered as work-related diseases. To these effects, there is an important causal relationship between work-related stress and the incidence of cardiovascular disease, so that the working conditions and the demands of it play an important and, in many cases, determinant role in the process of these diseases. It is thus that the qualification of these diseases can be considered “a disease or alteration of the vital process that can arise in the work caused by internal or external pathological agents” (STS 27 of December of 1995).

In this way the presumption of labour has been applied to the diseases that have shown in work time and work place, when it is not possible to discard an influence of labour factors in the formation and triggering of the disease. In this sense stress is the main argument that leads to jurisprudential doctrine in favor of work when it occurs in time and place of work, since there is practically no work activity that is exempt from levels of demand and performance which may be susceptible to provoke this risk factor. As heart diseases. In this sense “*to exclude this presumption requires evidence to the contrary that unequivocally evidences the rupture of the causal relationship between work and disease and for that it must be diseases that are not susceptible to a labour aetiology or That this aetiology can be excluded by evidence to the contrary, specifying to these effects that, in principle, an influence of the labour factors is not disposable ...*” (STS 18-12-2013, RJ 8476, RUD 726/2013).

3 Ministerio de Empleo y Seguridad Social. Estadísticas. www.empleo.gob.es/estadisticas/EAT/eat10/A1/index.htm

So, we can specified this direct relation of presumption of work of the psychophysical injuries that a worker suffers in the place and time of work, according to article 156.3 LGSS (Sánchez Pérez, 2016: 81).

5. Conclusions

As we have seen in this work, it is difficult to specify the time and place in which the symptoms arise to consider the pathology and, therefore, the labour presumption. It is the same in causal connection with professional activity. The causal relationship between the injury, the work performed by others and the continued use of ICTs, presents a special difficulty to elucidate the exclusive cause of the pathology.

The problem is to delimitate the labour aetiology of the psychic or psychophysical illness, because it can develop over a long time and from multiple causes. But the last word has always been the judicial body, because there is no explicit and clarifying rule in the Spanish legal system on the treatment of psychosocial diseases caused by work. Thus, it has not offered a unified answer.

If the doctrine qualifies different psychic pathologies of psychosocial origin as a professional risk, both because it is an objective consequence of the employment relationship and the circumstances in which the work is carried out, it is clear that techno-stress must have the same consideration for its link to the environment in which work is carried out.

The solution to all the dilemma raised regarding the consideration of techno-stress as a work illness is the legislator includes in the occupational diseases list psychosocial risks and, if possible, with details of the different pathologies that may arise. It will be necessary to hope that it will take the initiative and delimit exhaustively the legal treatment of occupational diseases, meanwhile we will have to continue appealing to the jurisprudential invocation.

Bibliography

Areal Calama, I., Río Puigjermanal, J., Castejón Castejón (1997), Multicausalidad y , REDT, núm. 81

Comisión de las Comunidades Europeas (2002), Cómo adaptarse a los cambios en la sociedad y en el mundo del trabajo: una nueva estrategia comunitaria de salud y seguridad (2002-2006), COM (2002) 118 final, Bruselas, 11 de marzo de 2002.

Díaz Franco, J.J. (2002), Calificación y procedimiento de identificación de las enfermedades profesionales”. Revista Técnica de Seguridad Social y Prevención, nº extra, junio.

Fernández Avilés, J.A.,

Igartúa Miró, M.T., (2007) la nueva lista de enfermedades profesionales y la inamovilidad respecto a las dolencias derivadas de los riesgos psicosociales, Actualidad Laboral, núm. 22

Martínez Barroso, M.R., (2007) Riesgo psicosocial en el sistema de protección social. Laborum

Molina Navarrete, C., (2007) Nuevo cuadro de enfermedades profesionales del trabajo y riesgos psicosociales ¿una nueva oportunidad de modernización real perdida?. Revista la Mutua (Fraternidad Mutrespa), Núm. 18

Moreno Cáliz, S., (2007) Análisis de la reforma de las enfermedades profesionales virtudes y deficiencias”. Tribuna Social, núm.203. Noviembre

Navarro Nieto, F. (2007) La tutela jurídica frente al acoso moral laboral. Thomson-Aranzadi, 2007.

Olarte Encabo, S., (2005) Acoso moral y enfermedades psicolaborales: un riesgo laboral calificable de accidente de trabajo. Progresos y dificultades. Temas Laborales, núm. 80

Rivas Vallejo, M.P., (2005) Violencia psicológica en el trabajo: sutratamiento en la jurisprudencia. Aranzadi.

Rojas Rivero, G.P., (2005) Delimitación, prevención y tutela del acoso laboral. Bomarzo

Montoya Melgar, A., (2008) El acoso en el trabajo y su encuadramiento jurídico. REDT, núm. 140.

Salas Carceler, (2004) Seguro de accidentes e infarto de miocardio. Comentario a la sentencia del a Sala 1ª del Tribunal Supremo de 11 de noviembre de 2003 (RJ 2003, 7522). Repertorio de Jurisprudencia Aranzadi, núm. 7

Sánchez Pérez, J. (2016) Los riesgos psicosociales en el ámbito laboral: una visión global y práctica. Comares.

Sempere Navarro, A.V. (2001), La protección de la enfermedad profesional: planteamientos para su modificación. Aranzadi Social, núm. 5.

Sempere Navarro, E., (1999), El estrés laboral como accidente de trabajo, AS, Tomo IV, Pamplona.

Serrano Olivares, R., (2005) El acoso moral en el trabajo. CES. Colección Estudios.

Sobrino González, G.M., (2005), El acoso moral en el trabajo y su consideración como contingencia profesional, RL, núm. 24.



Videa Book 2016

Looking at sectors
with prevalence
in the use of ICTS

3



PREVENTION OF OCCUPATIONAL RISKS IN TELEWORKING; SPECIAL REFERENCE TO PSYCHOSOCIAL RISKS



Aránzazu de las Heras García
PhD in Labour Law and Social Security. UDIMA.

Summary

1. Introduction.

2. Psychosocial risks: concept.

3. Applicable regulation.

3.1. European framework agreement on teleworking.

3.2. Workers' statute.

3.3. Law 31/1995 on prevention of risks at the workplace.

3.4. European framework agreements on psychosocial risks.

3.4.1. European framework agreement on stress related to work.

3.4.2. European framework agreement on violence and harassment.

3.5. Collective agreements.

4. The material conditions of the provision.

4.1. Workplace.

4.2. Work tools.

5. Possible psychosocial risks in teleworking.

6. Measures for the prevention of psychosocial risks.

7. Health surveillance.

8. Conclusion.

Bibliography.

Introduction

Teleworking, as a measure of labour flexibility, conflicts with the traditional model on which Labour Law is based, requires a greater effort and difficulty of implementation, and also evidences many issues not included in the current labour legislation that remain to the will of the parties or to collective bargaining.

The introduction of teleworking in the company, as it implies an organizational change, requires the participation of the social partners in its implementation, especially so that this system is not used by the employer as a way to extend working days, reduce wages or evade the compliance of prevention standards.

According to an study about *Productivity and new forms of work organization in the information society (Productividad y las nuevas formas de organización del trabajo en la sociedad de la información)* carried out by Universidad Carlos III in 2006, more than 40% of European workers were interested in permanent teleworking, 52% willing to work from home at least a day a week.

On the business side, there is also great interest in a “formula” capable of reducing fixed costs, however, its implementation is still very limited. It is necessary for its implementation a careful planning by the companies, specific cultural, psychological and formative conditions of the workers and an adequate regulatory framework, for now non existent despite the appearance - through the ambiguous denomination of “work at a distance” - an embryonic legal system.

Nowadays, as Rodríguez-Piñero Royo (2006: 1) points out, teleworking is no longer considered as a solution to an environmental or transport problem - that was how it was originated - but it is being seen as an employment site, as an opportunity for placement and, in most cases, as a measure to promote the reconciliation of workers' personal, family and work life. But for this implementation to be adequate, the rights of workers and, in particular, with regard to this article, the protection of health and safety must be respected through measures that avoid or minimize both physical and psychological risks.

But, how can health organizations be developed understanding them as those who carry out in healthy practices in a systematic way in order to organise and manage work processes that, at the same time, may influence healthy workers' development and, as a result, healthy organizations? (Carrasco González, Corte de la Corte y León Rubio, 2010:10).

Healthy organisations need of motivated and psychologically healthy employees. It is necessary to take distance from traditional and out-of-time managements that considers employees as mere instruments to achieve business goals and to go towards the conception of a positive organizational psychology that considers workers' health a goal itself and a legitimate objective that must be included in organizational politics (Salanova y Schaufeli, 2004: 109-138).

Through this article psychosocial risks of teleworking will be analysed, way of working in which more difficulties are presented in the employer's control that affect health and work environment, productivity and final quality of the product or the service. Its influence in absenteeism and workplace accidents has started to show with intensity and because of this psychosocial risks are on the spotlight of social agents both individual and collective.

2. Psychosocial risks: concept

Traditionally, risks associated with work categorized as occupational hazards were physical, however, as society evolves, risks and pathologies that damage the health of the worker in a psychological way are arising and are linked to, more than to material aspects of work, to aspects of organization or management of human groups in companies. (Sánchez Trigueros and Conde Colmenero, 2008:277).

For Molina Navarrete (2011) psychosocial risks could be defined as "the probability relation of a work suffering certain harm to his physical or psychic health derivative of the interaction between the labour organization - work conditions, productive systems and content of their duties -, their internal environment - social relations between the workforce of the enterprise (managers, colleagues)- and their external one - relations of the workforce with other people implied in their activity (clients, users...)- and their personal characteristics".

3. Applicable regulation

The treatment of psychosocial risks within the European Union (EU) has been of great importance in terms of the standardization of such risks and their regular integration into the preventive policies of the Member States through the Community Framework Directive 89/391 / EEC and its specific directives, with minimum requirements for the protection of health and safety at the workplace common to the whole territory of the EU.

The Community policy on occupational health no longer tends only to eliminate or reduce accidents and occupational diseases, but also promotes a true "work wellness", psychophysical, moral and social, as the European Commission points out in the strategic framework On occupational safety and health 2014-2020. That is, there can be no effective preventive policy if measures are not included to prevent "social risks: stress, harassment at work, depression, anxiety and risks associated with dependence on alcohol, drugs or medication" (Martínez Barroso, 2004: 5).

In the national labour legislation that regulates risk prevention, there are no specific rules on psychosocial factors, although some such as Order ESS / 1451/2013, of July 29, establishing provisions for the prevention of injuries caused by sharp instruments And punctures in the health and hospital sector [Official State Gazette (*Boletín Oficial del Estado*, BOE No. 182, July 31, 2013)] does establish a business obligation to evaluate all the risk factors present in the organization of work and related to the environment or work environment in general, including expressly the psychosocial ones linked to those. This order, being a sectoral regulatory norm, can be considered as an example of a notable impact in the elimination of the juridical uncertainty until now existing around the sense and scope of the business duty to evaluate psychosocial risks.

Indeed, as Professor Molina Navarrete (2013: 56) points out, this specific rule specifies a general duty, therefore, equally applicable to workers, whatever the sector and enterprise in which they work, because those risks are present, With greater or lesser prevalence, in all work organizations. Likewise, psychosocial risk assessment should be included in the initial evaluation, since the assessment must be comprehensive and comprehensive, without, of course, that the occurrence of certain circumstances - staff restructuring, change of address, complaints from workers ... - require a revision of the initial evaluation.

The rationale for this regulatory deficiency seems to lie primarily in the complexity of the concept, which is to relate the conditions of service provision, work organization, content and tasks and their interaction with individual characteristics, attitudes, needs, etc.

The proposed solution is generally based on the principle of adapting the work to the person, focusing on their physical and mental characteristics. As Bartolomé Antón, Fernández Ares, Prieto García and Sánchez Sánchez (2007: 355) point out, it must be taken into account that, throughout the provisions of the Law on the Prevention of Occupational Risks (*Ley de Prevención de Riesgos Laborales*, LPRL) the organization and management of work

are potential risk factors for the health of workers, so it is necessary to keep in mind the psychosocial risks in general, and in particular in teleworking. It seems that it is what is being demanded not only by scientific doctrine through its contributions, but by different instances by States within the European framework; as evidence of this, in 2012 a European psychosocial risk campaign was developed, focusing mainly on the inspection by checking the management of psychosocial risks in the company and the analysis of the evaluation of these and the actions carried out following a complaint of a worker.

Once the responsibility on the employer has been met, the need arises to provide him with tools that include both the work centre and the home or place freely chosen by the worker.

3.1. European framework agreement on teleworking

The European Framework Agreement on Teleworking (EFAT) (*Acuerdo Marco Europeo sobre Teletrabajo, AMET*) delimits the forms of action of teleworking as an especially useful instrument to facilitate and extend the introduction of teleworking in companies and to resolve some doubts that had arisen in certain aspects of the workplace. It's strength resides in the fact that it has been a product of the negotiation between labour unions and employers in the European field and has been ratified by all EU countries.

It defines teleworking (art. 2) as “form of organization and / or completion of the work, using information technologies in the context of a contract or an employment relationship, in which work which could also be carried out on the premises of the undertaking is carried out out of these premises on a regular basis”.

This agreement, in addition to the definition and scope of teleworking, defines its voluntary nature, conditions of employment, data protection, privacy, equipment, health and safety, work organization, training and collective rights, as well as the implementation and monitoring thereof.

In section 8, which establishes the responsibility of the employer in the protection of the health and safety of teleworkers and their obligation to inform the teleworker of the policy in this regard, especially the requirements relating to the screens of Data, and it is the teleworker's obligation to correctly apply these security policies (Martínez López, Ruiz Frutos and García Ordaz, 2008: 12).

The employer (also the representatives of the workers and / or the competent authorities) can verify the correct application of the rules by accessing the place where the service is performed, within the limits established by the legislation and collective agreements, being necessary, when the service is provided at the address, the notification and consent of the worker.

The EFAT, in section 9, proposes that measures be taken to prevent the isolation of the teleworker in relation to other employees of the company, such as giving him the opportunity to meet regularly with his colleagues and have access to the information of the company.

3.2. Worker's Statute

Article 13.4 of the Workers' Statute (ET, in Spanish *Estatuto de los Trabajadores*) regulates the protection of workers at a distance in the field of occupational risk prevention in the following terms: “Distance workers have the right to adequate protection in the area of safety and health, in accordance with the provisions of Law 31/1995 of 8 November 1995 on the prevention of occupational hazards and their implementing legislation”.

The development of teleworking entails the existence of certain obligations for the employer, who is responsible for ensuring the ergonomic requirements of the workplace, adequate lighting and air circulation, and other safety and risk prevention measures for the teleworker.

3.3. Law 31/1995 on Prevention of Risks at the Workplace.

Law 31/1995 makes the employer responsible for the prevention of risks both in the place where the activity is carried out and in relation to the equipment and tools used by the worker, whether these are contributed by the employer or if they are owned by the worker

In addition to the general safety duty (article 14 LPRL), the standard itself regulates a set of instrumental duties aimed at ensuring the safety and health of workers in the work environment, duties that are specified in: the assessment of occupational hazards, information on safety conditions, training of workers, monitoring and control of health status and participation of workers in prevention.

Therefore, the general obligation “to ensure the safety and health of workers at his service in all aspects of work” and to take all necessary measures to that end “devolve upon the employer. In this sense the legal text not only refers to those obligations specifically expected (in arts. 15 and ss. LPRL), but also to others not foreseen but emanating naturally from their powers of direction and organization.

With regard to psychosocial risks, the greatest problem encountered by the legislator in regulating preventive legislation is given by the complexity of the concept, which will refer to the working conditions, organization of the concept, content and realization of tasks and their interaction with individual characteristics, attitudes, needs, etc. Due to these precepts, the location of a risk of work stress or the appearance of cases worthy of such qualification within the organization, once such actions are included in the scope of the LPRL, force the employer to take action that in the future avoid the materialization of such risk or, at least, that they are able to reduce it as much as possible (Martínez Barroso, 2004: 9).

3. 4. European framework agreements on psychosocial risks.

In the regulatory area, there is no legal or unified legal regulation in the EU on psychosocial risks, although they are a concern of it. Proof of this are the numerous technical notes on prevention (TNP, in Spanish, *notas técnicas de prevención, NTP*) developed over the years devoted to the study of individual risks, some directives dealing with particular aspects such as harassment by discriminatory motives (Directives 2000/43 / EC and 2002/73 / EC, among others) or other collateral aspects, such as working time (Directive 2003/88 / EC), and the agreements that have emerged on each of the risks. These documents mainly contain indications for its subsequent treatment as well as, in some cases, its prevention.

There are three European social agreements between business and trade union organizations that have also helped to establish this area. These are the European Agreement on Workplace Stress 2004, the Agreement on Violence and Harassment at Work 2007 and the multisectoral guidelines on violence and harassment 2010.

The legal value of these agreements is very diffuse in that they have no binding force in Community and State legislation, nor the legal force of some collective agreements in national legislation. These are mere “gentlemen’s agreements”, conceived with a more promotional rather than regulatory purpose, as their content is ambiguous (Velázquez, 2012: 33).

3.4.1. European Framework Agreement on Stress related to Work.

The EU’s concern in this area is reflected in 2004 with the European Framework Agreement on Work-Related Stress of 8 October, transposed to the Spanish framework of collective bargaining in the Annex to the Inter-Confederation Agreement for Collective Bargaining (in Spanish, *Acuerdo Interconfederal para la Negociación Colectiva, ANC* 2005). The purpose of the Agreement was to provide workers and employers with an instrument to identify and prevent problems caused by work-related stress.

Among the measures proposed are training to understand their causes, as well as how to treat it; Increase information and consultation with workers, to clarify the objectives of the company, the role of each individual and the organization of work. These measures are essential to prevent, eliminate or reduce it, since the European Agreement, while maintaining that stress is not a disease, does recognize that prolonged exposure to it can reduce work efficiency and may be the cause of a pathology involving deterioration of the health of the worker (Romero Ródenas, 2006: 4).

3.4.2. European Framework Agreement on Violence and Harassment.

Harassment and violence can appear in any workplace and affect any worker, regardless of the size of the company, the field of activity or the type of contract or employment relationship. However, some groups and sectors may be more at risk than others.

Various forms of harassment and violence may be present in the workplace, which may be of a physical, psychological or sexual nature, constitute isolated incidents or more systematic behaviour, occur among colleagues, between superiors and subordinates, or come from third parties such as clients, users , patients, students, etc. or go from minor cases of disrespect to more serious acts, such as criminal offences that require the intervention of public authorities.

To avoid such situations, the awareness of all staff should be increased with appropriate training to reduce the likelihood of harassment and violence at work and to create a procedure to follow in case of incidents.

In Spanish law, the absence of a clear legal framework on prevention against harassment has not prevented their protection, either through the protection provided in Articles 14, 15 and 18 of the Spanish Constitution (EC), or

through the Article 4 of the ET, which provides the worker's right to physical integrity and an adequate health and safety policy, or through the obligations that can be extracted in preventive matters from articles 14 and following of the LPRL.

3.5. Collective agreements.

Not many collective agreements collect the formula of teleworking, and those who do so sometimes only mention the possibility of performing the service at home but without delving into how it will be done. Others, on the contrary, dedicate a section to it, and in it, among other aspects, include the protection of the worker in the matter of prevention of occupational risks.

From the analysis of a wide sample of collective agreements (among others, Alcatel-Lucent España, Repsol Butano, Grupo ONO, industria química, perfumería y afines) and of the regulation in both public administrations (Comunidad Autónoma de Castilla y León, Administración de la Comunidad Autónoma de las Illes Balears) and in universities (Murcia, Zaragoza, Burgos and UNED), the attention given in teleworking to the prevention of occupational risks (especialmente the risks derived from the use of new technologies) and to physical damage caused by this new modality of work by the composition of the position. These, on the other hand, leave aside other damages such as stress or harassment at work, focusing, however, on the training of the worker in risk prevention in order to be able to self-assess his or her domicile or to facilitate the option of receiving an inspection by part of a work technician of the company.

Only in the perfumery and related agreements and in the University of Murcia have we found references to psychosocial risks, thus, the agreement of perfumery and related establishes that the employer must adopt measures to prevent the isolation of the teleworker in relation to others workers of the company. And the University of Murcia, in the selection of candidates, requires that they undergo a medical examination that will determine the current health compatibility with the performance in the home. It is understood that this recognition will fundamentally value the employee's mood, which could negatively influence the possible isolation situation caused by teleworking, and that his previous analysis may advise a candidate to change the mode as a preventive of situations of Stress or loneliness.

4. The material conditions of the provision.

Any action that in the field of teleworking is carried out in order to prevent occupational hazards will necessarily have to take into account the two defining co-ordinates of that one: the place and the particular working tool.

Although many definitions of teleworking can be found, they all incorporate "the use of technologies" and the fulfilment of the provision "in a place other than workplaces". These elements can modify the possible psychosocial risk factors of a particular job: greater reliance on technology, control of time to achieve objectives, etc.

4. 1. Workplace

In all labour relations, the employer is responsible for the safety and health of his workers; because of this the employer has to exert a series of measures related to both health and safety, in order to avoid or minimize risks as far as possible. The application of prevention measures is essentially based on the existence of direct control by the employer of the main risk factors, including workplace itself.

The employer has a general duty of protection, so that, in order to comply, he must always know the places where his workers perform their service. If the worker alternates the benefit between the work centre and his address, both must have guaranteed protection in this matter.

This "alternative mode" of work development, and the use of the term "preponderant" in Article 13.1 of the ET, is interpreted here as a measure to avoid the isolation of the worker by requiring the provision of services in the workplace and therefore in contact with the rest of the template.

In the case of teleworking, the work centre is often configured as the home of the teleworker, so that the regulations on prevention of occupational risks may conflict with the rights of the person, such as the inviolability of the home and respect for personal privacy and family, regulated in article 18.1 of the EC.

In Spanish legislation, the fact that the benefit is provided at the worker's home does not exclude, but, on the contrary, reinforces the need to promote information, consultation and participation of the worker in the adoption of protective measures, which, on the other hand, recognizes article 18 of the LPRL.

Article 19 of the LPRL establishes that it is the worker who must observe the legal and regulatory measures of safety and hygiene, and it is incumbent upon the employer to inspect and control those measures. It is precisely in section 4 of this article where the main problem of the employer lies because of the difficulty of carrying out this control directly, except that he install video surveillance cameras, which could lead to violation of the fundamental rights of the worker (privacy, computer freedom, etc.) (Vicente Pachés, 1999: 1065). It could even mean a higher control than the one practised in face-to-face work, where constant vigilance is not frequent. This could become a stressful agent by giving the worker constant pressure during the performance of his duties.

Surveillance, in addition, should be limited to the strict space where the provision is made, although the risks and training on them can be extended to the rest of the address. Vigilance over the entire domicile of the worker, or even the rest of his family, would be understood as a violation of privacy.

Before the worker decides whether or not to allow the employer to supervise their job, it may be advisable that this inspection should be carried out on an official basis by the workers' compensation mutuals both at the beginning of the relationship and annually. This review of the facility may be voluntary, such as in medical examinations, except at the start of the activity, as well as when remodelling the home that may affect the job.

This surveillance could broaden its scope and extend to the worker's mental state, the evaluation of his workload, his time management, his relations with other colleagues, etc., as preventive measures for fatigue, stress or isolation.

In addition to the above, and as already indicated, the employer is obliged to provide practical and adequate training to the worker in the matter. The employer, in the opinion of the undersigned, in addition to influencing the training on the risks of the job, could include basic knowledge of possible risks at home as well as instructions on how to avoid or prevent them. This extensive training to the rest of the home may be striking because in the work centres prevention training focuses exclusively on the job or evacuation measures of facilities but not on the potential risks of misuse of other instruments that can be found in a common area dedicated, for example, to the company dining room (De las Heras García, 2016: 261).

Professor Mella Méndez (199) points out among the risks of the workplace that require a special evaluation: those related to isolation, taking distance from the work environment and the dedication of the same physical space

to private and professional life. These risks can lead to psychic or labour problems, such as distraction, poor performance or quality of work, and an increase in occupational accidents.

4.2. Worktools

The incorporation of new technologies in the world of work has meant an intense transformation of labour relations, both individual and collective. The productive process and the business management have been altered, which has affected the forms of work organization.

Application of new technologies to the monitoring and control of work provision, use of e-mail, access to the internet, automated processing of workers' data and information, acceptance of electronic signature, use in collective relations of the Intranet and, by combination and result of all of them, "teleworking", has had a great impact in the world of work, with the appearance of new forms of work (Blasco Pellicer, 2009: 1).

The introduction of new technologies into the production process generates benefits of different types from the business point of view, while it is liable to cause problems to the workers affected by the changes, which requires the employer to carry out an adequate policy of prevention in their productive organization in order to avoid risks as a result of the impact of new technologies on jobs (Meléndez Morillo-Velarde, 2016).

Technology itself is neutral, that is, it has no capacity by itself to generate any kind of effect, positive or negative, on workers. The negative or positive effects on health do not depend on technology itself, but on the organizational strategy adopted, the way in which work is organized around its use (Belzunegui Eraso, 2001: 407).

It will be the employer's obligation to inform the teleworker of the company's policy on health and safety at work, especially on the requirements related to data screens as these are perhaps the most common tools with which the activity will be developed.

Also, the worker should receive information from other machines that may also need to work (printers, paper shredders ...). On all of them, they should receive timely information as well as ergonomic rules regarding the rest of the elements that make up the workstation such as the chair, table or work lamp.

In order to guarantee the employer that the worker uses appropriate tools and that these comply with the regulations, the most appropriate is to provide them himself, as well as to provide him with basic training on their management.

Management of work tools, in relation to psychosocial risks, can cause the worker to feel anxiety caused by the constant questioning of their proper use (in the face of constant changes in computer applications), as well as dependence on them, situation produced when the worker has an addiction to work, is constantly connected to the telephone or email in case he receives instructions from his managers or colleagues.

5. Possible Psychosocial Risks In Teleworking.

From the legal obligation to prevent possible risks at work, there is a need to try to identify them. In addition to those already known in general, in terms of teleworking, terms such as techno-stress, techno-therapy, techno-fatigue, nomophobia, techno-addiction, etc. are used. (Dalmau Pons and Ferrer Puig, 2015).

The fear of losing work, insecurity in it, lack of control over elements of the contract itself, have become characteristics of current work. The uncertainty of the future is one of the greatest sources of anxiety and fear, especially when it is not exclusively personal, but also includes the family. This type of concern, and its consequences, has an effect on both the physical and mental health of the workers and can lead to a loss of work, or force the worker to request termination of the contract while degrading the work environment.

In order to deal with psychosocial risks, the employer must reasonably accommodate the productive organization, which can be translated, for example, into a change of functions to avoid the stressful work, or the place of provision of services of the harasser so that he can not harass to the victim, or to remove it from the victim.

Although there is no exhaustive or consensual list of psychosocial risk factors, an attempt is made to approximate the possible risks of teleworking (as set out in the Guide to Recommendations and Best Practices for Promoting Teleworking, 2010):

- *Risks derived from work teams.* Teleworkers share the risks with office work with data display screens. In addition, the general use of the technology can cause difficulties both for continuous adaptation to new equipment and systems (self-control, flexibility, self-efficacy, etc.) and for its specific and continuous training and preparation. This generates an overexertion to be able to adapt to the situation that is perceived by the individual as urgent and expensive. This overexertion is called *techno-stress*, and it manifests itself in two ways: with a conflictive relationship with technologies (tension due to the impossibility of handling a laptop computer, for example) and exaggerated identification (anxiety to constantly review e-mail, or lengthening the journeys work for being connected to the internet).
- *Risks derived from work environment.* Space, lighting, noise or air conditioning must be taken into account to create a comfortable working space. All of them can cause illness in the worker, so the employer must either carry out an inspection of the job, with the consent of the worker, or delegate this inspection to the personnel delegate or to the worker himself, in which case you should give him training and information about it.
- *Risks to physical health.* Working long hours in front of the computer can cause “sedentarism” because activities of a cognitive type are carried out but being most of the time sitting, which entails a lack of habitual physical activity. Associated with it can be found the so-called “potato on the desk syndrome”, which is characterized by easy access to food at any time of the day. This causes the intake of food at late hours, which together with the sedentarism can lead to a “functional obesity” that leads to cardiovascular diseases, hypertension, gastrointestinal disorders, etc. (Alonso Fabregt and Cifre Gallego, 2002: 2).

Related to overwork (and the willingness to work any time, anywhere) we find the concept of *workaholism* or “work addiction”, characterized by excessive dedication of time and effort and a certain compulsive and involuntary disorder to continue working, in addition to a general lack of interest in other types of activities.

In addition, teleworking can become a double-edged sword for the reconciliation of personal life and working life; sometimes, having to manage at the same time and with the same energy the family and work demands can cause problems to the workers (Cifre Gallego, 2008: 189). People who work from home, and those who use information technology to work when they are not in their main workplace (teleworkers), could take on the challenge of reconciling work and family life

in atypical ways. It should also be borne in mind that, at the same time, the family can be a source of social support, providing the means to cope with the difficulties related to work-family balance (Forastieri, 2012: 128).

- *Psychosocial risks*. Psychosocial risks are common risks to the development of work in the workplace, although worker isolation, lack of communication with peers or control by supervisors may have a greater impact on teleworking.

Their presence involves a high cost, both for companies and organizations and for workers themselves, in terms of decreasing productivity, increased absenteeism, increased staff turnover, increased work accidents motivated by lack of communication, coordination or adaptation of workers and prevalence of mental health problems, sleep disorders or other physical illnesses.

- *Isolation*, caused by working in an individualized environment with little or no contact with colleagues and managers.
- *Monotony*, associated with isolation, linked to the performance of repetitive tasks that are not interrupted by comments from colleagues or other tasks, can also cause discouragement in the worker and a lower performance of the same, as well as more failures in their execution for lack of attention.
- *Lack of external control or supervision or permanent control* can cause little work or, on the contrary, be done in excess, so that can occur in the latter case tension and stress that affects biological schedules and rhythms .
- *Work stress*, recognized by various European institutions as one of the most undesirable and relevant factors or phenomena in the reality of current work, which represents a huge cost both in human damage and in detriment to economic performance.

As a psychosocial risk involves a state of deterioration of functioning that has a high risk of generating important consequences for physical and mental health. European data indicate that it is one of the most important causes of off work, which is widespread and also increasing.

Other causes of stress are the excessive work load and rhythm with pressure mainly on time, very long working hours, lack of communication within the organization and a negative interaction between home and work due to problems related to conflict of demands or problems of reconciliation of family life with work.

This stress can lead to burnout, which causes emotional exhaustion and demotivating fatigue for work tasks. It differs from stress in the fact that exhaustion is emotional rather than physical and leads to loss of job motivation (Moreno Jiménez, 2010: 42).

Burnout syndrome is one of the most important work-related injuries of a psychosocial nature in today's society. The high pace of life, the increase in emotional and mental work, the demands of a higher quality of work, and the costs that burnout entails for individuals and organizations has aroused interest in knowing and taking measures to prevent it (Salanova and Llorens, 2008: 59-67).

For its prevention, among others, the WONT team has developed an evaluation instrument that consists of the completion of a test by the workers which is interpreted by the tool and from which will emerge the measures to be adopted, among which are training of staff, distribution of tasks, management of time, etc.

– *Mobbing* (Azagra Solano, 2010:3), or harassment at work, may also occur in teleworking because there is a working relationship between people who can engage in conduct that harms the physical and psychological integrity of one or more people. If these behaviours, instead of being oriented to the labour field, are intimidating behaviours of the sexual field, we will be facing sexual harassment.

Both workplace and sexual harassment can be manifested in teleworking, either when the service is provided in the workplace, or by sending messages by mail, mobile phone, phone calls or home visits. The latter, although it will be the employer's obligation to prevent it, will be the most difficult to detect by both the employer and even other colleagues.

Abuse of power, inadequate leadership, chronic conflicts, isolation, and non-fluidity in interpersonal relationships can be considered causes or sources of mobbing.

The psychosocial risks listed above are common risks to the development of work in workplaces, although, insisted on, isolation of the worker, lack of communication with peers or control by supervisors, can cause them to occur on more occasions than in the workplace.

6. Measures for the prevention of psychosocial risks.

Some measures that the employer could adopt for the protection of the workers, included in the Practical Guide on Teleworking in ICTs, are:

- To avoid mental or psychological fatigue or overload: reorganizing working time, including brief breaks during the day; adjusting the information load to capacity, as well as the relationship between the necessary care and the time that has been maintained, or redesigning the workplace.
- To avoid the feeling of isolation: to ensure that the person working alone does not lack information about what is being done, about the margin of decision that has to be made, about the failures that may occur and its consequences, as well as about other labour issues that the person who works alone may have concerns and provide the support needed for the performance of their task.
It is advisable to foster cordial relations between the command and the worker and between the worker and the people close to his area of work. Establishing a systematic meeting schedule with colleagues and / or managers of the company and alternating working days at home with others in the company, can be measures to take into account.
An assessment of the psychic (ability to overcome the anguish derived from loneliness), physical (in principle, the general state of health must be good) and intellectual (capacity to face problematic situations that must be solved, in many cases, by the worker himself) abilities (NTP 344: 1994).
- To avoid stress: use techniques to encourage the adaptability of the individual. These can be general, cognitive in order to change the way of seeing the situation (cognitive reorganization, modification of automatic and deformed thoughts...); physiological (relaxation, breathing control ...) or behavioural to promote adaptive behaviour (problem solving techniques, social skills, self-control, etc.).
- To avoid the techno-stress: applying concrete guidelines of use of the technology that protect of the fatigue and the addiction, as well as to set realistic goals of formation and cognitive restructuring to avoid the anxiety.

- To avoid role ambiguity: establish a communication system that makes explicit the objectives and general policy of the company, the department where the worker is located and the work place, as well as favour the existence of an open and agile communications climate that makes it possible to consult and solve ambiguous and / or conflicting situations.
- To ensure promotion activities: including training in aspects such as social skills, effective communication management, conflict resolution, teamwork, self-management and emotional management, participatory leadership styles and effective time management, among others.

It would be advisable - for the moment there is no obligation in this respect - that before the start of the employment relationship under the teleworking formula an inspection of the place where the service provision will be developed should be made for evaluating indoor air, ergonomics, risks in travel, lighting, exposure to chemical substances and other issues that are considered to be relevant to the health of the worker and that, in case of non-compliance, they may advise against the worker to proceed to the provision in that place. In addition to physical space and work tools, it would be advisable to carry out a physical and mental recognition of the worker in order to avoid possible psychosocial risks such as stress or anxiety.

In order to be sure that preventive measures are taken at worker's home, the employer will have two options: either to qualify the position himself or to delegate the authorization to the worker himself, training him in advance in order to be able to prevent risks .

In the first case, for the adoption of these measures, it should also be taken into account that the workers domicile is protected by the right to privacy, so that his actions must have the consent of the worker and be limited exclusively to the space in the workplace where work will be performed and not their entire domicile.

Di Martino (2004), on the other hand, refers some characteristics that must be taken into account for the profile of the teleworker. Among these, he mentions the following: (A) discipline; (B) self-motivation; (C) ability to organize with a low level of supervision; (D) ability to balance work with other activities; (E) ability to make decisions; (F) have knowledge in computer science and technology (ICT), (g) planning skills; (H) self-confidence; (I) problem solving; and (j) initiative.

In the study of practices, it is observed that certain companies, as in the Repsol Group, carry out a very detailed analysis of this “way of working”, listing in their agreements the basic requirements that the worker must meet in order to request the change to the modality of teleworking (VII Framework Agreement of the Repsol Group), which in the opinion of those who subscribe these lines, are mostly quite coherent and may prevent some of the psychosocial risks discussed:

- A seniority in the company of at least two years. This temporary requirement allows the entrepreneur to have a guarantee that the worker is known by the company, the forms of performance of the different tasks, colleagues and those responsible; in short, have a baggage of the same that will allow the worker to know how to proceed in certain complex situations, to know the different times of execution of the tasks, etc. This time also allows the entrepreneur to know the virtues and weaknesses of the worker and according to them schedule the performance and control itself.
- Sufficient knowledge of their position. It is necessary to have been at least one year in that position. This, together with the requirement of seniority already seen, ensures the knowledge of the concrete tasks and the overall operation of the company.
- Computer skills sufficient to work “remotely”. Having “enough” knowledge about them will simplify the process of adaptation to this new system of work.
- Characteristics of the worker: Referred to responsibility for self-management, discipline and motivation.
- Adequate sustained performance over time. The employer must rely on the performance of his worker to avoid creating excessive elements of control that could even violate the principle of privacy (Article 18.1 EC).
- Having a space that meets the minimum conditions in terms of prevention, safety and health.

Although the agreement of the Repsol Group has been cited as being the most demanding of access to workers, it is obviously not the only agreement and this is not the only way that imposes conditions; it is sufficient to mention only the experimental teleworking programs of the Administration, such as the “Work from Home” of the Autonomous Community of Castilla y León, where, on the one hand, certain requirements are included in the agreement analysed by Repsol, as seniority of two years - not in the post, but in any of the public administrations - to carry out a “teleworkable” activity, to have computer skills or to have the basic computer equipment at home (personal computer

with Internet access through Broadband with terrestrial transmission), and, on the other, others are excluded such as the necessary situation of discharge and full time, knowledge of the position or behaviours of the candidate.

7. Health surveillance.

According to *The health and safety issues for teleworkers in de European Union*, carried out by the European Foundation for the Improvement of Living and Working Conditions in 1997, it is necessary to implement in the Member States of the Union, and in particular in the companies which have implemented teleworking, a series of measures to correct the problems of health that have been detected in the exercise of the same. This report highlights among the problems generated by teleworking the loss of self-esteem, recognition and the tendency to provoke depressive pictures, all derived from the permanent situation of isolation to which teleworkers are subjected. Insists for its prevention in the prior evaluation of the workers who are going to perform the work at home, as well as their periodic check.

Article 22.1 of the LPRL establishes the duty of the employer to ensure the periodic monitoring of the health status of its workers with regard to the possible incidence on them of occupational hazards, which must be carried out before starting work, subsequently with adjusted frequency level of risk, and when there are disorders that could be due to the type of work.

Medical examinations, as a guarantee of the periodic monitoring of the health of workers, are not established, except in the cases indicated in the previous paragraph, periodicity, so that they will be in accordance with the rules of use and custom (one year review of the dentist, gynaecologist, oculist or dermatologist...) and the ones established by the mutual insurance company (usually annual).

But apart from the frequency of medical examinations, a particularly delicate and important issue is the voluntary or compulsory submission of the worker to them. In this sense, although it is a general principle that health surveillance can only be carried out when that person consents, it should be borne in mind that an exception is allowed if the performance of the examinations in question is essential to evaluate the the effects of working conditions on their health or to verify if this can constitute a danger to their lives, that of other workers or persons related to the company (article 22.1 of the LPRL).

According to the doctrine (Mella Méndez, 1999: 1038), teleworking can be one of these assumptions, especially when the worker is disconnected or unidirectionally connected via “work-place”, in which the absence of direct and continuous contact and between worker and employer prevents the immediate and constant observation of the state of health of the worker, as well as the concurrence of other indications that may reveal alterations or deficiencies in that state. In any case, the previous report of the representatives of the workers is required.

After recognition, the worker will be the only knower of the specific health outcomes, and the employer will be informed of the conclusions, only insofar as they relate to the worker’s ability to perform the job, the need to improve or introduce protective measures and the proper development of prevention functions (Cardona Rubert, 2003: 164).

In addition to the physical examinations it would be advisable to carry out assessments of psychosocial risk according to one of the many models available in Spain. These include the F-PSICO method, the PREVENLAB-PSICOSOCIAL method, the Navarre Institute for Occupational Health (INSL), the MARC-UV method, the MAPFRE Institute of Ergonomics (INERMAP), the ISTAS-21 method, the WONT methodology / RED questionnaire, the multidimensional questionnaire DECORE or the MC Mutual-UB set, all cited and explained by Moreno Jiménez and Báez León (2010: 88-107).

8. Conclusion

Development in the domicile of the employment activity makes it difficult for the employer to supervise preventive matters, so it would be advisable, before starting the service, to perform an inspection of the work space of their home, the tools about to be used and the physical and mental state of the worker, to inform him of the risks of the job and of the measures and activities of protection and prevention that he must adopt, as well as to verify that he possesses the theoretical and practical training in preventive matters necessary for the position of work that will be performed.

But not only a previous assessment of the place, the tools or the worker itself will be necessary, but it seems mandatory to follow up, to evaluate the real impact that it has, and if appropriate propose and make the necessary changes or adjustments. It will be especially important to equip the worker with tools that allow better management of time, communicative skills or management of emotions, as well as their own on work tools when changes occur.

Bibliography

Acuerdo para la Negociación Colectiva (ANC 2005, BOE de 16 de marzo de 2005).

Acuerdo marco europeo de teletrabajo, de 23 de mayo de 2002, firmado con fecha de 16 de julio del mismo año en Bruselas por los interlocutores sociales (CES, UNICE/UEAPME y CEEP).

Alonso Fabregat, M. B. y Cifre Gallego, E. (2002), «Teletrabajo y salud: un nuevo reto para la psicología». *Papeles de Psicólogo*, 83, 100-105.

Azagra Solano, M. (2010), «Recargo de prestaciones: ¿también en los casos de mobbing?». *Revista Aranzadi Doctrinal*, 5, 67-80.

Bartolomé Antón, M., Fernández Ares, C., Prieto García, S. y Sánchez Sánchez, V (2007), «Riesgos psicosociales emergentes en el trabajo». *Revista Universitaria de Ciencias del Trabajo*, 8, 341-356.

Belzunegui Eraso, Á. (2001), *Diversificación de las condiciones de trabajo y cambios organizativos de las empresas: un estudio sobre el teletrabajo*, tesis doctoral de la Universidad de Rovira i Virgili.

Blasco Pellicer, C. (2009), «Incidencia de las nuevas tecnologías de la información y la comunicación (TICS) en las reestructuraciones de las empresas». *Revista Aranzadi Social*, vol 2, 15, 131-151.

Cardona Rubert, M.B. (2003), «Las relaciones laborales y el uso de las tecnologías informáticas». *Lan Harremanak, Revista de Relaciones Laborales*, número extra 1, 157-173.

Carrasco González, A. M., Corte de la Corte, C. M. de la y León Rubio, J. M.: (2010), «Engagement: un recurso para optimizar la salud psicosocial en las organizaciones y prevenir el burnout y estrés laboral». *Revista Digital de Salud y Seguridad en el Trabajo*, 1, 1-22.

Cifre Gallego, E. (2008), «Estrategias de mejora de la salud psicosocial del teletrabajador. El arte de conjugar teoría y práctica». *Revista de Trabajo y Seguridad Social*, 300, CEF, 181-200.

Dalmau Pons, I. y Ferrer Puig R. (2015), «Preservar la salud teletrabajando», Ejemplar dedicado a «Prevención de riesgos laborales: tendencias en tiempo de crisis». *Oikonomics: revista de economía, empresa y sociedad*, 52-59.

De las Heras García, A. (2016), *El teletrabajo en España: un análisis crítico de normas y prácticas*, Madrid: CEF.

De Vicente Pachés, F. (1999), «Seguridad y salud en el teletrabajo», Descentralización productiva y nuevas formas organizativas del trabajo: X Congreso Nacional de Derecho del Trabajo y de la Seguridad Social, Zaragoza, 28 y 29 de mayo de 2009, 1065-1088.

Di Martino, V. (2004), *El teletrabajo en américa latina y el caribe*. Centro Internacional de Investigaciones para el Desarrollo.

Forastieri, V. (2012), «¿Por qué es importante el estrés relacionado con el trabajo? La acción de la OIT y el “enfoque Solve”», *Anuario internacional sobre prevención de riesgos psicosociales y calidad de vida en el trabajo*, UGT-CEC.

Guía práctica del Teletrabajo en la TICS, (2009). Observatorio Industrial de Electrónica, Tecnologías de la Información y Telecomunicaciones.

Mansilla Izquierdo, F. (2004), «El riesgo psicosocial en el trabajo: Una realidad emergente». *Revista de la Asociación Española de Neuropsiquiatría*, 89.

Martínez Barroso, M. R. (2004), «Reflexiones en torno al Acuerdo marco europeo sobre el estrés en el trabajo». *Revista Doctrinal Aranzadi Social*, 5, 1511-1534.

Martínez López, F. J., Ruiz Frutos, C. y García Ordaz, M. (2008), «Teletrabajo: seguridad y salud sin importar la distancia». *Revista Gestión Práctica de Riesgos Laborales: integración y desarrollo de la gestión de la prevención*, 45, 12-19.

Mella Méndez, L. (1999), «Notas sobre la prevención de riesgos laborales en el teletrabajo». Descentralización productiva y nuevas formas organizativas del trabajo: X Congreso Nacional de Derecho del Trabajo y de la Seguridad Social, Zaragoza, 28 y 29 de mayo de 2009, 1023-1044.

Meléndez Morillo-Velarde, L. (2016), «Nuevas tecnologías y riesgos psicosociales». *Revista Española de Derecho del Trabajo*, 184, 145-175.

Molina Navarrete, C. (2011), «El recargo de prestaciones por infracción del deber de evaluar los riesgos psicosociales: la doctrina judicial hace “justicia disuasoria”». *Revista Doctrinal Aranzadi Social*, 22, 6.

(2013), «Un hito jurídico en el deber empresarial de evaluación de riesgos psicosociales: alcance de una norma especial que confirma el principio general». *Revista de Derecho Social*, 63, 35-56.

Moreno Jiménez, B. y Báez León, C. (2010), *Factores y riesgos psicosociales, formas, consecuencias, medidas y buenas prácticas*. Ministerio de Trabajo y Asuntos Sociales.

Primera Jornada de análisis integral del mobbing, (2005) Girona, disponible en www.acosomoral.org

Productividad y las nuevas formas de organización del trabajo en la sociedad de la información (2006). Madrid: Universidad Carlos III.

Rodríguez-Piñero Royo, M. (dir.) (2006), *Nuevas actividades y sectores emergentes: el papel de la negociación colectiva*. Comisión Nacional de Convenios Colectivos. Ministerio de Trabajo y Asuntos Sociales. Madrid.

Romero Ródenas, J.M., (2006), «El estrés laboral como factor desencadenante de los riesgos psicosociales. Su posible protección en el ámbito de la empresa: especial referencia al Acuerdo europeo sobre el estrés laboral». *Justicia laboral: revista de Derecho del Trabajo y la Seguridad Social*, 22, 13-31.

Salanova Soria, M. (2007), «Nuevas tecnologías y nuevos riesgos psicosociales en el trabajo», *28 de abril, Revista Digital de salud y seguridad en el trabajo*, 1-21.

Salanova M. y Llorens, S. (2008), «Estado actual y retos futuros en el estudio del burnout». *Papeles del Psicólogo*, vol 29 (I), 59-67.

Salanova, M. y Schaufeli, W. B. (2004), «El engagement de los empleados: un reto emergente para la dirección de los recursos humanos». *Revista de Trabajo y Seguridad Social*, 261, CEF, 109-138.

Sánchez Trigueros, C. y Conde Colmenero, P. (2008), «La protección social y los riesgos psicosociales». *Anales de Derecho*, 26, 275-298.

Teletrabajo como medida de flexibilidad empresarial, (2008). Cámara Oficial de Comercio e Industria de Navarra.

Velázquez, M.: (2012), «Análisis comparado del control de la prevención de los riesgos psicosociales por las inspecciones de trabajo europeas: Reino Unido, Austria, Italia, Francia y España», en *Anuario internacional sobre prevención de riesgos psicosociales y calidad de vida en el trabajo*, UGT-CEC.

Convenios colectivos citados:

Administración de la Comunidad Autónoma de las Illes Balears. Decreto 36/2013, por el que se regula la prestación de servicios mediante teletrabajo (BOIB de 29 de junio de 2013).

Alcatel-Lucent España, SAU, (BOE de 10 de febrero de 2015).

Comunidad Autónoma de Castilla y León. Orden ADM/2154/2009, de 17 de noviembre, sobre el Programa experimental de teletrabajo «Trabaja desde casa» (BOCYL de 20 de noviembre de 2009).

Grupo ONO (Cableuropa, SAU y Tenaria, SA), II convenio colectivo (BOE de 1 de julio de 2013).

Grupo Repsol. VII Acuerdo marco (BOE de 13 de noviembre de 2014).

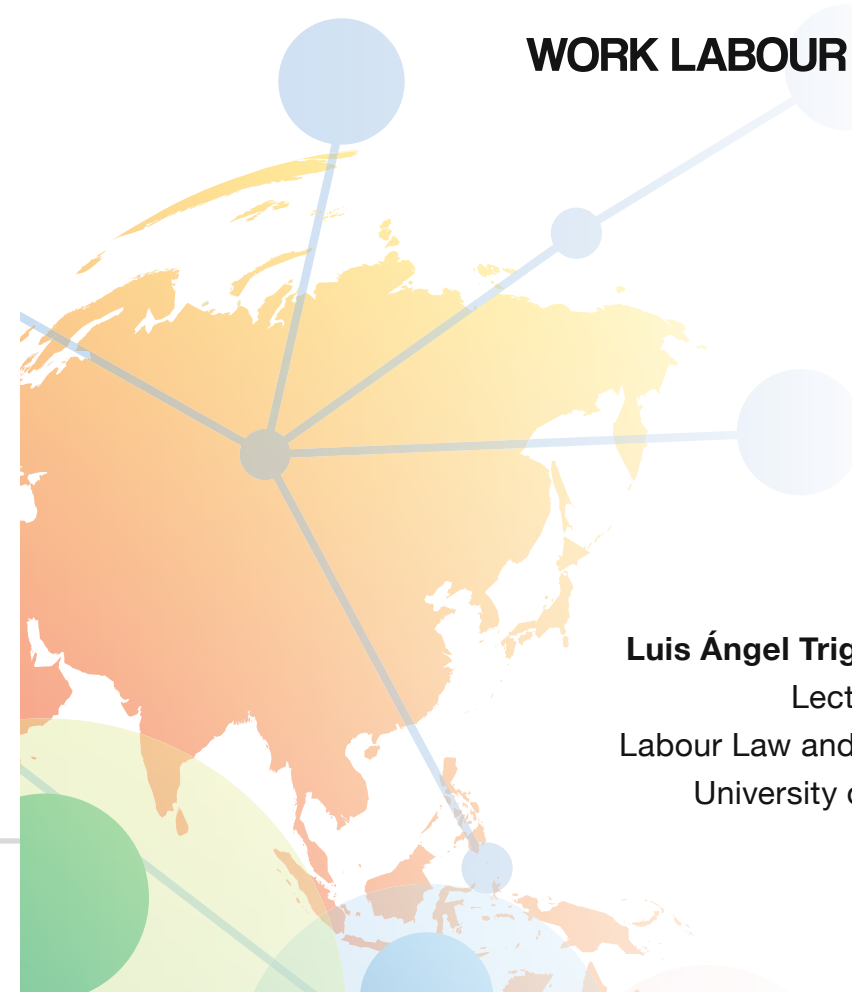
Industria química, XVII, convenio colectivo general (BOE de 9 de abril de 2013).

Perfumería y afines. Convenio colectivo estatal (BOE de 19 de enero de 2016)

Repsol Butano, XXIV convenio colectivo (BOE de 8 de junio de 2012).



PSYCHOSOCIAL RISK FACTORS IN LABOUR RELATIONS IN THE CALL CENTER SECTOR: TRANSNATIONAL IDENTIFYING ON PURPOSE OF THE VISION OF THE INTERNATIONAL WORK LABOUR ORGANIZATION



Luis Ángel Triguero Martínez
Lecturer
Labour Law and Social Security
University of Granada

Summary

1. Introduction.

2. Psychosocial risk factors.

2.1. Flexibility.

2.2. Precariousness.

2.3. Organizational and business restructuring.

2.4. Gender.

3. Psychosocial risks.

3.1. Stress.

3.2. Burn out syndrome.

3.3. Harassment.

3.4. Violence at work.

4. Challenges.

4.1. Social dialogue.

4.2. Training.

5. Conclusion.

Bibliography.

1. Introduction

Call centers conform nowadays a sector that employs millions of people worldwide. In this setting, services of different nature related to customer service are provided on a national, regional and international level -mainly- through phone contact in order to announce or sell products.

This sector has experimented a quantitative and significant growth due to its connection with the expansion and implementation of new technologies. And these technologies have undergone a high development during the last decades. Parallel and convergent progress with the sector itself. The implicit result has been its immediate contribution to the global economic progress. This matter has encouraged the success of this sector, but has moved into a second ground the dimensions related with well-being and health of workers.

Due to its transcendence, the International Labour Organization, in the framework of its constant politic and legal activity related to labour relations, developed a thematic document about *Work relations in telecommunication services and in the call centre sector* (ILO, 2015). This was debated in depth in the *Global Dialogue Forum on the Employment Relationships in Telecommunications Services and in the Call Centre Industry*, celebrated in Geneva during the 27th and 28th October 2015.

Both the aforementioned document and the resultant report of the quoted Forum (ILO, 2016) proves that both focus on predominant work relations in the sector. It's clarified explicitly that it does not address security and health at work. Without a doubt, the lack of attention to these two things cause a partially biased vision. Political law in security and health at work is part of every work relation. Furthermore, this law and its implications are essential, because their postulates are part of the decent work model advocated from the Organization.

The fact that the human and social character that impregnates the defended decent work in labor relations comes to be coincident, in essence and in a teleological way, with the relevant psychosocial risks prevention in actual society (Ballester Pastor, 2013:16). Without forgetting that the psychosocial aspects or dimensions, at a global level and nowadays, constitute one of the main corporative aims of every organization or enterprise. Implicitly, it is fomented and promoted, a priori, mainly on the paper, a healthy behaviour and attitude by the person included in them.

Although, trying to cover this so crucial deficit for labour relations in the sector where the attention is focused, from a particular study and analysis of the documents in preventive and safety matters, a great number of risk factors liable to, in a subsequent moment, originate psychosocial risks that may affect health and well-being are identified, and additionally, can suppose challenges to face for its regulation.

Therefore, a constructive and particular identification of those in the aforementioned sector in a transnational and general scale is proposed and established, that in essence, can manage to fill out the specific legal politics on safety and health at work in this sector. And briefly, the attention to the psychosocial dimension that faces the work already done by the International Organization itself analysing work relations. Above all, when from the part of the organization agreements referring specifically to themselves being liable to be extrapolated neither exist.

Because of this we have to start from the consideration of the fact that this psychosocial risks, according to national and international regulations, have to be prevented and monitored in the general and common setting of work risks prevention. Law politics that, necessarily because of the modern working society, has to centre its interest and attention, in an express way, in a prevention culture and in reinforcing preventive management. The perspective: conceiving a public responsibility against professional risks facing a restorative management and classic jurisprudence (Monereo Pérez, 2015:11; Cavas Martinez, 2009:113).

In accordance with this thought, the legal uncertainty originated and generated regarding the specificity of psychosocial risks for all law, politics and social operators because of the lack of an specific regulation regarding them, may lead to the thought of a regulating void in this matter on different levels that, from its praxis, hasn't been considered like so. Nevertheless, it explicitly manifests a lacking institutional and social compromise for and with its prevention and protection (Molina Navarrete, 2012:1106).

From this perspective, a non-differentiate legislative treatment model on psychosocial risks is on the lead and, because of this, an unspecific one (Molina Navarrete, 2012:1106). A priori, theoretically, facing psychosocial risks, the application on responsibility, protection and prevention can vary between different expected prevention mechanisms for every work risk -without regard of its kind, direction or reach-, until its derivation and inclusion in the treatment of matters directly connected with the management of human resources in the setting of complex organizations and enterprises that operate in the globalization setting. A lot of it is related with psychophysical risks

(Sánchez Trigueros, 2008:277). In the aforementioned documents, this internal tension which adds complexity to the already analysed dimension remains clear.

2. Psychosocial risk factors

In work relations in the call centre sector numerous risk factors that fit in the adjective "psychosocial" are found. That is to say, organizational, ambient, work related and social conditions are present in the working activity (Rivas Vallejo, 2009:23 yss) in the sector that, if not immediately, on a short term, may result, if not already did so, in generating risks of the aforementioned kind.

This is how the International Labor Organization understands it - since 1986 - as the interactions between content, organization and management of work and environmental conditions, on the one hand, and the functions and needs of workers, on the other hand, may exert a harmful influence on their health through their perception and experience.

Therefore, from its perspective, a combination of psychosocial risk generating causes are identifiable. These cause factors that are mentioned and debated by the International Labour Organization itself in the documents and in the Forum. However, their cataloguing and impact they may have on the call centre sector, not only on the particular employment relationship, but more importantly, on the work carried out in connection with occupational safety and health are ignored.

2.1. Flexibility

Work relations in the call centre sector are distinguished for its, until certain point, a bit extreme flexibility. This flexibility affects, mainly, two moments: access to employment, directly connected with precariousness which is mentioned afterwards, and in the work organisation itself, in the ordinary and quotidian development of the work relationship.

Key dimensions regarding this last moment are: the high turnover rate of the company's employees in the shifts in which they work; the adaptation of the working day to the seasonal demand peaks by the consumers depending on the services offered; or the influence of technological advances and new developments offered by the market, which lead to periods of greater dedication and activity in order to introduce the products to consumers.

These factors also generate that the work itself, as a result of the development of new technologies and the birth of new and different channels of communication, does not have to be provided in a workplace in an organization or company headquarters during a fixed schedule. On the contrary, it makes it easier for people to work from their place of residence but not on a set schedule, but on a fully flexible one in accordance with the mandates of the company's management and the demand needs. This makes the workers always available and not have clearly distributed their daily work, making it difficult to reconcile work and personal and family life, as well as rest. Fundamental human rights of work character are affected. Mainly when this flexible schedule is monitored is remotely controlled by their superiors by connection/disconnection log files in the system. Control, also, that sometimes reaches the amplitude of the calls or the time between them.

Time flexibility that is also driven by the need to achieve objectives imposed by the management or organization of the company, causing the worker to be involved only by them for the sake of its continuity in the interior at the cost of any sacrifice. The maintenance of a link with the achievement of the objectives of the company, its culture and its values is obstructed.

Likewise, work becomes more individualized, with the character of inherent social relation being reduced and affecting the communication and the interdepartmental relations of the organization and company where the services are rendered. Circumstance encouraged by the lack of support or contact with those responsible and, simultaneously, with other co-workers. A healthy internal social climate is not facilitated, preventing a pleasant and productive work environment.

These outstanding factors in the sector in question, being directly connected with the flexibility advocated in the organization and management of the employment relationship that projects its influence on the life of the person both inside and outside the framework of the employment relationship, constitute and Represent serious risk factors categorized as psychosocial. This is because of the influence they may have in order to trigger and constitute risks of this nature, as they affect both the physical and mental health of the worker. Undoubtedly these factors impede the achievement of a healthy working environment resulting from attitudes in organizational and business management in favour of the greatest possible economic competitiveness that guarantees better results.

2.2. Precariousness

As a consequence of the competitiveness generated and the contribution of this sector to the globalized world economy, the labour relations within it have evolved during the last decade of a secure and stable employment, with rights, to another unstable or atypical, as the own International Labour Organization.

Atypical employment which, without becoming undeclared employment or in the shadow economy (Raso Delgué, 2016:65-67), is characterized by a job in which quality and stability are not present. On the contrary, part-time and temporary employment predominate. Or, even, the occasional or punctual kind for a certain task, work or service. Contractual renewals that are going to depend on the profitability shown by the worker. It is true that the facilitation of the incorporation into the labour market of persons that has made this sector possible has been relevant. A different question is in the terms that the same has occurred: precarious employment.

In this, the violation or non-consideration in the form of exercise and guarantee of the fundamental human rights of the working person has been remarkable, especially in connection with the flexibility already exposed. It is reaffirmed when the workforce of companies and organizations in the sector have been reduced significantly in recent years by dismissals with very low costs and, in the case of new contracts, have been made with conditions less favourable than those initially undertaken.

With these elements, there is a fracture in the model and the need to rethink the competitiveness and economic development that has driven the sector so much. An economical view has predominated over a social and protective one for the working people. The organizational success has been thanks to the capital and technological side, not to the welfare, health and protection of these (Luceño Moreno, Martín García, Rubio Valdehita y Jaén Díaz, 2008:113). The same ones that, with the provision of their services, have boosted it. It is moving outside the margins of decent work advocated and defended by the International Labour Organization itself.

In this sense, the generalization of the precarious employment so characteristic of the sector represents, in essence, a very relevant psychosocial factor. We are in the position to affirm that it is a cause of consolidation of psychosocial risks in the same to produce a situation of permanent labour instability in the working person. Risks hat, nowadays, can be considered widespread by their extension to the millions of employed people in the sector (Ballester Pastor, 2013: 20)¹. And preventive care is needed as soon as possible.

Especialy when the consequence has been the generation of a scarce (Vallecillo Gámez y Molina Navarrete, 2013:74), as much by the own conditions of work, as by the forms and ways of acceding to the same one. Working people are commodified, they are considered mere instruments necessary for the ultimate goal of economic development, leaving behind the protection of their health and safety. They are a good plus of the so-called labour market - it should be, consistently, a job market - where, as with any other good or service, there is a lot of demand and a lack of supply. The latter has been the one that has weakened the status of rights of the employed person and rethought flexicurity: flexibility in the regulation of employment conditions - raised to the maximum extent to access, stay and exit the labour market - and a Security for the employee that is neither in their rights nor in the contract of employment itself. Consequently and directly, the latter is not found or, in case it does, it is weakened.

2.3. Organizational and business restructuring

In the evolution of labour relations in the call centre sector for the contribution to competitive economic development and the parallel loss of quality standards at work - influencing in a decisive way the configuration of psychosocial factors that lead to The health of people - privatization, liberalization, subcontracting and restructuring within the sector itself have also been key to greater strategic and / or competitive advantage (Kieselback, Nielsen y Triomphe, 2013:65-70). In this sense, being in connection with what has been pointed out, the jobs have been reorganized, subcontracted, consolidated and relocated jobs in other work centres.

These changes have been projected in the sector, on the one hand, with the reduction of the workforce through contractual terminations or assisted low incentives of professional reorientation programs; and, on the other hand,

the commercial relations with external suppliers - mainly based on mercantile characteristics - have been promoted, direct working relations with the personnel of the organization and company have decreased.

This has reduced the costs of the sector and has increased competitiveness, but in return, the feelings of insecurity generated, produced and increased by the absence of fluid contact in the pyramidal organization of the entities, undoubtedly constitute causes that generate psychosocial risks. They affect the health and feelings of the person. The anxiety that can be generated by the lack of information linked to labour insecurity in this context, affecting a reduction of well-being in the labour activity itself due to the uncertainty produced can be illustrative.

2.4. Gender

Organizational dimensions of work in the call centre sector affect the gender equality policy that necessarily has to be implemented, following the mandates of national and international regulatory standards on this matter. Dimensions that also, in agreement and simultaneity with the previous ones, act as psychosocial factors.

Significant, in this respect, is the lower use of female labour in relation to male labour during night work shifts or, similarly, for the provision of higher value added services, of the more technical ones. On the other hand, women are employed more in the jobs that require less qualification and in those that require intensive and personalized attention to the public. Accordingly, they have a slower or even horizontally stagnant career in the sector, and therefore their vertical progress not being easy in the form of promotions in the job relation of the organizations.

The principle of equality of opportunity and equality in rights between men and women at the professional level in the sector and for this group is thus cracked. Implicitly, this factor encapsulates, a priori and with these stereotypes, the women who provide their services in the sector. Psychologically, because of the implicit underestimation of their competencies, they may feel their options and possibilities regarding their professional development diminished since the beginning. These are psychosocial causes that, if they do not act for their eradication, may become, in the immediate future, a particular psychosocial risk with a marked gender bias.

¹ Even beyond the sector of call centres, it has been argued that the extension of precarious work can generate itsconsolidation as a psychosocial risk in pandemic terms.

3. PSYCHOSOCIAL RISKS

Factors provoking psychosocial risks in labour relations in the call centre sector in the description made by the International Labour Organization already identified, we analyse how they influence the generation and appearance of genuine and own psychosocial risks within them.

Insofar as there is no definite, specific and concise definition from the Organization itself, due to the transnational approach of the present study, these are to be understood following the concept of the European Psychosocial Risks Agency. Broadly speaking, in general terms and for all professional activity, it considers them as aspects of the design, organization and direction of work and its social environment that can cause psychic, social or physical damage to workers' health.

In this sense, there is also no restricted enumeration of the behaviours, actions or elements that make up this factors. However, in practice, there is a consensus, even a doctrinal one, in qualifying as a psychosocial risk to stress, harassment, burnout, and violence at work. Above all, in the area of call centres, attention is focused based on the offered view of labour relations in the sector itself and the psychosocial factors already mentioned.

3.1. Stress

The main framework of stress as a psychosocial risk in working people in the call centre sector is identified with they labour instability that they experience considering the contractual forms employed and their transient nature, the precariousness that prevails within the labour relations in the sector coupled with flexibility, as well as the fear of losing their job in the context of a constant restructuring, relocation and subcontracting that are experienced. In essence, this job insecurity that characterizes the one that generates and produces anxiety in the working person that adversely affects his own personal and work health, reducing emotional and psychological well-being at work. Feelings with negative projection towards other areas of personal life.

From this point of view, taking into account the organizational and human resource management criteria and the industrial relations present in the sector, they act as stress-forming agents as a psychosocial risk: the pressure to achieve the levels of objectives to ensure the work continuity of the person, exerting psychological pressure the criterion of the need to continue working; in connection with it, a labour surplus, both quantitative, in which the constant restructurings experienced in the sector before the competitiveness that can produce survival at work

can influence, and qualitative, in the form of requirements of quality thresholds in the provision of services in the context of precarious work and flexible working relationships; the excessive individualization of the work relationship centred on the particular achievement of the goals set within the organization of the company above relations with partners or the absence of involvement with values and culture of the organization and company; the lack of real knowledge of the professional career and the positions that can be played in future promotions, as the professional categories are stereotyped, as it has already been pointed out; and the lack of necessary time dedication to leisure and to familiar and personal relations as a result of work load, shift work, flexibility and stress generated by this job insecurity.

Thus, considering this psychosocial risk of stress and its particularities in call centres, the competitiveness and significant development of the sector can only be understood by the high use of the workforce and not by the quality of it. It's stress itself that, when it occurs, adversely affects not only the health of the working people as specified, but also illustratively and with identical character, the business or organizational results in the form of work casualties, disabilities, indiscipline or poor performance due to psychological stress (Luceño Moreno, Martín García, Rubio Valdehita y Jaén Díaz, 2008:111). This produces an overload of tasks that causes its ineffective and inefficient resolution in the framework of the provision of professional services in the face of the imbalance between demands and available resources with which to deal with them. Because of this the possibility of suffering work accidents is exponentially increased.

Given these circumstances, it is necessary to demand the objectives of the organization and company to be defined so that the working person can know them and, in accordance with them, specify their role and professional activity in the context of an employment situation that leaves the flexibility and precariousness that characterizes them behind. In addition, a constant dialogue with the workers should be maintained, informing them about the organization and results as well as consulting on needs and demands related to their provision of services and with particular safety and occupational health, being the ideal channel for representing workers. In the same sense, it is important to raise managers and middle managers' awareness about stress, its causes and how to manage it in a participatory way with the workers under their care.

This would allow for establishing a serious and reasonable evaluation of psychosocial risk of stress. Considering its important impact on the sector, in order to be able to provide information about it, the necessary preventive measures can be taken within the framework of the corresponding legal policy on occupational safety and health.

3.2. Burn out syndrome

This psychosocial risk, conceived and understood as a very particular and specific modality of stress, is widespread in the area of call centres. This is precisely because it is very present and almost constant by its validity among workers in the sector for all the motivations and factors already mentioned. To which the fact that it is the most characteristic risk in every working person who establishes his / her working relationship in a constant interaction between this one and the client or the clients in a consecutive and followed in time way must be added.

As a result, this syndrome occurs as an implicit response of the person employed in the call centres to the constant stress to which it is subjected in its position and to the work overload that they experience as a result of the time pressure that they suffer, facing the need to achieve objectives by presenting results to their superiors. Emotional and cognitive demands are accumulated and intensified throughout the working day, strengthened by the flexibility and precariousness extended in labour relations. This way, any kind of worries or emotional and relational feeling for and with the rest of the employees in the organization and / or company in which they work is lost.

Measures for prevention would be in connection with an adequate adjustment of the workload, its clear description, its own control over its activity, as well as the already pointed need for information, transparency and formal and material security towards the individual. Collaboration and participation of the worker should be allowed in the management of the organization itself through the channels established for this purpose by the legal policy on occupational safety and health. The worker would feel part of the values, culture and results of the entity. The worker would be less individualized in his provision of services and his performance would be recognized. With this, to some extent, the risk would be prevented and those bad feelings would be discharged into the person that can affect their health in a negative way.

3.3. Harassment

Harassment, in any of its variants - moral, sexual or discriminatory -, constitutes the psychosocial risk that generally receives more attention. Nevertheless, in the call centre sector has some values that, a priori, can imply a smaller presence of harassment because of its risk. Significantly, the individualization of the employment relationship to which it has been led, the gender bias in the jobs and the scarce or null projection of promotions in the sector generating a horizontal career due to the influence of the gender gap, situations related to it because of pressure or blackmail for promotion are reduced.

A different matter is that stress, isolation and excessive control that the worker is subjected to in the rendering of their services and in obtaining income from the directors, managers or middle managers, can be framed, in an extreme case, within harassment. Mostly because of harassment and psychological wear that can occur in the person. If limits are surpassed, the dignity of the working person is affected, therefore working in an intimidating, hostile and menacing environment. Clearer characters of harassment.

This has not been identified like harassment in the sector so far. But in a practical sense, nothing impedes that it could happen. Obviously, if every sexual, discriminatory or moral behaviour is added to the described situation, it would be identified, even if it's not identified with the same name.

Nevertheless, because of the popularity of the services provided by the workers of this sector, it's possible that this harassment could be present as external violence by the clients the workers talk with while working. In this sense, it is possible that some non-adequate answers and attitudes in the form of louder voices or threats before the offering of products of services during the call may constitute attitudes that could be placed in this psychosocial risk when they happen repeatedly. Clearly because of this work is more difficult and performance is affected, at the same time that the worker is affected emotionally in a negative way and their perception about their own professional skill is also affected

As preventive measures of this risk and of the particularity that can be presented in the sector the organizations and companies that employ in the sector must clearly eradicate the isolation and excessive control of and in the provision of services, facilitating interpersonal relations and worker participation that, if necessary, would serve to unmask harassment attitudes. Simultaneously, stress at the workplace would be reduced at least partially. A change in the aforementioned trend in the way services are provided and work is organised would therefore be of great importance.

3.4. Violence at work

Considering violence at work as a psychosocial risk, internal and external violence should be assessed. Concerning internal violence, among workers within the organization and enterprises in this sector, both the strong control they have on their part and the excessive individualization of their service delivery act as reducing factors of this risk, stopping its possible appearance. However, there is nothing to prevent violent episodes, whether of a physical,

psychic or verbal character, in the internal competition between them for the achievement of objectives for the sake of their survival in the entity.

A reduction of this competition, recognizing the work done by the directorates of the companies or organizations, as well as greater security and job stability, are elements that could contribute to its reduction.

On the other hand, external violence is the one that people outside the organization and company exert over the workers and it constitutes a very present psychosocial risk characteristic of the sector. Mostly psychological and verbal violence. That is, the one that the clients to which the services are offered by phone calls exercise in the form of threats, disrespect and / or even against personal dignity, non-valuation of professional ability, insults, etc. These can negatively affect the psychological and emotional health of the person when, given the intensity and repetition of calls throughout the work day, these attitudes become frequent.

They would be prevented or reduced allowing a communication with their superiors and these helping them to overcome the episode, as well as among peers, putting in common situations and possible solutions that allow to limit them, stop them and ways to deal with them. That is, make the workers themselves feel safe. An option to materialize this security would come from the hand of the approval of protocols of action internal to the organizations and companies before episodes of this external violence of marked by psychological and verbal harassment.

In any case, on both types of violence and on the psychosocial risk they entail, the gender bias that characterizes the sector must not be neglected in its appearance, development and prevention. Mostly in the lowest category jobs, in relation to and direct connection with the cultural influence on the work where the services are rendered after the restructuring, relocation or subcontracting. Especially when these are produced in non-developed countries in social and work matters. In this sense, the absence of a homogeneous pattern as a minimum standard on the issue detracts from efficacy and value both to its own identification and to its prevention.

4.-Challenges

In addition to the psychosocial factors detected in the general vision offered by the International Labour Organization in the documents on labour relations in the call centre sector and the psychosocial risks identified as a result of the previous ones, two aspects stand out, can be considered important for prevention in the sector in view of the need for the relevant implementation of occupational safety and health policy.

On the one hand, the importance of social dialogue and, on the other hand, training, are dimensions that are very residually mentioned by the International Labour Organization, but which, in totality, need a more central consideration for the role they can play.

4.1. Social dialogue

In general, in atypical employment relationships is difficult to promote, defend and guarantee freedom of association. Due to the importance of these in the call centre sector, together with the prevailing flexibility and precariousness, there is a low union affiliation of the employed workers. This low union affiliation affects negatively the representation and defence of interests of the collective. Their demands and situations do not, consequently, reach the negotiating table. Not even in psychosocial risk matters. Therefore, social dialogue is indirectly fractured.

In addition, the fact that the effectiveness of collective bargaining of its most immediate outcome, the collective agreement, is restricted should not be overlooked. This source of labour law usually does not include in the subjective scope of application to workers employed atypically.

It is therefore necessary not only to extend to all industrial relations included in the sector simultaneously and parallel to the eradication of this type of employment, but also to further promote social dialogue and its relevance for the immediate future of the sector. Especially, in order to face psychosocial risks in a preventive way. They must be put on the table, identifying themselves in order to fight against the factors of identical character that cause them through a social and tutive regulation of the protagonists of labour relations within them.

From these postulates, legal policy in the field of occupational safety and health would acquire more effective hints. Undoubtedly, collective agreements in the sector can tackle the concise and particular preventive regulation of psychosocial risks in the sector from a prior and necessary eradication of its provocative factors. The extension and application of the conditions of decent work must be regulated and guaranteed, at least.

In this direction, it would generate a participative management of this policy with a particular and concrete attention to the psychosocial elements inherent to the specific labour relations of the sector. This would establish the basis for the systems and processes of psychosocial intervention in organizations and companies of the same to be successful (Rufino San José y Fernández Avilés, 2015:27). It would be able to generate and produce a healthy work environment, understood - following the World Health Organization - like *the one in which both workers and managers collaborate in the implementation of a continuous improvement process to protect and promote the health, safety and well-being of all workers and the sustainability of the workplace.*

In a participative way, in the organization and company better working conditions would be instituted that, projected towards the life of the person, would not only increase their quality, but would also be developed in an environment of health promotion and preventive activity. A comprehensive prevention culture would be implemented.

4.2. Training

In the analysis offered by the International Labour Organization on labour relations in the sector of call centres, the training of the working people is transversal. The problem: the central importance it requires is not considered. It is enough to remember that this is the beginning of an adequate provision of professional services.

Although the work activity is intense, mechanical and repetitive, those who materialize it must be specifically formed to develop and apply their professional skills and communicative skills in accordance with the particular needs of the sector. Especially, in two moments: on the one hand, before entering to work on it - through an initial and basic training; On the other hand, once access to employment - through continuous training. This is due to the need to always have the new and reconfigured competencies demanded by the constant change and transformation inherent to the technological evolution affecting the sector.

This training must be considered from an comprehensive and integrative perspective. That is to say, the working people must be trained both on the content of the activities they have to develop in order to provide their services and the means to be used as well as on the implicit and explicit risks they entail by integrating into the security policy and occupational health of the organization and company.

From its attention, consideration and materialization, a priori, would be in formal conditions to eradicate psychosocial factors of the management and management of employment relationships already targeted, reducing both psychosocial risks simultaneously. That is, they would act on them from a preventive point of view automatically. If the causes of the latter are fought, they are less likely to appear. This trend will be multiplied by the adequate implementation of occupational safety and health policy and specific training in psychosocial risk prevention over time on emotional control and psychic work well-being, in connection with the development of skills and communication skills required by the sector.

The problem that remains a practical efficacy to this need is the fact that the importance of atypical employment in the call centre sector, coupled with the aforementioned flexibility and precariousness, is relevant. And is that people who are normally used for this job or lack the necessary training or, directly, have fewer opportunities to train.

At this moment is when social dialogue should be considered again. In the latter, since the recovery of its authentic value, meaning and scope following the direction indicated in the previous section, training should be a prominent dimension of it through its incorporation into the collective agreements applicable to organizations and companies in the sector.

From the same and with them it should be sought to ensure adequate and relevant training both with regard to the specific tasks with which the provision of services and individuals in the management of the equipment materializes, as well as in relation to the necessary management of the emotional load, of the provision of support and of the promotion of labour and personal attitudes guaranteeing and punish of the health.

Labour relations regulated from these parameters and having heard and taken into account workers' representatives who collect the needs and demands regarding this in the form of rights and training obligations, is an element of progress and progress for the sector. The dilemma, once again, resides in the fact that the latter are not spread and neither offer coverage to people employed atypically in their core.

5. Conclusion

From the consideration of occupational health and safety policy as a part of industrial relations in the call centre sector, transnationally, it is necessary to pay attention specifically to the psychosocial aspects present in the same in their dimension of factors and of risks in order to regulate the provision of services for its elimination. And, in connection with the prevention of occupational risks, a particular attention on psychosocial risks.

The fact that being present and being relevant within the sector undoubtedly urges the need to raise a serious and rigorous evaluation of psychosocial risks from the characteristics and features that characterize the predominant work in the sector. In this sense, all the risks and causes that generate that have not been avoided have to be assessed, obtaining from their analysis and valuation key and necessary information for the adoption of the preventive measures that can be adopted.

To do this, the results achieved, necessarily, must be integrated into the legal policy of occupational safety and health. Preferably, a participative one and in the framework of social dialogue. At the same time, organizations and companies in the sector must be informed so that they can involve workers in their knowledge, training and follow-up from a preventive perspective. An effective and efficient implementation of the policy in question has been established, laying the foundations for a healthy work environment, especially in the area of psychosocial risks.

In logical harmony, it would be in a position to rethink the sense and scope that has the sector of the call centres in the economic development. That is, if it is sustainable and compatible with the protection of safety and health of the workers who provide their services.

As a consequence, in the economic approach of the sector that predominates in the development that it has generated, not only attention must be paid to the relevant figures on its contribution to the globalised world economy, but attention must also be focused on the costs it has produced on people and their health. Implementing a preventive policy that meets the necessary expenses on this, it is certain to improve even more the competitiveness and economic development of the sector, but in more social, tuitive and protective terms for one of the most precious assets of all people: health. In this case, in connection with the labour scope and it's projection to the personal sphere.

Bibliography

AA. VV., *Las relaciones de trabajo en los servicios de telecomunicaciones y en el sector de los centros de llamadas*, Organización Internacional del Trabajo, Departamento de Políticas Sectoriales, Ginebra, 2015.

AA. VV., *Final report about the discussion: Global Dialogue Forum on the Employment Relationships in Telecommunications Services and in the Call Centre Industry*, Department of Sectoral Politics, Geneva, 2016.

BALLESTER PASTOR, M^a A., “La política de la OIT y de la Unión Europea sobre salud y riesgos psicosociales”, *Revista Internacional y Comparada de Relaciones Laborales*, vol. 1, num. 4, diciembre 2013.

GARCÍA JIMÉNEZ, M., DE LA CASA QUESADA, S. and MOLINA NAVARRETE, C., *Regulación de los riesgos psicosociales en los ambientes de trabajo: panorama comparado de modelos y experiencias en Europa y América*, Editorial Bomarzo, Albacete, 2011.

CAVAS MARTÍNEZ, F., “Breves consideraciones sobre la prevención de los riesgos psicosociales”, in *Los riesgos psicosociales: teoría y práctica*, AA. VV., SÁNCHEZ TRIGUEROS, C. (dir.), GONZÁLEZ DÍAZ, F. A. and HIERRO HIERRO, F. J. (coords.), Thomson Reuters Aranzadi, Navarra, 2009.

KIESELBACH, T., NIELSEN, K. y TRIOMPHE, C. E., “Riesgos psicosociales y efectos de las reestructuraciones en la salud”, in *Reestructuraciones empresariales, riesgos psicosociales y bienestar en el trabajo. Una nueva dimensión del modelo comunitario de gestión social*, VILLAR CAÑADA, I. and VALLECILLO GÁMEZ, M^a R., Comares, Granada, 2011.

LUCEÑO MORENO, L., MARTÍN GARCÍA, J., RUBIO VALDEHITA, S. y JAÉN DÍAZ, M., “Psicología y riesgos laborales emergentes, los riesgos psicosociales”, *Edupsykhé, Revista de Psicología y Educación*, vol. 7, num. 2, 2008.

MOLINA NAVARRETE, C., “Los riesgos psicosociales. Su particularidad en la legislación positiva”, en *Tratado de salud laboral, Tomo I, Aspectos jurídicos de la prevención de riesgos laborales*, AA. VV., MONEREO PÉREZ, J. L. and RIVAS VALLEJO, P. (dirs.), GARCÍA VALVERDE, M^a D. (coord.), Thomson Reuters Aranzadi, Navarra, 2012.

MONEREO PÉREZ, J. L., “La protección integral de los riesgos profesionales a veinte años de vigencia de la Ley de Prevención de Riesgos Laborales: prevención versus reparación”, *Revista de Derecho de la Seguridad Social*, num. 3, 2015.

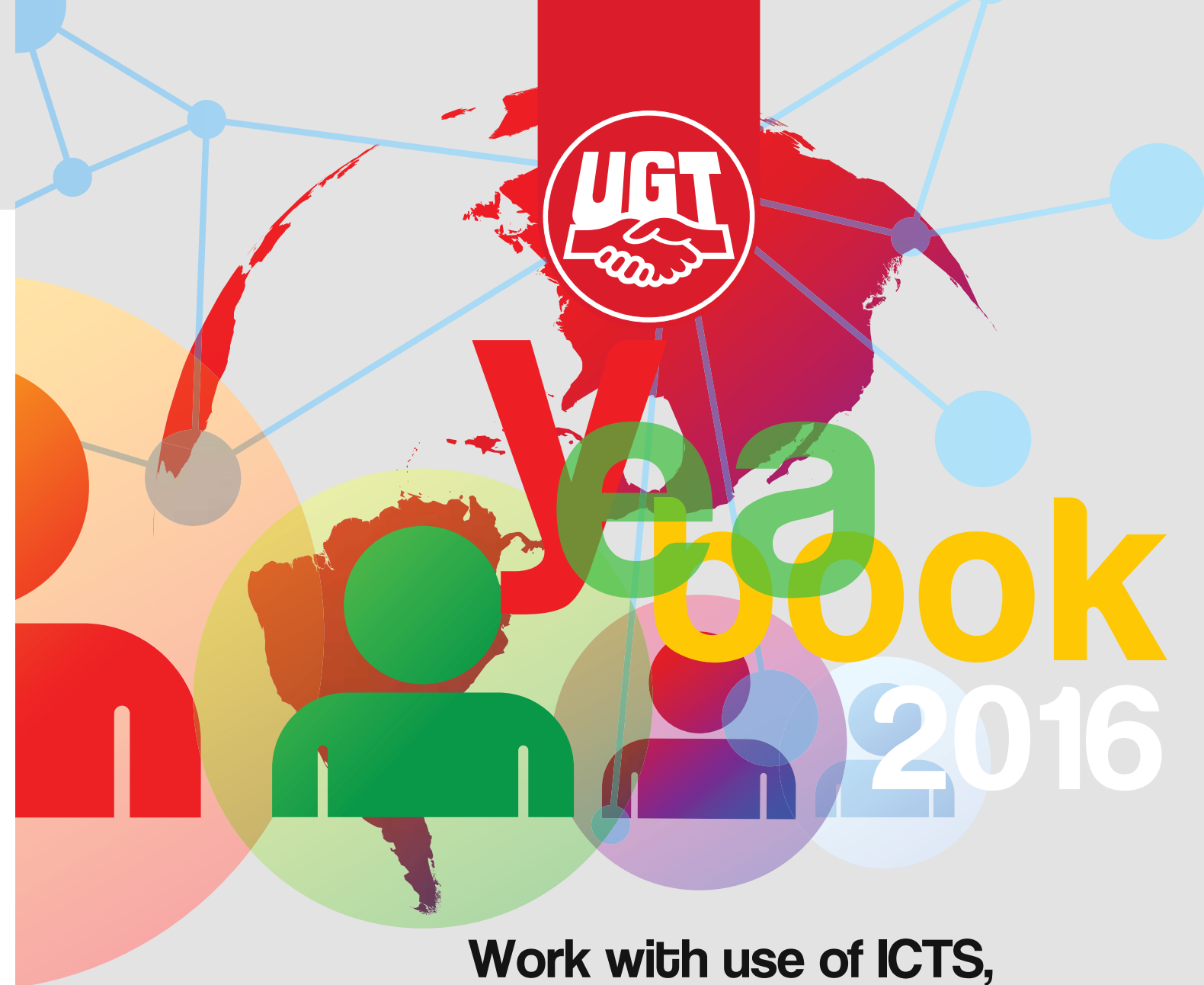
RASO DELGUE, J., “Economía globalizada, formas atípicas de trabajo y desregulación ante el fenómeno de la economía sumergida”, in *Derecho social y trabajo informal. Implicaciones laborales, económicas y de Seguridad Social del fenómeno del trabajo informal y de la economía sumergida en España y Latinoamérica*, AA. VV., MONEREO PÉREZ, J. L. and PERÁN QUESADA, S. (dirs.), Comares, Granada, 2016.

RIVAS VALLEJO, P., *La prevención de los riesgos laborales de carácter psicosocial*, Comares, Granada, 2009.

RUFINO SAN JOSÉ, M. and FERNÁNDEZ AVILÉS, J. A., “La prevención de los riesgos psicosociales en el marco de las estrategias Europea y Española (un nuevo “escenario” para avanzar)”, in *Anuario Internacional sobre prevención de riesgos psicosociales y calidad de vida en el trabajo 2015, Nuevas estrategias en prevención de riesgos psicosociales en el trabajo, Experiencias comparadas*, RUFINO SAN JOSÉ, M. (dir.), FERNÁNDEZ AVILÉS, J. A. and GONZÁLEZ VICENTE, E. (coords.), Secretaría de Salud Laboral y Medio Ambiente UGT-CEC, Blanca Impresores, Jaén, 2015.

SÁNCHEZ TRIGUEROS, C. and CONDE COLMENERO, P., “La protección social y los riesgos psicosociales”, *Revista Anales de Derecho, Universidad de Murcia*, num. 26, 2008.

VALLECILLO GÁMEZ, M^a R. and MOLINA NAVARRETE, C., “La reforma de segunda generación del mercado laboral: incentivos al espíritu emprendedor y retorno del pensamiento mágico”, *Revista Trabajo y Seguridad Social, Centro de Estudios Financieros*, num. 361, 2013.



**Work with use of ICTS,
working time and reconciliation of
personal and work life
(new perspectives)**

4



NEW TECHNOLOGIES, TIME OF WORK AND PSYCHOSOCIAL RISKS PREVENTION.



Estefanía González Cobaleda.
Expert in Prevention of Labour Risk
Research. University of Jaén.

Summary

1. Introduction

2. ICT: use and problems in labour relations

2.1. The traditional approach of using technology at work

2.2. The need for a more complete and renewed focus from the protection of occupational health

3. Working time: permanent connection to work favoured by new communication spaces

3.1. The new demands of intensive work protected by internal flexibility

3.2. Technological availability of the worker against the workday

4. Right to disconnect: the prevention of psychosocial risks typical of new technologies

5. A novel and interesting approach: to the right and must of technological disconnection outside working hours

Final thoughts

Bibliography

1. Introduction

The emergence of new Information and Communications Technologies (ICT) have come to transform all the society areas, resulting in the inclusion of an influential phenomenon both in working life, and in social and family life (Mercader Uguina 2002: 107). In fact, their introduction into the working world has deeply changed working organization by intensification work, and changing autonomy, updating knowledge and worker's skills to cope with a most competitive labour market.

Indeed, the ICT contribute undoubtedly to improve production and competitiveness standards, also they have improved workplaces, such as those manual tasks which have been replaced by automated processes and a variety of technologies support, generating an observable trend of decreased physical workload and even dangerous. They also provide the opportunity for greater flexibility at work and, consequently, they can contribute to increase satisfaction (Kelliher And Anderson, 2010: 85). So, at first, it might seem that the employer gives a greater scope for action to their workers, that is, a degree of freedom so that they can accomplish the relevant work activities in the manner, time and place they consider better. However, this apparent freedom means while to some extent by these tools or technological devices, the worker does not find clear limits between the difference of private and professional sphere, because both spaces commonly overlap (Martinez Fons, 2002: 2-3). In some ways, new technologies, despite favouring the advancement and progress of the labor provision, also are creating some new occupational risks.

In short, all these changes can challenge the workers' rights and freedoms and they can cause different damages to their health. In this research, we analyse if it is necessary or not, a rethinking of the traditional methods to face this such recurring problems based on the premise of "eternally available worker", in which losing limits are established between the workplace and worker staff, by the unsuitable use of technological devices and the degree of connectivity out of work during the "rest period". Therefore, the aim is to draw attention to a critical area to organize the use of new technologies in companies to submit it to a review from a social perspective in occupational health and safety.

2. ICT: use and problems in labour relations

2.1. A traditional approach in using technology at work

In recent times, the incursion of new technologies in the workplace have stir up the work, modifying, mean fully, the work organization in two of its most important facets, that is, in production process and in business management (Cardona Rubert, 2003: 158), that produced positive and negative changes in character. Thus, the access to these new technologies can foster the development and improvement of the different tasks and activities to be developed by a worker and may even pose a marketing strategy for a business organization. But at the same time, they can get negative effects on psychosocial health of workers, which have been declining physical workings demands in favour of increased demands on psychosocial interaction, enabling more incisive action on work and on worker in a more feasible way for the entrepreneur.

Indeed, the use of electronic mail, the access to Internet and intranet, the use of ICT in monitoring and control of workers, the possibility of interactive and momentary through different mobile technological and communication devices and social networks are some of the examples of the extraordinary incorporation of new technologies in the workplace and how they are becoming an essential part of it.

However, it should be stressed that the problems in the workplace has not arisen in the implementation of new technologies as such but by their access, connectivity and uninterrupted communication that can offer (Falguera Baro, 2016: 35), therefore, by inadequate management and use thereof. In fact, the introduction of ICT in workplace not only affects the production capacity of the business organization, but also has great control on the employment relationship.

This whole situation was the origin of some raised labour disputes, which could call classical problems regarding to power-based business management and protection of individual rights worker (BEDS RODA, 2001: 143). In this sense, the use of new technologies in the workplace, notwithstanding the above of the technological tool, we can show three traditional conflict points:

- The use by workers of ICT for non-business purposes.
- The use of new technologies by the employer to act against worker in the process of its disciplinary power.
- The increased of corporate control by the use of ICT with the aim of improving service workers

The first effect that should be noted, is the lack of a specific legislative regulation, however, must have been extra-legal sources which provide some guidelines for organization and conduct, although in a partial and not always coherent way, with a regulatory uncertainty consequent.

For all these cases, the problem posed by the use of ICT in the workplace, may represent a conflict between the rights and interests of the employer to organize productive resources in the most efficient way possible in the free Enterprise frame [art. 38 Spanish Constitution (CE)], and recognized worker rights, especially in which concern his dignity (art. 10.1 CE), privacy (art. 18.1 CE), life integrity (art. 15 EC) and the health protection right (art. 43 EC), data protection right (art. 18.4 CE) or the communications secret regulated in the Article 18.3 of the EC and in the Article 197 et seq of the Penal Code (Pérez Luno, 1992: 37). Like way the art. 4.2.e) of the Workers' Statute (ET) which establishes the right to privacy respect of the worker and art. 20.3 ET that recognizes and defines the powers of control and supervision of the employer.

Even though the more general rules of use of ICT conventionally determined by the law, are those requiring the employer a previous fixation, knowing enough for all workers -openness-, about how use the working tools that are a property of the company, and stating, if it is applicable some prohibitions (Molina Navarrete, 2014: 157) [Judgment of the European Court of Human Rights (ECHR Judgment) of 3 April 2007 “case Copland against the United Kingdom”; Judgment of the Supreme Court (TS) of 6 October 2011; Constitutional Court (STC) 241/2012 of 17 December and STC 29/2013, of February 11]. However, the lack of legal and conventional, complete and consistent regulation makes such criteria, predominantly jurisprudential, sometimes suffer fluctuations. For example, the sentences STC 241/2012 and STC 170/2013, accept that mercantilist approach weak the need for prior information about control. Hence the persistent weaknesses and deficiencies of regulatory limits on the power of computer control.

This complex outlook causes that in recent years we are witnessing, confirming by most of the employment solicitor doctrine, to the critique to this back step from the human resources dimension of fundamental rights (Desdentado

Bonete, et al, 2012: 20). Now we should go one step further and ask how this dilution of the boundaries between privacy and staff workers through the ICT (STS of September 21, Rec.259 / 2014), that causes serious problems from protecting their occupational health (art. 15 and 43 EC). As it is known, the “new communication age” means that any worker can be easily located by geolocation devices although he is not physically at workplace (Collantes Ibáñez, 2012: 37) and also he can answer quickly to the needs of the employer at time when he was required, notwithstanding the above where he is, through mobile technology devices. These smart devices create a certain degree of autonomy in favour of professional and family conciliation, but a poor organizational management cannot allow the rest of the worker forcing him to always be aware of them (González Cobaleda, 2015: 35) despite ending their working day, she came up the blurring of boundaries between work and rest time (STSJ of Catalonia, of May 23, Rec. 3613/2013), causing the spread of physical and mental diseases.

So, in the legitimate exercise of ICT at workplace, it is necessary the use of skills that take into account both the needs of the employer and the workers, without underestimating the negative charge to health with the inappropriate use of necessary skills, from the wrong organization and business management.

2.2. Needing for a more complete and renewed focus from the protection of occupational health

We are attending to the perpetuation of ICT in new working ways that show not only technical problems but also human and social problems, the debate is a result of the negative effects that could result on workers, as well as for business organizations.

In any case, business organizations don't take into account psychological and physical workers relationships who have to deal with the implementation of new and successive technological systems, which “forced” to make continuous efforts to adapt and recycling and also make difficult a disconnection work and invading the worker's privacy. In such cases, they generate negative effects and unintended consequences such as mental overload, fear of the unknown and stressful situations involving a pernicious cost to workers, companies and society in general. Thus, ICT favour the advancement and progress for the provision of labour, but also they are creating new occupational risks.

In this context, we can refer to the term “techno-stress” that it is has vital importance because of its direct relationship with the negative psychosocial effects come from the massive and inappropriate use of new technologies, in leisure and at work times. Thus we can define “labour techno-stress” as a specific type of work-related stress.

Therefore, the origin of this particular stress situation is basically focused on the perception of the worker of a mismatch between demands and resources related to the use of new tools and technological systems, leading to a high level of unpleasant and the development of negative attitudes towards ITC, feeling directly linked to the workplace (Salanova M., et al., 2007: 1). But instead, these problems not usually are in correspond to the negative impact of the technologies, but the way in which in the use on the organization company. In short, it is necessary to disassociate the worker from the misconception of blaming only at him for his failure to adapt to these new forms of work organization through the ITC. In fact, the labour techno-stress is a result from the interaction between personal and organizational factors, which cannot be responsible only the worker, and its being vital to consider it as a psychosocial risk at work.

This implies just because the inclusion of new technologies into the workplace and it should not be the simple fact that generates the labour techno-stress, but the changes that are introduced in the markets by new contractual practices the massive use of ICT and the establishment of greater flexibility and competitiveness, influencing both working conditions and safety and occupational health. In other words, we can generally determine that psychosocial risks, such as techno-stress, are a result of poor working conditions and, more specifically, poor work organization.

Naturally, there are several terms that relate to the labour techno-stress term, such as techno anxiety -distrust and thought of inability to use the ICT, techno-addiction -uncontrollable need to make permanent use of the new technologies, techno weariness -Feeling fatigue and mental exhaustion because a continued use of ICT-and technophobia -Rejection the new technologies (Salanova M., et al, 2007: 2). It also emphasizes that, eventually, Technostress could also develop “burnout”. But in this research we consider the subject Technostress.

Well, all these changes can challenge the rights and freedoms of the workers, and they can cause different damages to the health of those who use the new technologies in a wrong way in the workplace. Indeed, the changes generated by ICTs lead to the need for an assessment, prevention and counselling to remove and avoid both, the risks and the negative effects of the technology impact on business efficiency and psychosocial workers needs (Martin, P, et al. 1999. 19).

Indeed, this renewed and expanded, proactive and balanced approach, is not considered out of the learning. And this because there is almost a decade that it was considered the need “to imagine legal methods” to reconcile

“the demands to respect the workers dignity and privacy with the renewal of the productive management” (Pérez Of Shimadzu Orihuel, 1990: 72), they were related to the “constitutional right to protection of mental integrity that requires action before damage is found” [Judgment constitutional Court (STC) No.. 160/2007]. Therefore, beyond the limit of power of control over worker information technology, it should be making an intermediate interpretation, which is basing all development rules of fundamental rights that we have analysed above, together with the fundamental right to life, to physical integrity and to health (art. 15 EC) and, more specifically, to the protection of health (art. 43 EC).

But it is in the recent judicial law-case which this approach begins to acquire naturalization certificate because the need to reflect on a more complete and renovated protection concept of occupational health approach. That is, the NICT are considered as a productive factor in itself, that it does not cause a problem, but in conjunction with how entrepreneurially is managed can get into a psychosocial risk (STS de 21 de September de 2015, rec. 259/2014). So, it must be evaluated in the context of the management of psychosocial risks as it was being required by the rules of risk prevention and, in addition, has come to define or specify in the aforementioned judicial law cases [Sentence del Tribunal Superior de Justice (STSJ) de Cataluña 3613/2013, de 23 de mayo, rec.6212/2012].

3. Working time: permanent connection to work favoured by new communication spaces

3.1. New intensive work demands protected by internal flexibility.

As can be seen from the field of labour law it has sought to preserve the individual and social workers time. That is, the protection of basic workers' rights such as life, health and safety and also the progressive recognition of the right of workers to time off in search of a balance between work and personal time. From this perspective, the first ILO Conventions have linked working time arrangements to protecting the safety and health of workers According to this, also it is included in the International Covenant on Economic, Social and Cultural Rights 1966 and Article 2 of the European Social Charter of 1961. On the other hand, limits and guarantees essential for the harmonization of requirements employers and the aspirations and interests of workers are set out in Article 31 of the Charter of Fundamental Rights and Article 151 of the Treaty on the Functioning of the European Union, and also in all different European directives

Thus, it is clear that the working organization time is a essential matter in the productive organization, whose flexibility may causes benefits both employers and workers, in cost for employers, and for workers in concealing family life and work time and the personality development (Molina Navarrete, 2014a:62).

Indeed, it is briefly reviewing, those basic concepts of working time and rest content on the Directive 2003/88 / EC of the European Parliament and of the Council of 4 November 2003 concerning certain aspects of the organization of working time, applicable to all sectors, private and public, and also closely related to safety and health at work. First, the concept of working time is defined as *“any period during the worker is working, at the employer's disposal and carrying out his activity or duties”*. Seeing this, the Court of Justice of the European Union (ECJ) based on three criteria, such as: space (stay in the workplace), authority (be available to the employer) and professional (be exercising their functions) (STJUE de 10 de September de 2015, Asunto C266/14). Instead, as we mentioned at the outset, the new work technologies are allowed to reinvent the way of providing services where the workplace is much more flexible. The task can be developed at any place outside the business centre. Therefore, the workplace must be understood broadly. In fact, the interpretation of this concept by judicial case law in European and Spanish level, seems to determine that there are situations in which the workplace is perfectly determined, however, co-exists the possibility that the worker is not strictly found in it, so the time spent on the provision of services is regarded as working time (STS de 26 Juin 2003, Rec. 124/2002).

Secondly, the rest period as “any period which is not working time”, so there is not to be any interference by the employer in the private life of the worker (leisure, rest, development worker's personality) (Trillo Párraga, 2010:108). In this way, the final decision is while the rest period the worker must not be subject to any obligation to the employer, because it could prevent him from pursuing freely and without interruption to the pursuit of their own interests, reducing the duration and quality minimum rest worker (STJUE de 3 de octubre de 2000, Asunto C303/98, Sentencia Simap; STJUE de 9 de septiembre de 2003, Asunto C151/2002, Sentencia Jäeger, STJUE de 10 de septiembre de 2015, Asunto C266/14, entre otras).

In this context, the ECJ has stated, that Directive 2003/88 / EC does not envisage an intermediate category between periods of work and rest, declaring that everything that is not covered by the concept of time work will be included in the concept of time off and vice versa [apartado 28, Asunto C266/14 y apartado 45, Asunto Grigore C258/10]]. However, it should be emphasized that the available time in location -by mobile phone, GPS, email, etc. And with no

obligation to be in the workplace, is not considered working time. Thus, the ECJ said that should only be considered working time where effective provision of services (paragraph 52, SIMAP C303 / 98), i.e., when the worker develops any activity related to the work. In other words, the fact that the worker is outside the business sphere and outside working hours, is not an impediment to assign the working nature of that time, when such availability is concerned with activities related to work, as can happen using ICT. Therefore, it has to protect the health and safety of these workers (paragraph 2 Directive 2003/88 / EC) and to respect the limits of working hours and breaks.

Instead, in general, the response of the legal system about time arrangements work in preventive policy, does not progress, but with difficulty remains, against the return of adaptable aspects (Ballester Pastor, 2013: 11) that is a continuous purpose for the availability of the worker. In this area, to standard working time from the different national systems, have established important reforms in recent decades, introducing more internal flexibility resources, as a flexible management of working time by the employer and a standardisation of the power to manage working conditions (Moreno Vida, 2014:41). In particular, the EU is tilting in favour of flexibility for companies, changing the economic logic versus social logic. Therefore, a flexible regulation of working time is intended to meet the business needs of a productive nature and thus to facilitate a rapid and better attention to short-term market needs and production. However, this approach, related to this strictly mercantilist conception of regulation of working time, is opposite to that determined in the Directive 2003/88 / EC, concerning the improvement of safety and health of workers set as “a goal that cannot be subordinated to [...] purely economic considerations.”

In any case, in which refers to flexible ways of working through the spaces of technology devices, we can express the negative effects and impaired health worker who can cause such internal flexibility. Changes of the time, place and manner of the provision of the work, as well as managing the use of ICT can increase the work interferences in worker’s personal life by improper use of such technological devices. That is, the worker must be available to the employer without such activity was totally free and voluntary (SAN January 28, 2014, Rec. 13/2014) despite the end of his official working day, becoming one clear breach in the regulations on working time and unbalancing the parts (STS de 4 de December de 2007, Rec.507/2007). Therefore, it is clear that breaches the agreed work time, reducing consequently the quality and length of rest time worker, being directly responsible employer noncompliance and not ensure the safety and health of its workers.

At this point, we think that the use of technology outside the workplace for work must be considered as working time, therefore that implies an increase of the work day for these workers, requiring, a necessary increase in their salary and also to improve the safety and health of workers. That reveal that if the time spent on these tasks means for workers doing their work beyond the working hours fixed in the collective agreement or employment contract, they should be the treated as overtime hours, with the lay down limits, the obligation to register and to pay or to compensate with rest time established by law.

Anyway, in recent times it has been already detected this need to put the working time not only in connection with productivity and competitiveness that it is favoured by the digital environment, but also the safety and health of workers at all levels, because labour flexibility can be positive when there exist some minimum regulations and as well as adequate controls and publics. However, this need has not led to a general and systematic reception in working times regulation.

3.2. Technological availability worker reaction to a workday

In Spain, as it happens in other European countries, new technologies have been introduced as a main tool in the workplace. Thus, they have created new spaces of communication where answer times are getting shorter. Also, connectivity outside working hours can promote flexibility between work and family life, achieving greater autonomy in professional activities. Similarly, they have created the possibility of increasing productivity by leveraging those working times called “waiting period” or “dead time” that develop, for example, on trips, timeouts and others.

In this regard, management of working time with the development of technologies, as we have seen, are affecting labour relations by different ways. To do this, in the Spanish legal system the distribution of the working day is regulated in ET art. 34, paragraphs 1 and 2. So, the ordinary working day limit is 40 hours per week on average calculated annually. Similarly, such distribution of working hours must respect, in any case, the minimum set periods of daily and weekly rest

As for the irregular distribution of working time, a precept has been modified by the controversial reform of the Law 3/2012, of 6 July, on urgent measures to reform the labour market. Namely, it has been determined a flexible distribution of working hours, provided that the employer, if there is not a collective agreement or company agreement, provide a certain number of hours per year, with the availability to require them to workers in response to the requirements

generated from the market parameters and competitiveness (Roqueta Buj, 2012:28). Therefore, we can consider to assign a defect in transposition of art. 19 of Directive 2003/88 / EC because the lack of causal justification, which certainly exceeds the defined parameters by the Community framework. It would seem reasonable, therefore, to correct this deficiency, and to hold the irregular distribution of working time to the concurrence of the appropriate objectives, technical or organizational reasons.

Indeed, despite what might seem at first, the consequences of this precept are essential. Business position has been reinforced between the opposing interests on this matter on both by employer and workers. In this logic, the ways to organize and distribute work time are changing, at least the criteria set currently in the management of working time, where ICT have a very significant space.

In the other hand, one of the limits it has been impassable and respected, until today, was not to have the rest hours against any pact organization of working time currently, although it is weakened by the introduction of ICT in the workplace and internal flexibility. That is, law regulation contributes to indefinitely prolong working hours getting and encouraging a paradigm of workers' "full availability" to answer a message, a telephone call or an email. Widespread development of a new labour culture based on the increased use of ICT, by a more competitive economy, tend to blur the limits between work time and rest (Monereo Pérez, 1995:7).

The famous "new productive model" goes back to the past because promoting continuous efficiency by most different ways, technological, legal, organizational, etc., that make it difficult workers to "switch off" their obligations and problems of the work. So, apart from overcoming "legal and conventional" barriers related to time and work space, it is established and therefore infringing a regulatory and institutional framework that favour job stress as fundamental social right and the protection of personal integrity regarding the right to health -STC 160/2007- (Molina Navarrete, 2014:114).

Indeed, it has provided to the employer, tools to manage work days, working hours and work pace to change organizational and production needs. It is estimated that this favour competitiveness and costs, that in the context of economic crisis, can lead to decision-making job destruction (White Argüelles, 2012: 12) and reduce or even endanger workers' health, because health and safety conditions at work is relativized.

In particular, according to the Labour Force Survey (LFS), developed by the National Institute of Statistics, in 2015 3.5 million were made extra hour a week unpaid, or by financial compensation or time off. This means that 56% of overtime performed by workers are not payed.

According to the data provided by the EPA, the Inspectorate of Labour and Social Security (ITSS) aims to ensure by the recent Instruction No. 3/2016 "on the strengthening of controls regarding working time and overtime "with control actions of full-time contracts. In any case, this matter is just regulated by another Instruction No. 1/2015 refereed to the same task but only in relation to part-time contracts.

Thus, as confirm the new instruction, ways to manage the workday by the entrepreneur, must ensure compliance with the legal and conventional rules on working time, in particular maximum workday on which they settle modern labour relations.

Beyond this obvious surveillance and control, the ITSS express about the negative impact that a breach of the rules on working hours can result in concealing work and family life. This breakdown is caused, in our view, by the labour reform made by Law 3/2012, of July 6, with the resulting imbalance of legal relationship (Ramos Quitana, 2013:94).

Because of this, it seems that the need for enhanced management control of working time can rely on the case law established in recent times. We can make a brief reference to the Supreme Court Sentences of Andalusia, November 6, 2006; STSJ of Andalusia, December 19, 2002 and currently STSJ of Castilla y Leon, February 3, 2016, as they failed, in general, that the record of daily working time is mandatory, regardless of the performance or non-performance of overtime hours, as established in the ET art. 35.5 also the resulting information to be provided to workers' representatives. In this way, the duty to respect not exceeding the legal maximum, is an employer responsibility and specified in the establishment of guidelines and criteria that it necessary to ensure compliance with the limits of working hours and breaks. More recently, in the same way thy awarded by the National Court [SAN, de 4 de December (proc.301/2015); SAN de 19 de February (proc.383/2015) y SAN 6 de mayo (proc.59/2016)].

The question is whether the ICT and new contractual practices based on the flexibility of the organization of working time are permissible within the promotion of integrated prevention of occupational hazards, or, if these

transformations can be an important source of psychosocial risks for workers, causing them a significant impairment of psychological well-being and health (PEIRÓ, 2004:183). In this context, ICTs are an essential part in a company and does not “get out of” of the debate created around its massive use inside and outside working hours and determining the hours of work that truly makes the workers. Along this lines, in recent years it requires greater adaptability of the regulatory framework governing the labour market, while taking into account the economic situation and high unemployment (Monereo Pérez, J. L., et. at., 2008:11). Consequently, the current legal regulation weakens and helpless the worker and he is forced to accept worse working conditions, besides having less demand power (Molina Navarrete, 2011: 287).

Hence, this transformation of Social Labour Law is inspired by the hegemonic value of the principle of efficiency (Molina Navarrete, 2014th: 57), where the ICT appear as a fundamental tool for. Therefore, the finding that imbalance between the parties of the employment relationship, about flexible working hours and inadequate management technologies have become one of the essential aspects of the work organization in particular, and unprotected working conditions in general, arising from particularities regarding the provision of work by the employee, increasing psychosocial risks.

4. Right to disconnect: the prevention of new technologies psychosocial risks.

Seeing as the blurring of boundaries between work and private time, that cause psychosocial risks directly related to inadequate management of ICT and the weakening of working conditions, the need to protect the safety and health of workers by taking care to working time and minimum rest periods required and a good organization of technological work resources.

So, preventive treatment of psychosocial risks, techno-stress or burnout, are set into the mechanisms according to Law 31/1995 of 8 November on Prevention of Occupational Risks (LPRL) which is the transposition of the Framework Directive 89/391 / EEC setting basic principles and obligations on Safety and Health at Work for all European countries. Thus, the Spanish legal system, in art. LPRL 14.2 provides both the obligation of the employer to ensure the safety and health of workers in every aspect related to work, and psychosocial risks (STJUE de 15 de November de 2011, Asunto C-49/00).

Consequently, we could determine that psychosocial risks are the interaction between the characteristics of the organization of work, the environment and capabilities, as well as the particularities of workers. First, the goal through working conditions, management styles, work systems, use of machinery and technology, work control mechanisms... In addition, social relations between workers and people outside the company. And finally, the personal traits of the workers, their needs, culture and personal situation inside and outside of work, ie, subjective or personal factors (García Jiménez, M., et. at., 2010:18). In this regard, from the arts. 4.2 and 4.7 LPRL, is not limited to the features of the ITC, but also includes the environmental and interactive feature to any relevant factor integrating the whole enterprise, that is, both the organization itself activity and people. Therefore, the set of these two objective and subjective factors, can influence the health, performance and working environment, [art. 15.1 g) LPRL]. However, it is generally fails factors linking only subjective nature, then, it is revealed as incorrect and insufficient action. Hence, we should not blame only the worker for his inability to adapt, but also assessment new ways of work organization by new technologies.

Within this dimension, in accordance with the case law, it is necessary to establish a “balance between the worker contract obligations and their constitutional freedom” (STCO 186 / 1996 of November 25, and 186/2000, of 10 July), since the ICT have had a deep impact and exposure on all aspects of the people lives. In relation to the reconciliation need between the use of ICT and psychosocial health of workers, it is essential to develop, first of all, a suitable assessment of that causes psychosocial risks (judgment of the High Court no. 91 / 2014, May 14), being necessary to have all the guarantees of validity and reliability. So all psychosocial risk factors related to ICT have been identified and controlled from a preventive point of view, because the possibility to cause bad effects in workers.

According to this, Article 15.1.d) of the LPRL and ET Article 36 of the establishes the obligation “to adapt the work to the individual, in particular as regards the [...] choice of equipment and methods of work and production, [...] to reduce its effects on health “. In any case, it is necessary to update the risk assessment (arts. 4.2y 6.1 RSP and arts. 4.7 y 16.3 LPRL) once made the initial assessment of occupational risks if jobs are affected by the choice of work equipment, the introduction of new technologies... It is understood that with this mechanism is tried to detect any damage or change in working conditions that may affect the full protection of the worker. Therefore, they have to take preventive measures as well as methods of work and production, to ensure the highest level of safety and health of workers by removing or avoiding the most of its consequences. In fact, depending on different circumstances in intensity, frequency and duration, work techno-stress can be the source of many diseases and health disorders.

On the other hand, within the social dialogue framework, they have obtained different results on psychosocial risks, in general, meaning an important advance in searching answers to particular questions. So, to summarize, they have lay down different agreements on Telework Community origin on Job Stress, Harassment and Violence at Work and also the Multisector Agreement-Guide on violence and harassment to third parties. All of them have been established on the principle of worker's protection faced all kind of occupational hazards, which, although not expressly refer to the labour techno-stress are emphatic about the employer's obligation to prevent and protect the psychosocial risks including as a specific type of job stress which their origin are in the use of new communication technologies.

More recently, the assessment of all organizational, environmental and subjective factors have specifically included in the current regulatory framework, both national and European (Directive 2010/32 / EU of the Council of 10 May 2010, to prevent injuries caused by sharps in the hospital and healthcare sector), as reaffirm the transposition into domestic law through articles 4, 5 and 6 of the Order ESS / 1451/2013, of July 29 (BOE de 31 de julio). That is, despite being a standard for healthcare sector, a sectoral law makes sense to realize this which is a general duty set for all sectors, articles 14, 15, 16 and 17 of the LPRL. Therefore, the risk assessment should take into account different aspects such as technology, work organization, working conditions, level of qualifications, psychosocial factors related to employment, in addition to the influence of factors related to the environment work, with the aim of determining how to eliminate exposure and considering possible alternative systems.

In addition, in plain view that it be explained, it is clear that the system identifies the risk arising from the work in a comprehensive and integrated way, where are psychosocial risks. By the same token, we have found that technological development poses new demands for workers and for their health, in fact, we cannot forget the strong relationship between the ICT for the daily development work and increased flexibility in the market work as psychosocial risk factors. In this context, we can consider that the collective agreement becomes the ideal instrument for overall compliance with the legal duty of the employer to protect worker health. So, through collective bargaining should determine rules of action to answer to these situations, adapting the safety and health at work to the features of the production sector or the business organization needs (Desdentado Bonete, A; et. at., 2007:15). However, it should be noted that conventional studies by now show that the attention given about the treatment of the impact of ICT in Industrial Relations is still inadequate, biased and partial.

5. A new and interesting approach: to the right and duty of technological disconnection outside working hours

Having been evidenced the importance and need to ensure the safety and health of workers in digital environments, in order to avoid labour techno-stress and the increased of the psychosocial diseases from an excessive use of ICT in the workplace, in some European countries are beginning to step to recognize the computing devices "break away duty" provided to the worker. This approach comes from the idea that the recognition of the "right to disconnect" is not enough and therefore be determined direct taxation to the company of their respect. This is, to make to be effective this right, disconnection must be accompanied by a "duty of disconnection" concerning, first, of workers but also employers.

In France, for years they have been demanding improvement actions to prevent, especially, over work and physical and mental load of workers. Regarding to its jurisprudence, despite being scarce judicial pronouncements about the right to the worker digital disconnect, they have been saying about not qualifying shirking the fact that the worker cannot be located after work. Similarly, different collective agreements have expressed on the subject, however, include the collective agreement signed sectoral, of April 1, 2014, held between SYNTEC and CINOV employers and CFTD and CFE-CGC unions to the field of technical consulting, engineering, computer services, human resources and consulting (Mella Méndez, 2016:43).

In this context, include the recent French labor reform of 2016 known as "Loi Travail", (*Loi n° 2016-1088 du 8 août 2016 relative au travail, à la modernisation du dialogue social et à la sécurisation des parcours professionnels*), among other innovations, we are incorporating adaptation measures in the labour market into the digital age and, among them, the so-called "Right to disconnect" (*Droit à la déconnexion*), once the working day are finished.

Thus, with effect from January 2017, Article 55.I.2° introduces a new paragraph in Article L. 2242-8 of the French Labour Code, to provide "*the full exercise by the worker of his right to disconnect*" .. Also, the company must define and delineate the procedures for the use of digital devices, to ensure the respect of rest time and vacation, as well as their personal and family life, being this one placed on knowledge of workers and managers by control mechanisms for training and awareness reasonable use of digital devices. In short, the technology is set off from the responsibility in order to achieve them, form both worker and employer.

On this point, it is striking that the approved text does not include a definition about what is “right to disconnect” leaving the determination and conceptualization to collective bargaining. In this sense, it would have been an appropriate definition by removing the uncertainty regulatory, however, we think that the absence of a specific law regulation should be the extra-legal sources which provide some guidelines.

Now, we cannot ignore that there is a regulatory framework where the law creates management tools and empowers the social partners to define the specific forms to have a full exercise of that right by collective bargaining and being binding. Therefore, by this novel and interesting experience we recover the important role of social law, where the Law and Autonomy Collective complement each other and work together to ensure a new balance and a compromise and involvement regarding the legal obligations whatever size of the company. Furthermore, this implemented measures by the recent French labour reform, not only seeking to increase worker protection and the prevention of possible risks from the labour techno-stress but also, it is necessary to set up flexibly adapted measures in a specific organization to protect and prevent both workers and companies.

Final thoughts

As shown, the introduction of ICT in the workplace has led a great transformation of the work that needs a thorough and complete treatment. Overall, there have been changes to the time, place and manner of development work as well as managing the use of ICT posed increasing interferences of work in the worker intimate and personal life, by improper use of such technology devices.

Although it is true that we cannot deny the benefits, from a perspective of legitimate business profitability, that new technologies provide in production processes to make its more efficient. Similarly, decreasing the burden of physical and hazardous work is found also to provide the opportunity for greater flexibility at work can lead to greater worker satisfaction.

However, we cannot hide the negative reference in particular to the intensification of the worker subordination to the employer by increasing the chances both in the power control and availability of worker during and out of the daily work. This circumstance would may danger workers fundamental rights and, in particular, the safety and health of workers with the increase of burnout and techno-stress mainly in times of crisis where it becomes apparent constant threat of job loss (RODRÍGUEZ ESCANCIANO, 2013:33).

The first obstacle we found is the increasing recognition of business management powers to the detriment of adaptation and balance between work time and worker personal life, establishing flexible labour constitution (MONEREO PÉREZ, 2001:213) and enhanced by the introduction of ICT in labour relations. Given this, thy stablish a significant increase in the incidence and prevalence of psychosocial risks at workplace, where personal, economic and social costs are the great importance. In any case, in recent times it has been expressed the need to connect work time not only with productivity and competitiveness but also with the safety and health of workers because labour flexibility can be positive, provided that there are minimum standards and two-way benefit for employer and worker.

So, staying out of for this study space the data analysis provided by the useful reports by organizations and institutions in this area, we do consider essential state that are enough studies and scientific evidence on the possibility and the need for action preventively against psychosocial risk factors, to avoid the main consequences on mental and physical health of workers. Therefore, the search for the greatest possible safety and health at work is not only a legal and ethical duty, but an efficient decision economically (Molina Navarrete, et. at., 2014c:53).

The question lies in the analysis of the role that the social partners can play in this regard. We consider that social partners, by collective bargaining, have to move forward in creating frameworks for action more effective in the prevention of psychosocial risks, through the signing of promotional frameworks to reconcile the interests of workers and digital and technological progress, as well as permanent and rapid change, where collective autonomy does not move to the Law on prevention of psychosocial risks, but complete it. In order that a progressive awareness of the scale of the problem occurs so that, through collective bargaining, the need to control the excessive use of ICT as tools of work is guaranteed, as well as respect for the required time rest for the protection of worker health.

And it is that there are few possibilities of control and availability offered by ICT at workplace, constituting the need to assume a concern for psychosocial risks and finding a balance between the workplace and staff from a focus interactive quality of life, work environments and improving the competitiveness of enterprises, ie, an interaction between objective and subjective or personal characteristics. Therefore, welfare must be in the social field and not in the economic (Rodríguez-Piñero y Bravo-Ferrer, 2006: 55). That is, it has to settle a logic of responsibility and ongoing dialogue about it.

Bibliography.

Argüelles Blanco, A.N. (2012). “La ordenación sostenible del tiempo de trabajo: luces y sombras de las últimas reformas laborales”. *Revista Internacional de Organizaciones*, núm. 8, págs. 11-29.

Ballester Pastor, M. A. (2013). “La política de la OIT y de la Unión Europea sobre salud y riesgos psicosociales”. *Revista Internacional y Comparada de Relaciones Laborales y Derecho del Empleo*, vol. 1, núm. 4, págs. 8-30.

Camas Roda, F. (2001). “La influencia del correo electrónico y de Internet en el ámbito de las relaciones laborales”. *RTSS.CEF*, núm. 224, págs. 139-162.

Cardona Rubert, M. B. (2003). “Las relaciones laborales y el uso de las tecnologías informáticas”. *Lan Harremanak: Revista de Relaciones Laborales*, nº extra 1, 2003, págs. 157-173.

Collantes Ibáñez, P. (2012). “Prevención de riesgos psicosociales y salud mental”. *La salud mental de las y los trabajadores*, Madrid: La Ley, 2012, págs. 23-44.

Desdentado Bonete, A. Y Menéndez Sebastián, P. (2007). “Negociación Colectiva y Prevención de Riesgos Laborales. Una aproximación crítica”. *Revista Alcordemgo. Revista Científico-Técnica de Seguridad y Salud Laborales*, núm. 8, 2007, págs. 11-35.

Desdentado Bonete, A. Y Muñoz Ruiz, A. B. (2012). *Control informático, videovigilancia y protección de datos en el trabajo*, Valladolid: Lex Nova.

Falguera Barò, M. A. (2016). “Nuevas tecnologías y trabajo (I): perspectiva contractual”, *Trabajo y derecho: Nueva revista de actualidad y relaciones laborales*, núm. 19-20, págs. 31-45.

García Jiménez, M. Y Olarte Encabo, S. (2010). “La regulación de los riesgos psicosociales en España: Experiencia y prospectiva”, *Revista de Prevención de Riesgos Psicosociales y Bienestar en el Trabajo*, núm. 1, págs. 13-48.

González Cobaleda, E. (2015). “Riesgos psicosociales, derechos fundamentales y NTIC: Una perspectiva de protección diferente”. *RTSS.CEF*, núm. 387, págs. 17-42.

Kelliher, C. Y Anderson, D. (2010). “Doing more with less? Flexible working practices and the intensification of work”. *Human Relations*, 63(1), 83-106.

Martín, P; Salanova Soria, M. Y Cifre Gallego, E. (1999). El proceso de “Tecnoestrés” y estrategias para su prevención (I). *Prevención, trabajo y salud: Revista del Instituto Nacional de Seguridad e Higiene en el Trabajo*, núm.1, págs. 18-28.

Martinez Fons, D. (2002). “Uso y control de las tecnologías de la información y comunicación en la empresa”. *RL*, 2002, núm. 23-24.

Mella Méndez, L. (2016): “Nuevas tecnologías y nuevos retos para la conciliación y la salud de los trabajadores”. *Trabajo y derecho: nueva revista de actualidad y relaciones laborales*, núm.16, págs. 30-52.

Mercader Uguina, J.R. (2002). *Derecho del Trabajo, Nuevas tecnologías y sociedad de la información*. Valladolid: Lex Nova.

Molina Navarrete, C. (2011). *Teoría de las relaciones laborales*, Madrid: CEF-Udima.

Molina Navarrete, C. (2014). “Autotutela empresarial secreto de comunicaciones y control judicial: La Sala Social pierde el paso con la Sala Penal”, *RTSS.CEF*, núm. 381, págs. 157-162.

Molina Navarrete, C. (2014a). “La « Luna Europa» y sus dos caras: Regulación flexible del tiempo de trabajo y límites comunitarios”. *La ordenación del tiempo de trabajo en el siglo XXI. Retos, oportunidades y riesgos emergentes*. Granada: Editorial Comares, págs. 57-82.

Molina Navarrete, C. (2014b). “La rabiosa actualidad socio-laboral para el inicio del 2014: Entre la certeza de los recortes de la protección social y la esperanza de la empleabilidad a tiempo parcial”, *RTSS.CEF*, núm. 370, págs. 59-146.

Molina Navarrete, C. Y González Cobaleda, E. (2014c). “El papel de la participación de los trabajadores en la gestión de los riesgos psicosociales: Encuestas y estudios comunitarios”. *Anuario Internacional sobre prevención de riesgos psicosociales y calidad de vida en el trabajo*, Secretaría de Salud Laboral UGT-CEC, págs. 51- 73.

Monereo Pérez, J. L. (2001). “Evolución y futuro del Derecho del Trabajo: El proceso de racionalización jurídica de la «cuestión social»”, *Relaciones Laborales*, núm. 15/16, págs. 197-254.

Monereo Pérez, J. L. Y Fernández Avilés, J. A. (2008). “Para una crítica del modelo de flexiseguridad liberal: Flexiseguridad y garantismo jurídico-social. (Segunda y última parte)”, *Tribuna Social: Revista de seguridad social y laboral*, núm. 208, págs. 9-20.

Monereo Pérez, J.L. (1995). “La política social en el estado del bienestar: Los derechos sociales como derechos de «desmercantilización»”. *Revista del Trabajo y Seguridad Social*, núm.19, pág. 7-45.

Moreno Vida, M. N. (2014). “Configuración general del tiempo de trabajo: Algunas reflexiones críticas”. *La ordenación del tiempo de trabajo en el siglo XXI. Retos, oportunidades y riesgos emergentes*. Granada: Editorial Comares, págs.37-56.

Peiró, J. M. (2004). “El sistema de trabajo y sus implicaciones para la prevención de riesgos psicosociales en el trabajo”, *Universitas. Psicológica Bogotá*, Colombia, núm. 2, págs. 179-186.

Pérez De Los Cobos Orihuel, F. (1990). *Nuevas tecnologías y relación de trabajo*, Valencia: Tirant lo Blanch.

Pérez Luño, A. E. (1992). “Intimidad y protección de datos personales: Del Habeas Corpus al Habeas Corpus Data”, *Estudios sobre el derecho a la intimidad*, Madrid: Tecnos, 1992, págs. 36-45.

Ramos Quitana, M.I. (2013). “Tiempo de trabajo y conciliación de vida personal, familiar y laboral: Riesgos psicosociales emergentes”. *Salud en el trabajo y riesgos laborales emergentes*, Albacete: Editorial Bomarzo, págs.89-111.

Rodríguez Escanciano, S. (2013). Innovación tecnológica y productividad empresarial: posibilidades y límites en un contexto económico de crisis. *Diario La Ley*, núm. 8094, Sección Doctrina.

Rodríguez-Piñero Y Bravo-Ferrer, M. (2006). “Derecho del Trabajo y racionalidad”. *Relaciones laborales: Revista crítica de teoría y práctica*, núm. 1, págs. 55-64.

Roqueta Buj, R. (2012). *La flexibilidad interna tras la reforma laboral: La Ley 3/2012, de 6 de julio*, Valencia: Tirant lo Blanch.

Salanova, M; Llorens, S; Cifre, E; Nogareda, C. (2007). “Tecnoestrés: concepto, medida e intervención psicosocial”. *Nota Técnica de Prevención núm. 730 del INSHT*, Ministerio de Trabajo y Asuntos Sociales.

Trillo Párraga, F.J (2010). *La construcción social y normativa del tiempo de trabajo: Identidades y trayectorias laborales*, Valladolid: Lex Nova.



IL DIBATTITO EUROPEO SUL DIRITTO ALLA DISCONNESSIONE NEL RAPPORTO DI LAVORO

Anna Rota
Universidad de Bolonia (Italia)

Sommario

1. Introduzione

2. Sulle origini del diritto alla disconnessione: il protagonismo degli attori sindacali in Germania e Francia;

3. Prospettive *de iure condendo*: le modifiche al code du travail francese;

4. Segue: il dibattito parlamentare in Italia.

5. Quali ritardi rispetto alle politiche europee?

6. Considerazioni finali

Bibliografia

1. Introduzione

L'avvento dell'informatica e lo sviluppo delle tecnologie di comunicazione mobile hanno favorito rapide e profonde trasformazioni dell'impresa, determinando da un lato un superamento delle rigidità del Novecento industriale ed introducendo, dall'altro, una serie di questioni inedite per lo studioso delle relazioni di lavoro (Popma, 2013: 5-6; Barthélémy – Cette, 2015: 47 ss.; Valenduc - Vendramin, 2016: 34).

Positivi sono, almeno in buona parte, gli effetti dell'innovazione tecnologica sull'organizzazione del lavoro: grazie alla potenza delle connessioni digitali si assiste quotidianamente a un progressivo spostamento dal modello di fabbrica tradizionale - basato su una rigida divisione di tempo e spazio - a strutture più elastiche, flessibili e talvolta virtuali (Chiaro – Prati – Zocca, 2015: 69); nuove opportunità professionali ed occupazionali si configurano attraverso il web, divenuto luogo di libertà, informalità, creatività e valorizzazione immateriale (Tullini, 2015a: 18) che plasma soggettività e rapporti inediti; la maggiore versatilità e sofisticatezza delle strumentazioni informatiche facilita le comunicazioni aziendali, sopperendo agli inconvenienti ed ai limiti addebitati in passato alle prime applicazioni digitali (COM 2014/332, 7); finanche l'inserimento della robotica nel processo produttivo viene ad essere sostenuto quale adeguata risposta per i settori ad alto tasso infortunistico ed in relazione alle lavorazioni monotone, ripetitive o che prevedano un contatto rischioso con materiali radioattivi o atmosfere esplosive (Agenzia europea per la sicurezza e la salute, 2015a).

Ad uno sguardo appena più attento, emerge come nell'epoca attuale sia anche necessario occuparsi tanto delle potenzialità lesive della *digital fabrication* o della *human- robot collaboration* (Agenzia europea per la salute e la sicurezza sul lavoro: 2015a; Paolantonio, 2015: 69) quanto discutere di nuovi apparati di tutela per chi prestando la propria attività lavorativa all'interno dei moderni contesti produttivi si espone a inediti rischi professionali, in specie a quelli indotti dai nuovi modelli di organizzazione del lavoro (Degryse, 2016: 47 ss.). In tale solco si inserisce l'interessante dibattito attorno al diritto/dovere di disconnessione, concepito come garanzia da riconoscere a favore di una specifica fascia di lavoratori, i cosiddetti “*always connect workers*”, in un periodo storico in cui la pervasività degli strumenti informatici e tecnologici può arrivare ad incidere sull'integrità psico-fisica del lavoratore e compromettere in maniera non trascurabile il pieno godimento dei diritti della persona.

Proprio a quest'ultimo tema, seppur con qualche anno di ritardo dalla sua teorizzazione quale diritto alla vita privata nel XXI secolo (Ray, 2002: 939), sono rivolte le attenzioni degli attori del sistema sindacale e dei *policy*

makers nazionali. Soprattutto nei Paesi dell'Europa continentale (Degryse, 2016: 57 ss.), la disconnessione dai dispositivi elettronici assume rilevanza all'interno della dinamica negoziale-collettiva e si impone sulla scena pubblica francese ed italiana dove sono rispettivamente in discussione i contenuti del nuovo *Code du Travail* ed alcune proposte di regolamentazione eteronoma circa una nuova modalità di attività da remoto che passa sotto il nome di «lavoro agile».

Al cospetto dello scenario che progressivamente va delineandosi, complesse e delicate problematiche emergono dalla difficile conciliazione tra le esigenze aziendali di sfruttare le *facilities* informatiche e i diritti della persona del lavoratore sempre più «assorbito» dalla tecnologia anche al di fuori dell'orario convenzionale di servizio. Questioni che, a ben vedere, s'inseriscono all'interno di una ampia e datata riflessione sulla validità del tradizionale sistema di regole lavoristiche, concepito per una prestazione svolta in un tempo predeterminato ed in uno spazio, quello dell'impresa, dai confini più circoscritti rispetto a quelli particolarmente labili dell'attuale organizzazione del lavoro (Smuraglia, 1985: 72; Carinci, 1985: 204 ss.; Vardaro, 1986: 75 ss.; Biagi – Treu, 2002: 5 ss.).

A tal proposito pare interessante soffermarsi sui possibili scenari futuri di un sistema in rapida evoluzione e con ricadute, anche piuttosto significative, sul patrimonio dei diritti fondamentali della persona tra i quali quelli relativi alla salute e sicurezza del lavoratore (Eurofound, 2015: 2) ed evidenziare in che modo le tendenze legislative a livello nazionale rispondono alle sollecitazioni promosse a livello sovranazionale attorno ai rischi psicosociali indotti dalle trasformazioni dei modelli di organizzazione del lavoro.

2. Sulle origini del diritto alla disconnessione: il protagonismo degli attori sindacali in Germania e Francia.

Ad occuparsi della permanente connessione digitale del lavoratore e delle conseguenze prodotte alla salute ed alla qualità della vita sono da qualche tempo la Svezia, la Germania e la Francia, Paesi che per tradizione e cultura sono particolarmente attenti a creare le condizioni affinché nei luoghi di lavoro si persegua il benessere organizzativo (Lerouge, 2012: 233 ss.).

Mentre in Svezia si incide sulla durata giornaliera della prestazione di lavoro, riconoscendo nel limite di sei ore la migliore e più proficua *performance*, negli altri due Stati soprattutto la contrattazione collettiva consolida il proprio ruolo di protagonista nella gestione di alcuni radicali cambiamenti a livello organizzativo, adottando soluzioni negoziate che danno concreta attuazione a quanto riconosciuto nell'ambito delle Carte costituzionali e nelle fonti del diritto europeo ed internazionale.

Partendo dall'assunto che messaggi di posta elettronica e telefonate per gestire rapporti con i fornitori, i dipendenti e la clientela/utenza arrivano anche negli orari dedicati alla vita privata, in Germania si è cercato di disciplinare il fenomeno della disconnessione dagli strumenti digitali, avendo da un lato ben chiare le esigenze di chi organizza l'attività produttiva e non trascurando dall'altro l'esigenza/urgenza di rendere effettivo il godimento dei diritti della persona del lavoratore anche al di fuori della sua obbligazione contrattuale con l'impresa.

Ad avviare una lunga stagione di accordi volti a regolare per via negoziale la disconnessione dagli strumenti informatici è stato anzitutto l'accordo siglato, su impulso dell'IG Metall, tra il Consiglio di fabbrica e la direzione di Volkswagen alla fine del 2011. Nello stabilimento si è concordato di ricorrere alla *festively dubbed silent night*, una forma sperimentale di disconnessione tecnica che, mediante l'installazione di dispositivi informatici, determina in specifiche fasce orarie (dalle ore 19 di sera alle 8 di mattina) e durante il *week end* l'interruzione forzata della lettura della posta elettronica dal *BlackBerry* fornito dall'azienda ai propri dipendenti.

Una specifica attenzione alla tutela prevenzionistica viene a riscontrarsi nelle intese raggiunte a partire dal 2012 con la Daimler- Benz, produttore di automobili e mezzi di trasporto. Per prevenire lo stress tecnologico dovuto all'*overflow* di comunicazioni e informazioni di servizio ed all'invasione degli spazi personali al di fuori dell'orario di lavoro è stata prevista l'automatica distruzione delle *mail* pervenute dopo una certa ora e durante i periodi di sospensione del contratto di lavoro (malattia, congedi, permessi, ...) unitamente al re-indirizzamento del messaggio ad altro contatto disponibile tra il personale aziendale (Degryse, 2016: 69). Ciò, grazie all'installazione di un'applicazione, chiamata *Mail Holiday*, volta a capitalizzare gli esiti di una ricerca condotta nel 2011 dal Dipartimento di Psicologia dell'Università di Heidelberg sulle attività professionali realizzate attraverso l'impiego di dispositivi digitali.

Da entrambi gli accordi non è difficile scorgere un'inedita attenzione alla persona del lavoratore ed un atteggiamento virtuoso ed indubbiamente avanguardistico rispetto a fenomeni irreversibili e sempre più radicati nelle imprese. In tale contesto l'autonomia collettiva, oltre a fornire soluzioni apprezzabili ed in grado di impedire lo sconfinamento del lavoro nella vita privata, ha inciso sul versante dei rischi psicosociali, al centro della campagna di sensibilizzazione

avviata dalla BAuA (l'Istituto tedesco in materia di salute e sicurezza) ⁽¹⁾, dimostrando come alle criticità che l'innovazione tecnologica innesta nelle relazioni di lavoro si possa reagire con il più tradizionale degli strumenti a disposizione della dinamica negoziale ⁽²⁾.

Ad insistere nella prospettiva della prevenzione dei rischi psico-sociali è stato successivamente anche il titolare del potere legislativo: tra le proposte avanzate, una relativa allo stress sul lavoro consacra l'esistenza di un diritto alla disconnessione durante il periodo di congedo/sospensione dell'obbligazione lavorativa dopo aver messo in rilievo che un uso continuativo e contemporaneo di apparecchi informatici e digitali può arrivare a produrre sofferenze e disfunzioni psicologiche di particolare gravità. Tale progetto d'intervento si colloca all'interno di un più vasto dibattito sull'avvenire del mondo del lavoro, che coinvolge decisori politici, economici, esperti, parti sociali e cittadini nella ricerca di soluzioni ad alcune delle più delicate questioni che l'epoca della virtualizzazione delle relazioni di lavoro (Degryse, 2016: 58) e del lavoro senza frontiere (Valsamis, 2015) solleva.

Una crescente attenzione verso le modificazioni apportate dal progresso tecnologico all'organizzazione del lavoro ed in particolare al diritto di disconnessione viene a riscontrarsi anche nell'ambito della contrattazione collettiva francese (Ray, 2015: 516).

Non è infrequente constatare nella fase di negoziazione collettiva l'impegno del *management* e dei sindacati a co-determinare misure di tutela dei lavoratori in grado di evitare che le tecnologie informatiche e di comunicazione incidano negativamente sulla persona del lavoratore (Heas, 2015: 843), mettendo nello specifico a rischio la sua integrità fisica e personalità morale.

1 Si può rimandare all'esperienza condotta dalla BAuA sulla base di 23 studi internazionali prodotti sull'argomento. A tal riguardo deve segnalarsi che l'attenzione ai rischi psicosociali in Germania si spiega alla luce dei giorni persi per disturbi psichici. L'Istituto nazionale per la salute e sicurezza sul lavoro ha evidenziato come nel 2008 si sia registrato un aumento di tali patologie fino ad arrivare nel 2011 ad un aumento delle giornate lavorative perse pari al 40% circa.

2 Si può addirittura parlare di modello preso a riferimento da quelle realtà aziendali, specie di grandi dimensioni (Deutsche Telekom, Eon ed Henkel) ove di recente sono state sottoscritte intese che introducono regole volte a limitare la tendenza all'iper-connessione, prevedendo un controllo della posta elettronica attraverso sofisticate applicazioni tecnico-informatiche che si spinge a selezionare i messaggi sulla base dell'urgenza.

Senza la pretesa di entrare esaustivamente nel merito di una ricca esperienza che in buona parte ha mutuato le soluzioni adottate nell'ambito della contrattazione collettiva tedesca, le intese sottoscritte in Francia mettono in evidenza «un diritto convenzionale che rafforza il legame tra tempo di lavoro e la salute del lavoratore nell'impresa» senza tuttavia trascurare la dimensione privata dell'individuo al di fuori dell'orario di lavoro (Heas, 2015: 843) ed una peculiare attenzione allo stress tecnologico dovuto al sovraccarico di informazioni e comunicazioni conseguente dalla costante connessione alle risorse digitali per esigenze di servizio.

Tra gli accordi che meritano una più approfondita analisi per aver contribuito a promuovere l'emersione di un dibattito a livello nazionale (Ray, 2012: 1033; Favenec Hery, 2015: 113 s.) e convinto di recente addirittura il Ministro del Lavoro a sostenerne l'introduzione nel *Code du Travail*, di estremo interesse pare quello raggiunto in casa Areva. Ci si riferisce in particolare al primo accordo che nel 2012 ha riconosciuto e regolato per via negoziale il diritto alla disconnessione testimoniando, anche in una fase critica e recessiva del diritto del lavoro, la straordinaria resilienza di imprese e sindacati rispetto ai nuovi bisogni di tutela di chi, mediante retribuzione, si impegna a svolgere un'attività professionale che non sempre si esaurisce all'interno dei locali aziendali e durante l'orario di lavoro definito dall'autonomia individuale o collettiva.

Al fine di salvaguardare la vita personale/familiare/sociale e la salute del dipendente sulla base di quanto alcune ricerche empiriche avevano esortato a fare a partire dal 2007 (su cui Barteley – Certe, 2007: 11-17; Ray, 2015: 517; Jauréguiberry, 2014: 29, 14-19) le parti hanno convenuto di introdurre nell'*Accord sur le développement de la qualité de vie au travail* la disconnessione dalle risorse digitali in determinate fasce orarie.

Oltre ad essere fondamentale per la realizzazione delle successive intese a livello interprofessionale (cfr. art. 17 Accordo interprofessionale del 19 giugno 2013) e decentrato, questo accordo deve senz'altro annoverarsi tra gli interventi che a livello negoziale hanno più efficacemente perseguito gli obiettivi fissati a partire dalla strategia europea elaborata nel 2007 in relazione ai rischi associati alle nuove tecnologie, fornendo un modello di gestione prevenzionale orientato ad una valutazione globale e complessiva di tutto ciò che può interferire negativamente sulla salute e sicurezza del lavoratore, inclusi quelli di tipo psico-sociale generati dalla permanente connessione agli strumenti informatici.

Più recentemente, gli accordi collettivi sono progressivamente passati all'obbligo di disconnessione (Accord Reunica, 2014) e perfino all'istituzione di Commissioni interne delegate al controllo di eventuali violazioni di tali disposizioni. Ad introdurre una corresponsabilità del lavoratore nell'attuazione delle misure tecniche ed organizzative di disconnessione digitale è intervenuto l'*Accord sur la durée du travail* sottoscritto nel 2014 dalla CFDT e dalla CFE-CGC al termine di una negoziazione avviata con i sindacati di mestiere delle prestazioni intellettuali, del Consiglio degli Ingegneri e degli Informatici (Degryse, 2016: 69), finalizzata a «garantire il rispetto della durata minima del riposo imposto dalla normativa francese ed europea in materia». Per la creazione di Commissioni paritetiche delegate al monitoraggio della qualità del lavoro e ad intervenire ogni qualvolta vi sia fondato sospetto di nocimento al patrimonio dei diritti della persona del lavoratore si segnalano invece l'Accordo Thalés e l'intesa Solvay (Favenec Hery, 2015: 119).

3. Prospettive de iure condendo: le modifiche al *code du travail* francese

Oltre ad assumere rilevanza all'interno della dinamica negozial-collettiva, il tema ha di recente investito anche il governo francese.

A sollecitare l'inserimento del diritto di disconnessione nella legislazione nazionale sono dapprima intervenute le organizzazioni sindacali del settore degli ingegneri quadri e tecnici (Degryse, 2016: spec. 67-68 e 76). Rilevata l'assenza di adeguata tutela nel diritto positivo, soprattutto l'UGICT - CGT ha promosso iniziative di sensibilizzazione e sostenuto una revisione del *Code du Travail*. Ciò, dopo aver appurato che «l'iper-connessione rappresenta un rischio reale per la salute e che l'imprenditore ha l'obbligo di proteggere il lavoratore da tali conseguenze».

Un ruolo determinante ai fini dell'introduzione di tale garanzia all'interno dell'ordinamento giuridico francese va poi senza dubbio riconosciuto al lucido, approfondito e ben documentato Rapporto «Transformation numérique et vie de travail» elaborato dalla Commissione Mettling composta da esperti designati dalle organizzazioni sindacali e patronali (CFDT, CFE/CGC, CGT, FO ed il direttore generale del MEDEF) o provenienti dal settore delle scienze sociali e di diritto del lavoro. Incaricato dall'Esecutivo nazionale di studiare «gli effetti della rivoluzione digitale nel mondo del lavoro», il gruppo di lavoro ha elaborato una serie di misure tra le quali rileva la raccomandazione n. 19 dedicata all'introduzione del c.d. diritto/dovere alla disconnessione, quale risposta necessaria ed indispensabile di qualsiasi organizzazione del lavoro che intenda perseguire il *well-being* dei propri dipendenti ed evitare sia tensioni tra sfera privata e professionale (Rapporto Mettling, 2015: 20 e 52), quanto l'insorgenza di un rischio di sovraccarico

cognitivo ed emozionale, la cui mancata e/o adeguata prevenzione può dar luogo al c.d. *techno-stress* o *stress tecnologico* ⁽³⁾ e nei casi più gravi al *burn out* ⁽⁴⁾ o ancora al «FOMO» (*Fear Of Missing Out*) da intendere come una forma di ansia sociale derivante da un rapporto ossessivo con gli strumenti di comunicazione professionale (Rapporto Mettling 2015: 35).

Per accompagnare la transazione numerica e facilitare nello specifico l'attuazione di tale diritto/dovere sono state nello specifico suggerite azioni di vario tipo: campagne di sensibilizzazione, incontri e formativi, la chiusura dei server, la separazione di indirizzi mail e dei numeri di telefono professionale e personale, nonché spazi di discussione per quanto riguarda il corretto e responsabile utilizzo delle apparecchiature elettroniche per ragioni lavorative (Rapporto Mettling, 2015: 21).

Le misure proposte all'interno del documento rivelano una peculiare attenzione ai rischi psico-sociali e nello specifico alla ricerca di modelli in grado di reagire agli effetti dell'innovazione tecnologica sui rapporti di lavoro sempre più destrutturati sia dal punto di vista temporale che spaziale.

Su questo sfondo s'innesta da ultimo il dibattito legislativo in corso attorno ai contenuti di tale diritto.

Nella versione licenziata lo scorso mese di luglio dall'Assemblea nazionale, il diritto-dovere di disconnessione è disciplinato all'interno dell'art. 55 del Progetto di legge «*Visant à instituer de nouvelles libertés et de nouvelles protections pour les entreprises et les actifs*».

Ai sensi di tale disposizione, la cui entrata in vigore dovrebbe essere anticipata al 1 gennaio 2017, se ne condiziona il riconoscimento ad una tecnica regolativa che demanda l'integrazione del contenuto precettivo alla contrattazione collettiva ed in subordine all'iniziativa unilaterale dell'impresa. Ad integrazione dell'art. L. 2242-8, *Code du Travail*,

³ Si tratta di una patologia studiata già negli anni Ottanta dallo psicologo americano Graing Broad, Technostress: the human cost of computer revolution. Tra gli studi scientifici più recenti v. M. Salanova e altri, The dark side of technologies: technostress among users of information and communication technologies in Int. Journ. Psychol., 2013, 48, 422-436. Nello specifico, il techno-stress è causato dall'uso continuativo e contemporaneo di apparecchi informatici e digitali, dalla gestione di un flusso continuo di informazioni provenienti dall'impiego delle tecnologie e dall'errata ergonomia dei luoghi e delle attività di lavoro a cui conseguono sofferenze e disfunzioni psicologiche (a fronte di una sintomatologia che spazia dagli stati ansiogeni, all'affaticamento mentale, ai disturbi comportamentali e al sistema cardio-circolatorio).

tale tutela è prevista a favore di qualsiasi lavoratore dipendente, incluso il personale escluso dall'applicazione di una buona parte della normativa in tema di orario di lavoro. Ciò, al fine di assicurare l'esercizio effettivo del diritto al riposo ed un buon equilibrio tra lavoro e vita privata contro l'abuso di *e-mail* ed *Internet* per motivi professionali.

Nel solco di una delicata opera compromissoria già enunciata nella parte del progetto riguardante gli ambiti della negoziazione collettiva, l'individuazione delle modalità concrete di tale diritto è delegata dunque a specifici accordi collettivi oppure, in difetto di questi ultimi, direttamente alla decisione aziendale. In questa seconda ipotesi, compete al *management* elaborare, previo parere del comitato d'impresa o dei delegati del personale, una *charte* che assieme alle attività formative e di sensibilizzazione verso un uso ragionevole delle ITC nel rapporto di lavoro provveda a definire le modalità di esercizio del diritto in oggetto.

Al netto degli emendamenti che hanno inciso sul più articolato testo originario, non pare invece colmata allo stato la più grave delle lacune della previsione di legge appena approvata, vale a dire la mancata individuazione di un regime sanzionatorio in caso di violazioni della norma (Tourres, 2016: 66). Una ulteriore critica va mossa al fatto che in assenza di accordo, lasciare alla discrezionalità del datore di lavoro la definizione delle modalità di attuazione di tale diritto significa limitare in concreto il dialogo con le organizzazioni sindacali, sminuendo quello che negli ultimi anni gli attori sociali sono riusciti a realizzare nelle sedi di negoziazione collettiva. Infine, è venuto meno l'emendamento che aveva esteso la portata del diritto di disconnessione alle realtà aziendali con almeno 50 dipendenti prevedendo che al parere del comitato d'impresa si aggiungesse quello del Comitato di igiene, sicurezza e delle condizioni di lavoro.

4. Segue: il dibattito parlamentare in Italia

Diversamente da quanto rilevato nella contrattazione collettiva tedesca e francese, molteplici fattori inducono a constatare nel contesto italiano una visione miope delle parti sociali rispetto ai cambiamenti indotti dalle innovazioni tecnologiche ed in specie un particolare disinteresse verso il dibattito sorto all'estero sul diritto alla disconnessione.

Ciò malgrado buona parte delle comunicazioni di servizio avvenga tramite una vasta gamma di dispositivi elettronici tra cui *tablet*, *smartphone* e strumenti informatici di ultima generazione utilizzabili anche fuori dall'orario di lavoro e dai locali aziendali.

La trascuratezza verso le trasformazioni apportate dalla tecnologia all'organizzazione aziendale si deduce anzitutto dai documenti per la sicurezza, formalmente attenti ai rischi connessi all'uso dei dispositivi digitali ma sostanzialmente sprovvisti di misure di tutela adeguate allo scopo prevenzionistico. Non si fatica ad evidenziare nella prassi una preponderante attenzione alla prevenzione dei rischi fisici ed una appena accennata valutazione attorno a quelli psico-sociali, più difficilmente misurabili rispetto ai precedenti (Tullini, 2015b: 125).

Deve inoltre segnalarsi una certa approssimazione delle *policy* aziendali, sovente indifferenti o poco consapevoli rispetto alla questione. A ciò, invero, fa eccezione qualche sporadica iniziativa che manca tuttavia di potenzialità diffusiva ed emulativa tra le imprese ⁽⁴⁾, quasi a voler escludere l'esistenza del problema nel contesto italiano.

Né, infine, emerge qualcosa di più significativo dai contenuti degli accordi collettivi di più recente approvazione o dal vigente quadro legislativo, ancora lungi dal fornire risposte concrete ai quesiti sollevati dai più recenti cambiamenti all'organizzazione del lavoro.

Un significativo cambio di passo, per quanto circoscritto ad una specifica area di lavoratori, pare tuttavia emergere dall'analisi delle più recenti proposte di regolamentazione eteronoma. Ad inaugurare una nuova stagione per le relazioni di lavoro è stato un disegno di legge riguardante il lavoro agile, vale a dire una forma di telelavoro evoluto reso senza vincolo di luogo o orario, con il ricorso a piattaforme informatiche, strumenti tecnologici anche portatili e sistemi interconnessi.

Nell'ampio quadro regolatorio elaborato all'interno del disegno di legge Adattamento negoziale delle modalità di lavoro agile nella quarta rivoluzione industriale, dedicato al lavoro reso «in funzione di progetti e obiettivi o a risultato» senza vincolo di luogo o orario ed impiegando risorse digitali, il diritto alla disconnessione costituisce una delle novità più rilevanti: «nel rispetto degli obiettivi concordati e delle relative modalità di esecuzione del lavoro

⁴ In questo senso si richiama una buona prassi realizzata in un'impresa romana, presentata da AIFOS, quale partner della Campagna europea 2014-15, Insieme per la prevenzione e la gestione dello stress lavoro correlato organizzata dall'Agenzia europea per la salute e sicurezza nei luoghi di lavoro. A tale iniziativa, pubblicata nella sezione sicurezzasullavoro.inail.it/PortalePrevenzioneWeb/wcm/idc/groups/prevenzione/documents/document/ucm_206398.pdf all'interno del portale istituzionale dell'Inail, è stato riconosciuto un particolare apprezzamento per il contributo innovativo alla gestione dello stress e dei rischi psicosociali nell'ambiente di lavoro, collocando un'esperienza italiana tra gli esempi più significativi a livello europeo nella pianificazione della prevenzione dei rischi professionali.

autorizzate dal medico competente, nonché delle eventuali fasce di reperibilità», tale garanzia viene riconosciuta a favore di una cerchia di lavoratori subordinati ed autonomi che soddisfino le condizioni reddituali e di altra natura indicate dalla disposizione riguardante il campo applicativo della disciplina (art. 3, comma 7).

Da qui, un primo avvicinamento di una parte delle organizzazioni sindacali (nella specie CGIL, CISL, UGL), delle principali associazioni datoriali e delle imprese di grandi dimensioni ad un fenomeno divenuto nel giro di qualche mese uno dei principali oggetti di discussione anche di un altro progetto di legge riguardante le nuove forme di lavoro a distanza svolte da lavoratori subordinati che realizzano una prestazione con l'ausilio eventuale di strumenti tecnologici e senza una postazione fissa, svolgendola in parte all'interno dei locali aziendali e in parte all'esterno e sottoponendosi ai soli vincoli legislativi e collettivi relativi all'orario di lavoro.

Ciò è stato permesso grazie ad un emendamento che mutua in buona parte l'originaria previsione contenuta nel primo disegno di legge preso in esame, senza tuttavia specificare il coinvolgimento delle *expertises* operanti con specifiche competenze tecniche in raccordo con il datore di lavoro. Nello specifico si impone che l'accordo relativo alle modalità di lavoro agile individui «i tempi di riposo del lavoratore nonché le misure tecniche e organizzative necessarie per assicurare la disconnessione del lavoratore dalle strumentazioni tecnologiche di lavoro» (art. 14, Disegno di legge Misure per la tutela del lavoro autonomo non imprenditoriale e misure volte a favorire l'articolazione flessibile nei tempi e nei luoghi del lavoro subordinato).

In entrambi i progetti di legge viene in rilievo una previsione che oltre a rivelare una portata trasversale incidente anche sul tema dell'orario di lavoro e della conciliazione tra tempi di vita e di lavoro (Tourres, 2016, 65), sconfessa in concreto un falso mito del lavoro a distanza: anche nell'ordinamento domestico, il diritto di disconnessione si configura quale risposta necessaria al cospetto di un contesto nel quale al venir meno del “rito della timbratura” (in favore di una maggiore flessibilità della prestazione) non consegue per forza di cose un abbassamento del livello di stress lavoro correlato e più in generale dei rischi psico-sociali, né un miglior equilibrio lavoro – vita privata (Chiaro – Prati – Zocca, 2015: 81) che, anzi, sempre più spesso, si trova ad essere “invasa” ed erosa dalle esigenze di servizio.

Al di fuori del dibattito parlamentare appena conclusosi con la trasmissione del secondo disegno di legge al Senato della Repubblica italiana, la riflessione continua ad affiorare soltanto a livello teorico.

In particolare, non trovano congrua considerazione sul piano pratico le sollecitazioni derivanti dagli ultimi rapporti dell'Osservatorio europeo sulle condizioni di lavoro che, dopo aver messo in evidenza i non trascurabili rischi alla salute derivanti dall'utilizzo eccessivo dei *mobile devices*, sostengono tra le azioni *win-win* l'introduzione di misure volte a separare la vita lavorativa dalla sfera personale in un contesto nel quale il progresso tecnologico consente una permanente connessione agli strumenti digitali (Agenzia europea per la salute e sicurezza sul lavoro, 2014a: 13, 14, 37).

Migliore sorte non è toccata all'indagine condotta dal Dipartimento di informatica dell'Università Irvine California in collaborazione con la *United States Army*, per dimostrare la stretta connessione tra stress lavoro correlato e uso contemporaneo della posta elettronica e delle *digital resources* aziendali (Mark– Volda – Cardello, 2012)⁵ e neppure alla ricerca *Email overload at work: an analysis of factors associated with email strain* (Dabbish – Kraut, 2006), al cui interno è possibile trovare un corposo e ricco elenco di soluzioni organizzativo-procedurali e buone pratiche per le imprese chiamate a governare l'incidenza della digitalizzazione negli ambienti di lavoro (⁶).

Ad accrescere la sensibilità verso l'insorgenza di rischi nuovi e/o emergenti non sono serviti neanche i più recenti approfondimenti dell'Istituto nazionale per l'assicurazione contro gli infortuni e le malattie professionali, che al sovraccarico di ITC per gli “*always connect*” hanno associato conseguenze pregiudizievoli tanto per il lavoratore, sul

5 Nello specifico, tale dimostrazione è giunta al termine d'una indagine condotta su un campione di dipendenti ai quali, per 5 giorni consecutivi, era stato precluso l'accesso alla mail aziendale: ne è risultato che la faticosità della prestazione lavorativa è strettamente collegata da un rapporto di proporzionalità diretta al multitasking, vale a dire alla esigenza di rispondere a più richieste in contemporanea, quindi decresce qualora una corretta ed adeguata politica aziendale intervenga definendo anzitutto una più idonea strategia a livello organizzativo.

6 Ci si riferisce ad un rapporto presentato nel 2006 ma che, a quanto consta, ha trovato pochissima evidenza nei contesti aziendali, lasciando prive di opportuna considerazione le politiche di formazione e gestione degli strumenti informatici, al fine di prevenire lo stress lavorativo, nella specie il tecnostress. Per completezza deve segnalarsi che alle stesse considerazioni era in precedenza giunta la ricerca condotta da A. BURGESS – T. JACKSON – J. EDWARDS, *E mail training significantly reduces email defects*, in *Int. Journal of Information Management*, 2005, 25, I, 71 ss. richiamato da S. Gamberini, *Che stress queste e-mail*, in *Riv. Amb. Lav.*, 2015, 41, 15. L'attenzione di tale documento al fenomeno della perenne connessione del lavoratore si declina soprattutto nell'ottica di programmi di formazione volti ad approfondire le tecniche di scrittura e le modalità di utilizzo della mail. Del problema si è da ultimo occupata la ricerca *Future work centre, You've got mail!*, Research report 2015, disponibile al sito futureworkcentre.com/wp-content/uploads/2015/07/FWC-Youve-got-mail-research-report.pdf, 39 ss. Quest'ultimo rileva per una serie di proposte e suggerimenti a favore delle imprese che si trovino a gestire un intenso traffico di messaggi mediante strumenti informatici e digitali.

piano fisico e psicologico, che nei riguardi delle imprese. A tal riguardo è stato osservato come il *technostress* - quale forma particolare di stress lavoro correlato paragonabile per gli effetti invalidanti a quelli prodotti dall'esposizione ad amianto - sia da annoverare, al pari dell'esposizione prolungata ai campi elettromagnetici, tra i rischi nuovi ed emergenti (Di Frenna, 2013) da valutare attentamente ai fini di una efficace gestione della prevenzione e sicurezza nei moderni contesti produttivi.

Le ricerche appena segnalate restano sullo sfondo tanto quanto gli studi che alla mancata o erronea gestione del processo di digitalizzazione e delle sue conseguenze, sul piano dell'estensione temporale della prestazione lavorativa oltre i tetti stabiliti dalla fonte negoziale, ricollegano ripercussioni negative, quanto a costi diretti ed indiretti, sulla produttività, sull'organizzazione e sull'economicità aziendale (Burgess – Jackson – Edwards, 2005: 75 ss.). Da questo punto di vista, restano ancora in buona parte trascurate pure le interessanti sollecitazioni offerte sia dall'OIL (OIL, 2016: 7) che dall'Esecutivo dell'Unione (COM 2012/173 def; COM 2014/332 def: 2-3 e 5) e dall'Agenzia europea in materia di salute e sicurezza sul lavoro (EU-OSHA, 2009: 21; EU-OSHA, 2014b) a proposito dei vantaggi diretti ed indiretti (maggiore produttività, riduzione degli infortuni, minore incidenza delle malattie professionali, impatto sociale, ect) che una corretta valutazione dei rischi professionali può arrecare alla sfera personale dei lavoratori, all'impresa ed all'economia nazionale.

In buona sostanza, il salto di qualità resta al momento attuale affidato alle evoluzioni sul piano della legislazione nazionale. In attesa di ciò, il diritto alla disconnessione continua ad essere concepito come un freno all'attività aziendale e non come un'opportunità per ripensare i processi, avviando dialoghi, formazione e sperimentazioni. Tale situazione assurge quasi a livello di paradosso in un Paese che già dal 1942 annovera all'interno della legislazione lavoristica l'obbligo per l'imprenditore di tutelare l'integrità fisica e la personalità morale del lavoratore (art. 2087 codice civile) e che a livello europeo si è costantemente distinto per la spiccata attenzione verso la responsabilità sociale d'impresa nel settore della salute e sicurezza sul luogo di lavoro.

Detto altrimenti, molto dipenderà dal reale atteggiarsi del soggetto istituzionale e dalla sensibilità delle parti sociali. Se nel primo caso non mancano segnali incoraggianti, sul fronte della negoziazione collettiva ancora si attendono sperimentazioni analoghe a quelle registrate in Francia e Germania ed in grado di evidenziare una certa lungimiranza delle relazioni sindacali italiane nella gestione dei cambiamenti indotti dai nuovi modelli di organizzazione del lavoro.

5. Quali ritardi rispetto alle politiche europee?

Le modifiche al quadro normativo proposte parallelamente in Francia ed in Italia si pongono sullo sfondo di un contesto, quello europeo, da tempo sensibile alla prevenzione dei rischi psicosociali, vale a dire a quella «nuova categoria di rischi legati a fenomeni di trasformazione del lavoro causati dall'intensificazione, dalla precarizzazione, dalle nuove forme di organizzazione del lavoro e dall'introduzione di nuove tecnologie» (Calafà, 2012: 257).

I primi riferimenti comunitari alla necessità di introdurre nell'obbligo di sicurezza del datore di lavoro anche i rischi psicosociali risalgono al primo programma d'azione delle Comunità europee in materia di salute e sicurezza sul lavoro adottato dal Consiglio con risoluzione del 29 giugno 1978 (Peruzzi, 2012: 197).

Qui, con fare lungimirante si rilevava già come «nella tecnologia moderna sono stati introdotti procedimenti sempre più avanzati e generatori di nuovi pericoli».

La medesima sensibilità è stata dapprima accolta nella direttiva videoterminali (Dir. 1990/270/CEE) e poi posta alla base dei successivi programmi d'azione della Commissione, in particolare dalla Comunicazione relativa al programma 1996 – 2000 (COM 95/282 def.) che tra le linee di intervento individuava quella di verificare l'impatto delle nuove tecnologie e dei nuovi metodi di produzione sulla salute dei lavoratori (azione n. 3). E rileva, ancora oggi, come *leit motiv* di un sistema sempre più proiettato alla comprensione e prevenzione dei rischi nuovi ed emergenti. In proposito costante impulso al tema è stato offerto sia dalla Commissione, attraverso documenti programmatici sprovvisti di natura vincolante, sia tramite i documenti dell'Agenzia europea per la salute e la sicurezza sul lavoro. A tal riguardo si segnala la strategia comunitaria contenuta nella Comunicazione «Adattarsi ai cambiamenti del lavoro e della società» (COM 2002/0118 def.) laddove si definisce di cruciale importanza approcciarsi ai rischi psicosociali, in particolare a quelli derivanti dalle innovazioni e trasformazioni del lavoro, allo scopo di prevenire compromissioni alla salute del lavoratore, intesa come nozione comprensiva sia del benessere fisico che di quello psichico e sociale e non appiattita invece sull'assenza di malattia o infermità. In questa stessa direzione si spinge anche la più recente Comunicazione approvata a giugno 2014, soffermandosi sulla necessità di prevedere i potenziali effetti negativi delle nuove tecnologie sulla salute e sicurezza dei lavoratori, senza dimenticare quelli indotti dai cambiamenti nell'organizzazione di lavoro ed in specie dallo sviluppo delle tecnologie dell'informazione in grado di determinare una costante connessione agli strumenti digitali (COM 2014/ 332, 7).

Ad integrazione delle politiche comunitarie si è negli anni mossa l'Agenzia europea per la salute e sicurezza, costituendo un Osservatorio europeo sui rischi per raccogliere e analizzare le informazioni sui fattori di rischio nuovi ed emergenti legati alle trasformazioni tecnologiche e sociali e realizzando per conto dell'Esecutivo dell'Unione tutta una serie di studi ed indagini in relazione a quelli di tipo psico-sociale. All'apprezzabile impegno di tale organismo si deve buona parte degli sforzi adottati a livello aziendale per la gestione dei rischi alla salute psichica del lavoratore, specie laddove derivanti dall'utilizzo massivo delle strumentazioni informatiche e tecnologiche.

Degna di rilievo è la recente riflessione attorno alle nuove forme di lavoro sul web, nella specie al lavoro tramite piattaforma digitale. In proposito l'organo tecnico della Commissione ha rilevato l'importanza di affrontare i rischi psicosociali associati al lavoro svolto in regime di *crowdsourcing*, vale a dire in relazione a quelle attività realizzate in tempi piuttosto rapidi e secondo condizioni contrattuali fissate dal gestore della piattaforma tramite la quale e a favore della quale si eroga la prestazione (Agenzia europea per la salute e la sicurezza, 2015a: 3). Ciò risulta anche da un approfondimento sulla robotica, nell'ambito del quale si sottolinea come la digitalizzazione assieme alle tecnologie di informazione e comunicazione ed alla robotica siano elementi cruciali per lo sviluppo della nuova *ubiquitous society* (riducendo ad esempio gli alti costi del lavoro ed i problemi derivanti dalla significativa riduzione di popolazione attiva nel mercato del lavoro) ma anche per l'introduzione di questioni che necessitano di specifica attenzione sotto il profilo dei danni derivanti alla salute e sicurezza delle persone a ciò esposte (Agenzia europea per la salute e la sicurezza, 2015b: 4).

Per quanto indispensabili al raggiungimento dell'obiettivo europeo del miglioramento delle condizioni di salute negli ambienti di lavoro, le proposte di intervento sin qui esaminate restano tuttavia poco circostanziate e specifiche, limitandosi più in generale ad individuare ambiti di intervento ed obiettivi strategici invece che strumenti ed azioni concrete da perseguire a tutela della salute e sicurezza dei lavoratori sottoposti all'incalzante pervasività delle tecnologie di informazione e comunicazione anche fuori dall'orario di lavoro. Manca nella documentazione esaminata uno specifico *focus* sulle esperienze riguardanti l'introduzione del diritto di disconnessione e sui vantaggi da esso conseguenti nel caso in cui le imprese ne promuovano l'attuazione all'interno dei contesti produttivi.

Più attento al diritto di disconnessione, quanto meno nell'esplicitarne il contenuto all'interno del panorama sovranazionale, pare invece l'attuale programma d'azione della Confederazione europea dei sindacati. All'interno del III pilastro della nuova agenda da adottare nel periodo 2015-19 si individuano i presupposti di un lungimirante approccio ai cambiamenti del mercato e dell'organizzazione del lavoro.

Tra il «nucleo di norme sociali ambiziose» da porre alla base della nuova rivoluzione industriale il paragrafo «Verso un'Europa sociale più forte» sollecita un rinnovamento nella prassi sindacale degli Stati membri ed, *a fortiori*, degli attori collettivi invitandoli ad esercitare forme di «pressione per migliorare la conciliazione della vita familiare, privata e lavorativa, incluso il diritto alla disconnessione dalle tecnologie dell'informazione e della comunicazione, ICT». Tanto si auspica in un contesto nel quale «i lavoratori necessitano di un controllo maggiore sui propri tempi di lavoro» da limitare mediante accordi sindacali che oltre ad assicurare una più adeguata e rigorosa osservanza della direttiva sull'orario di lavoro (p. 258) e dei tempi di vita privata (p. 259) tengano in debito conto gli aspetti di tipo prevenzionistico (p. 260).

6. Considerazioni finali

L'attuale dibattito sul diritto di disconnessione dagli strumenti informatici e dalle piattaforme digitali all'interno degli ordinamenti presi in considerazione delinea anzitutto l'impegno degli Stati nell'affrontare uno dei rischi derivanti dalla maggiore flessibilità delle prestazioni lavorative. Intensificazione del lavoro, aumento del livello di stress e del tempo di lavoro sono le caratteristiche essenziali di un sistema che richiede maggiore attenzione, sia a livello istituzionale che nell'ambito della dinamica contrattuale-collettiva.

Sinora, profondamente diverso è stato nei Paesi esaminati l'atteggiamento delle parti sociali rispetto alla prevenzione dei rischi psicosociali. Nel caso francese, la contrattazione collettiva ha anticipato quello che a breve potrebbe realizzarsi sul piano legislativo; altre volte, come l'analisi del contesto italiano ha rilevato, gli attori negoziali si sono rivelati invece poco capaci di affrontare il cambiamento nonostante gli effetti potenzialmente lesivi delle tecnologie di informazione e comunicazione siano già stati abbondantemente messi in luce sul piano scientifico.

Alla luce di quanto analizzato, la codificazione del diritto alla disconnessione nell'ordinamento giuridico pare alquanto necessaria. Tanto più se si considera che la diffusione dello stress digitale aumenta quasi a livello esponenziale soprattutto tra quadri, *manager* e dirigenti, vale a dire con riguardo a soggetti nei confronti dei quali non trovano applicazione buona parte delle previsioni contenute nelle direttive riguardanti l'orario di lavoro.

Ciò induce a rivedere da un lato il nesso logico e giuridico tra orario di lavoro e tutela della salute e sicurezza definito nell'ambito della direttiva 2003/88/UE recepita all'interno degli Stati membri, a fronte di un sistema retto su rapporti di lavoro rispetto ai quali non è più agevole risalire con esattezza al momento iniziale e finale dell'effettiva prestazione lavorativa.

Per evitare che l'inciso «nel rispetto dei principi generali della protezione della sicurezza e della salute dei lavoratori» contenuto nell'art. 17 della citata direttiva rilevi solo sul piano eminentemente risarcitorio e rimediale (Tullini, 2015b: 123), pare indispensabile una modifica legislativa che tenda a rendere obbligatorio il riconoscimento del diritto alla disconnessione all'interno delle fonti europee che si occupano di orario di lavoro, riesaminando più accuratamente il campo delle esclusioni sotto il profilo dei destinatari delle tutele (Ricci, 2010: 83 ss.).

Parallelamente a ciò non pare da escludere, pur non senza sottovalutarne le varie difficoltà dell'operazione giuridica al vaglio, una diversa concettualizzazione di «ambiente di lavoro»: da parametro definitorio ancorato ad un luogo fisico ben definito, il locale aziendale, a nuova dimensione comprensiva di più elementi ed incentrata su una nozione polisenso più conforme agli attuali sviluppi delle relazioni di lavoro.

Agire in tal senso significherebbe introdurre tutele uniformi all'interno dello spazio europeo, avvalendosi di uno strumento di *hard law* attraverso il quale si è perseguita nel tempo la strada della armonizzazione nel progresso delle discipline nazionali (Ricci, 2010: 66). A differenza di altri ambiti, dove da tempo «la produzione normativa, di tipo regolativo, ha probabilmente raggiunto la sua massa critica» (Caruso, 1997: 25), un intervento di armonizzazione dei sistemi nazionali trova giustificazione nell'attuale delinarsi della collaborazione con l'impresa-datore di lavoro e nelle peculiari problematiche a ciò conseguenti.

Per quanto i principi di prevenzione della direttiva quadro 89/381/CE trovino applicazione anche in relazione ai rischi psico-sociali, l'assenza di norme specifiche e dettagliate ostacola di fatto l'attuazione di strategie prevenzionistiche a tutela dei lavoratori. Né sono da soli sufficienti gli accordi conclusi nel quadro del dialogo sociale europeo. Il prodotto dell'autonomia negoziale, per quanto apprezzabile per l'impegno promosso nella direzione di una adeguata gestione dei rischi nuovi ed emergenti, resta privo del valore vincolante tipico della norma di legge, non avendo portata generale come la fonte legale (Vogel, 2015: 37).

Se ciò non fosse possibile, malgrado una revisione della direttiva sull'orario di lavoro resti auspicabile per definire un omogeneo quadro di regole nell'ambito europeo, un percorso alternativo sarebbe quello appena intrapreso dal legislatore a livello nazionale.

Iniziative di tipo normativo come quelle passate in rassegna sono peraltro ammesse dallo stesso testo comunitario che, limitandosi a fornire delle prescrizioni minime, lascia allo Stato membro la possibilità di fissare diverse e più favorevoli condizioni per i prestatori, anche per coloro che allo stato risultano esonerati dall'apparato di tutele riconosciute ad operai ed impiegati. Né pare esclusa dalla Carta sociale europea firmata nel 1961 dal Consiglio d'Europa (anche nella sua revisione del 1996) laddove si stabilisce l'obiettivo della riduzione dell'orario di lavoro, richiamando gli Stati membri a garantire una durata ragionevole per il lavoro giornaliero e settimanale (art. 2) o dall'art. 31 della Carta di Nizza la cui formulazione sancisce inequivocabilmente che «ogni lavoratore ha diritto a una limitazione della durata massima del lavoro e a periodi di riposo giornalieri e settimanali e a ferie annuali retribuite», senza prevedere a riguardo alcun tipo di distinguo a fronte dell'attuazione dell'obiettivo, enunciato nel Preambolo, di rafforzare la tutela dei diritti fondamentali alla luce dell'evoluzione della società, del progresso sociale e degli sviluppi scientifici e tecnologici. È questa la dimensione che richiede il maggior approfondimento soprattutto in considerazione del piano inclinato che si sta venendo a creare con riguardo ai soggetti esclusi dal campo applicativo delle tutele individuate nella vigente normativa in tema di orario di lavoro - ambito sulle cui persistenti lacune, a quanto consta, non è ancora giunto alcun monito delle Corti nazionali ed europee.

Se le criticità emerse suggeriscono dunque un ripensamento del quadro legislativo e degli ambiti attraverso cui gestire concretamente le interconnessioni tra le esigenze aziendali ed i diritti della persona del lavoratore, l'autonomia collettiva rappresenta il contesto ideale per la concreta gestione delle nuove sfide che la modernità introduce.

Per facilitare tale obiettivo, si potrebbe ricorrere allo stanziamento di somme da destinare a favore delle imprese che sottoscrivano con le rappresentanze dei lavoratori accordi collettivi che oltre ad occuparsi della conciliazione tra tempi di lavoro e di vita tengano in debito conto le esigenze di tutela della salute e sicurezza del lavoratore. A tal proposito potrebbe intervenire il Fondo sociale europeo, nella specie quella parte di fondi stanziati a favore degli investimenti sull'adattamento dei lavoratori e delle imprese ai cambiamenti, dedicati all'attuazione di modalità di organizzazione del lavoro innovative e maggiormente produttive (COM 2014/332: 14).

Al tempo della fabbrica digitale e della virtualizzazione delle relazioni di lavoro caratterizzate sempre più da un traffico di e-mail tale da raggiungere le persone ovunque ed in qualsiasi orario, contributi pubblici di tipo economico potrebbero facilitare la crescita di consapevolezza sulle problematiche emergenti dai profondi cambiamenti che gli ambienti di lavoro stanno registrando da qualche decennio.

In un’ottica aziendalista di costi benefici, molte sono le valutazioni economiche che potrebbero rivelarsi convenienti per l’azienda che decida di affrontare sotto il profilo preventivo e sistematico una delle delicate e difficili sfide del XXI secolo intraprendendo azioni volte a perseguire il *well-being* del proprio personale mediante forme di disconnessione dagli strumenti di lavoro che impediscano la permanente connettività dell’individuo alle risorse digitali.

Convincono invece meno gli strumenti pratico-operativi individuati in sede europea ai fini della prevenzione dei rischi professionali. La specificità di quelli psico-sociali impongono metodologie appropriate che mal si conciliano con tecniche standardizzate e check lists, oppure con l’OIRA - di recente introdotto nella legislazione italiana tramite uno dei decreti attuativi della vasta riforma del diritto del lavoro realizzata con il Jobs Act.

Al di là delle risposte che si intenderà dare alle nuove istanze di tutela derivanti dai moderni contesti lavorativi, la strada da perseguire resta comunque quella di occuparsi più approfonditamente delle problematiche che l’introduzione per via negoziale del diritto di disconnessione ha cercato di affrontare. Ciò diventa ineludibile a fronte delle numerose ricerche condotte a livello internazionale ed in ambito nazionale che esortano sempre più frequentemente ad esaminare contesti nei quali espressioni come *information overload/ infobésité* (sovraccarico informativo e cognitivo), *multitasking ed email addiction (dipendenza dalla posta elettronica)* non rappresentano soltanto neologismi all’attenzione di sociologi dei *media* e scienziati di psicologia ma fenomeni da analizzare, prevenire e contrastare nei moderni ambienti di lavoro (Popma 2013).

Su tale terreno si giocherà inevitabilmente anche la partita della sostenibilità dei sistemi sanitari pubblici e di protezione sociale.

BIBLIOGRAFIA

Agenzia europea per la sicurezza e la salute sul lavoro (2014a), “Previsione sui rischi nuovi ed emergenti correlati alle nuove tecnologie entro il 2020: workshop per i punti focali nell’UE”. Lussemburgo, 1- 40.

Agenzia europea per la sicurezza e la salute sul lavoro (2014b), “Il calcolo dei costi dello stress e dei rischi psicosociali nei luoghi di lavoro”, Lussemburgo, 1-47.

Agenzia europea per la salute e sicurezza (2015a), “A review on the future of work: robotics”. Lussemburgo, 1-4.

Agenzia europea per la salute e la sicurezza (2015b), “A review on the future of work: on line labour exchanges, or crowdsourcing: implications for occupational safety and health”. Lussemburgo, 1-6.

Bartelémy J. – Cetté G. (2007), “L’impact des TIC sur la durée et les rythmes de travail”. *JCP*, 13 marzo 2007, 11-17

Bartelémy J. – Cetté G. (2015), “Verser une approche plus qualitative de la durée du travail”. *Droit social*, 47 -54.

Biagi M. – Treu T. (2002), “Lavoro e information technology: riflessioni sul caso italiano”. *Diritto delle relazioni industriali*, 1, 5 – 17.

Burgess A.– Jackson T.– Edwards J. (2005), “E mail training significantly reduces email defects”. *International Journal of Information Management*, 25, I, 75- 85.

Calafà L. (2012), “Il diritto del lavoro e il rischio psico-sociale (o organizzativo) in Italia”. *Lavoro e diritto*, 257- 290.

Carinci F. (1985), “Rivoluzione tecnologica e diritto del lavoro: il rapporto individuale”. *Giornale di Diritto del Lavoro e delle Relazioni Industriali*, 26, 203- 241.

Caruso B., (1997), “L’Europa, il diritto alla salute e l’ambiente di lavoro”. *Ambiente, salute e sicurezza: per una gestione integrata dei rischi da lavoro*, a cura di Luigi Montuschi, 1-36.

Chiaro G.– Prati G.– Zocca M. (2015), “Smart working: dal lavoro flessibile al lavoro agile”. *Sociologia del Lavoro*, 138, 69 - 87.

Commissione Mettling (2015), *Transformation numérique et vie de travail*.

Comunicazione della Commissione (2012), *Verso una ripresa forte dell’occupazione*, Bruxelles, 18 aprile 2012.

Comunicazione della Commissione al Parlamento europeo, al Consiglio, al Comitato economico e sociale europeo e al Comitato delle Regioni (2014), Bruxelles, 6 giugno 2014.

Degryse C. (2016), “Les impacts socieaux de la digitalisation de l’économie”. *Working Papers ETUI*, 2, 1-86.

Dabbish L.A.– Kraut R.E. (2006), “Email Overload at Work: Analysis of Factors associated with email strain”. Canragie Mellon University Human- Computer Interaction Institute, USA.

Eurofound, 2015, “New forms of employment”. Luxembourg, Publications Office of the European Union.

Favennec Hery F. (2015), “Qualité de vie au travail et temps de travail”. *Droit social*, 113-120.

Di Frenna E. (2013), “Tecnostress in azienda e sicurezza sul lavoro”. Netdipendenza Onlus.

Gamberini S. (2015), “Che stress queste e-mail”. *Rivista Ambiente Lavoro*, 41, 15.

Jauréguiberry F. (2014), “La déconnexion volontaire aux technologies de l’information et de la communication”. *La Lettre de l’Institute Scienses Humaines et Sociales*, 29, 14-19.

Heas F. (2015), “Temps et santé au travail, pour une connexion plus explicite dans la loi”. *Droit social*, 10, 837- 844

Lerouge L. (2012), “Il rischio psico-sociale, un’analisi giuridica comparata tra il Nord e il Sud dell’Europa”. *Lavoro e diritto*, 233- 256.

G.J. Mark G.J. – Volda S. – Cardello A.V. (2012), “A pace not dictated by electrons: an empirical study of work without mail”. *sito: www.ics.uci.edu/~gmark/home_page/Research_files/CHI%202012.pdf*.

Paolantonio G. (2015), “Rischi emergenti nei green jobs: l’analisi dell’Agenzia europea”. *Igiene & Sicurezza lavoro*, 2, 69 ss.

Peruzzi M. (2012), “La prevenzione dei rischi psico-sociali nel diritto dell’Unione europea”. *Lavoro e diritto*, 197 – 232.

Popma J. (2013) “Technostress et autres revers du travail nomade”. *Working Paper ETUI* , Bruxelles.

Ray J.E. (2002), “Le droit à la déconnexion, droit à la vie privée du XXI siècle”. *Droit social*, 939 - 944.

Ray J.E. (2012), “A propos de la révolution numérique. Actualité des TIC (mai-septembre 2012). Seconde partie”. *Droit social*, 1027- 1038.

Ray J.E. (2015), “Qualité de vie(s) et travail de demain”. *Droit social*, 2, 147-150.

Ray J.E. (2015), “Actualité des TIC. Tous connectés, partout, tout le temps?”. *Droit Social*, 516 – 527.

Ricci G. (2010), “La tutela della salute e della sicurezza dei lavoratori e l’orario di lavoro”. *Manuale di Diritto sociale europeo*, a cura di S. Sciarra, Giappichelli Editore, Torino, 54- 87.

Smuraglia C. (1985), “Rivoluzione tecnologica e tutela della personalità”. *Rivista giuridica del lavoro e della previdenza sociale*, 1- 2, 77 – 82.

Tourres C. (2016), “Lavoro agile e diritto di disconnessione: una proposta francese”. *Verso il futuro del diritto del lavoro*, a cura di E. Dagnino – M. Tiraboschi, Adapt Press, 2016, 64-68.

Tullini P. (2015a), “C’è lavoro sul web?”. *Labour Law Issues*, I, 1-20.

Tullini P. (2015b), “Nuove strategie per la prevenzione dei rischi psico-sociali nel lavoro: il caso italiano”. *Anuario Internacional sobre prevención de Riesgos Psicosociales y calidad de vida en el trabajo*, Blanca Impresores, 121-140.

Valenduc G. – Vendramin P. (2016), “Work in the digital economy: sorting the old from the new”. *Working Papers ETUI*, 1- 51.

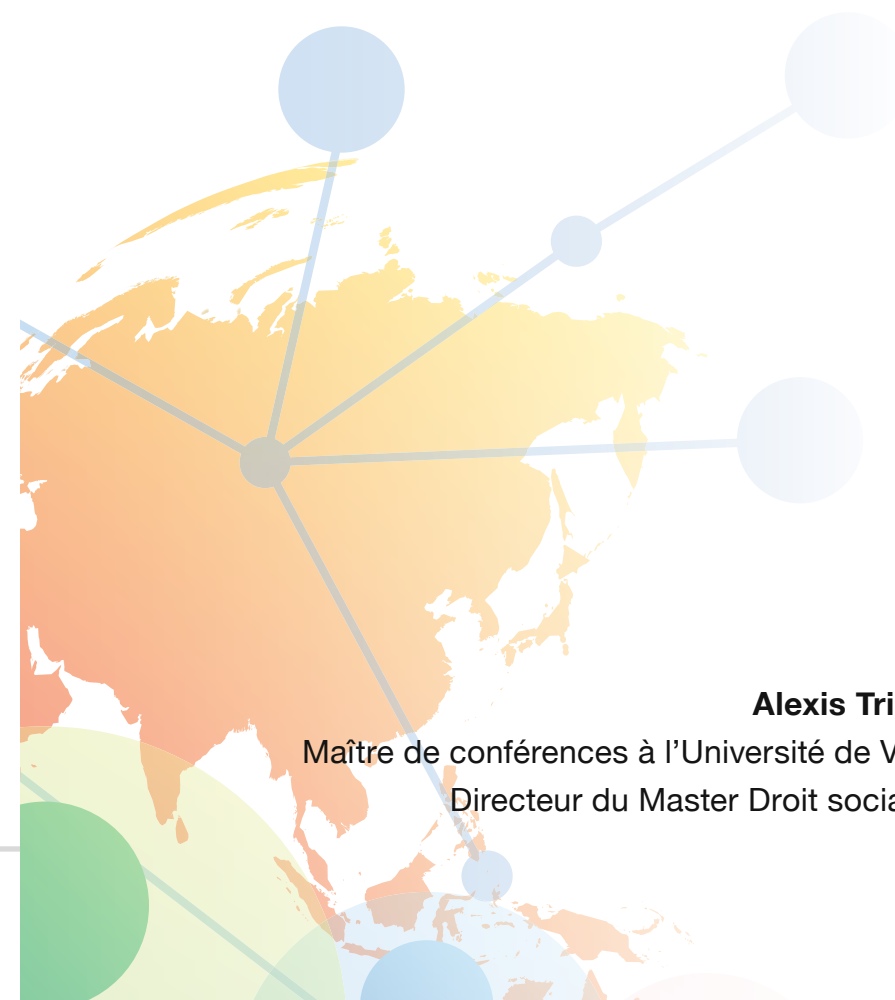
Valsamis e altri (2015), "Employment and skills aspects of the digital single market strategy, European Parliament".
[http://www.europarl.europa.eu/RegData/etudes/STUD/2015/569967/IPOL_STU\(2015\)569967_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2015/569967/IPOL_STU(2015)569967_EN.pdf)

Vardaro G. (1986), "Tecnica, tecnologia e ideologia della tecnica nel diritto del lavoro". *Politica del diritto*, 1, 75-140.

Vogel L. (2015), "The machinery of occupational safety and health policy in the European Union. History, institutions, actors". *Working papers ETUI*, 1-80.



L'EXPERIENCE FRANÇAISE DU DROIT A LA DECONNECTION



Alexis Triclin

Maître de conférences à l'Université de Versailles Saint-Quentin en Yvelines
Directeur du Master Droit social Université Paris Saclay

Sommaire

Introduction

1. Les NTIC : un nouveau facteur de risques pour la sante des salaries

- 1.1. Le phénomène du cyber- harcèlement au travail
- 1.2. La reconnaissance légale du cyber-harcèlement
- 1.3. L'infobésité, facteur de burn out
- 1.4. La connectivité à tout prix : une nouvelle addiction au travail

2. Le droit a la deconnection : un nouveau theme au cœur de la negociation collective

- 2.1. Le contenu du droit négocié à la déconnection
- 2.2. L'apport déterminant de la négociation collective

3. La nouvelle loi française sur le droit a la deconnection

- 3.1. Le temps de la réflexion : les apports du rapport mettling de 2015
- 3.2. La position de la doctrine et des organisations syndicales
- 3.3. Les dispositions légales sur le droit à la déconnection

Bibliographie

Introduction

Il a fallu 38 ans pour que la radio parvienne à atteindre 50 millions d'utilisateurs dans le monde. 13 ans pour la télévision, 3 ans pour internet à domicile, 1 an pour Facebook et 9 mois pour Twitter.

Avec l'ère numérique, les outils dits « connectés » sont désormais incontournables. Ce que l'on désigne désormais sous le sigle NTIC (Nouvelles Technologies de l'information et de la communication) colonisent l'ensemble des espaces, entendus au sens large comme temps et lieux, en particulier professionnel.

Les NTIC constituent désormais un outil essentiel pour le maintien et le développement de la compétitivité des entreprises. Celles qui gagnent sont désormais celles qui savent établir des coopérations, travailler en réseau, produire et utiliser collectivement des connaissances sans cesser de les actualiser pour générer de la valeur. La gestion des connaissances, aussi appelé également en anglais *Knowledge management* est devenue un facteur important de la performance.

Synonymes de sécurité, d'ouverture et d'évasions, intuitives et pédagogiques, les NTIC constituent de fabuleux outils pour améliorer la rentabilité et la croissance des sociétés. Les échanges internationaux sont désormais simplifiés et transforme de nombreux métiers.

L'arrivée en masse de ces nouveaux outils de communications a modifié considérablement la façon de vivre des travailleurs. Les années 2000 sont désormais le symbole d'une nouvelle ère placée sous le signe du numérique. Alors que certains auteurs craignaient une fracture numérique, l'usage des outils informatiques s'est généralisé.

Les NTIC sont pourtant aussi perçus comme un facteur de dégradation de la qualité de vie, et n'apparaissent pas forcément comme des facteurs de motivation et de reconnaissance pour un grand nombre de salariés. Un nouveau terme, *l'homo numericus* est même apparu pour désigner ces hommes et femmes désormais à l'aise avec les outils informatiques et toujours connectés. Comment ce nouvel *homo numericus* aborde-t-il professionnellement cette nouvelle réalité technologique ?

Nous vivons dans une situation paradoxale : la connexion devient de plus en plus permanente et ces mêmes technologies sont aujourd'hui porteuses d'informations non désirées, d'appels intempestifs, de surcharge de travail,

de confusion entre urgence et importance, des nouvelles addictions et de contrôles non autorisés, la sécurité des uns se faisant aux dépens de la surveillance des autres.

Ces problèmes sont qualifiés de nouveaux embarras numériques, car ils peuvent être de natures privées (droit à l'image/données personnelles), mais aussi professionnelles.

Pour la première fois depuis la révolution industrielle, la diffusion de la technologie et de ses usages a des conséquences au moins aussi importantes pour le citoyen dans sa sphère privée que le travailleur dans sa sphère professionnelle. Ainsi, si le développement des NTIC constitue une chance pour améliorer la productivité des entreprises, il remet aussi aujourd'hui en cause certains fondements de notre conception du droit du travail.

Comment combiner les enjeux d'une nouvelle organisation du travail, du développement des entreprises et de la protection des droits et libertés des salariés? Comment allier performance collective et satisfaction des exigences individualisées des salariés, tenir compte des impératifs économiques mais aussi des innovations technologiques et des aspirations des salariés ?

Le but de cet article est d'expliquer la prise de conscience en France que cette révolution numérique est perçue comme un nouvel aspect des RPS (I). Dès lors, comment la négociation collective a-t-elle commencé à encadrer ce phénomène et à élaborer un nécessaire droit à la déconnexion (II). Enfin, comment le législateur français va-t-il jeté les bases d'un régime légal du droit à la déconnexion pour adapter la législation française aux enjeux de la révolution numérique (III.).

1- Les NTIC : un nouveau facteur de risques pour la santé des salariés

L'ère du numérique se caractérise par l'absence de frontière. Les courriels traversent des milliers de kilomètres en un clic et les réunions peuvent regrouper des personnes à l'autre bout de la planète, sans problématique de temps ni de lieu. Avec l'absence de distance physique, les salariés, et en particulier les cadres, sont de plus en plus souvent rattrapés par leur travail dans leur vie privée. L'intensification de la charge de travail et le non-respect du temps de repos, fragilisent la santé mentale de très nombreux salariés. Depuis quelques années, avec le développement des nouvelles technologies, le risque psychosocial n'a jamais été aussi grand dans notre société.

1.1. Le phénomène du cyber- harcèlement au travail

Pour certains salariés malheureusement, la réalité dépasse la fiction lorsque les relations avec leurs collègues deviennent compliquées et parfois impossibles. Dans certains cas, la simple mésentente peut vite tourner en situation insupportable pour le salarié.

L'article L.1152-1 du Code du travail définit le harcèlement moral par une interdiction : « Aucun salarié ne doit subir les agissements répétés de harcèlement moral qui ont pour objet ou pour effet une dégradation de ses conditions de travail susceptible de porter atteinte à ses droits et à sa dignité, d'altérer sa santé physique et mentale ou de compromettre son avenir professionnel ».

Cette pratique se caractérise donc par son objet et/ou ses effets sans plus de précision sur ce que représentent exactement les agissements de harcèlement moral. Avec l'arrivée des nouvelles technologies dans l'entreprise, les modes de communication et les habitudes ont changé. Certaines pratiques flirtent désormais avec la notion de harcèlement et chaque salarié peut se sentir harceler ou même sans s'en rendre compte, devenir un harceleur potentiel. Ce nouveau type de harcèlement est défini par le terme cyber-harcèlement.

Il s'agit du fait d'utiliser les nouvelles technologies d'information et de communication pour humilier ou intimider quelqu'un, de façon répétée dans le temps. Voilà une des premières conséquences de l'explosion des outils informatiques et cette pratique se vérifie de plus en plus dans l'enceinte même des entreprises.

La pédagogie et la neutralité dont doit faire preuve le manager peuvent s'effacer en l'absence d'échange physique. Mais ce harcèlement peut aussi émaner de simples collègues que ce soit intentionnelle ou non.

Ne pas répondre à un courriel c'est désormais prendre le risque d'apparaître dépassé par son travail et il est désormais possible de solliciter quelqu'un à n'importe quelle heure pour traiter d'un sujet en exigeant un retour immédiat.

Il n'y a plus d'interaction physique entre le harceleur et le harcelé. L'aspect verbal de la relation de travail disparaît peu à peu. Ainsi, les problèmes de compréhension se multiplient-il ; les propos sont-ils moins nuancés. Il n'est plus possible de sentir la réaction émotionnelle de l'interlocuteur.

C'est l'une des principales différences avec les méthodes de harcèlements « classiques » constatées en entreprise, le harcèlement se déroulait souvent sur le lieu de travail. Le domicile constituait un refuge pour le salarié. Les soirées, les week-ends, les vacances étaient des bulles d'air pour un salarié mal à l'aise dans son équipe.

Désormais, ces limites de temps et de lieu ont disparu. Avec la judiciarisation des risques psychosociaux, cette surcharge communicationnelle n'est plus ignorée des entreprises, pénalement responsable de la santé de chaque collaborateur.

L'employeur à, on le sait, une obligation de résultat de protéger la santé et la sécurité de ses salariés. Cette protection du salarié se retrouve notamment dans la Charte sociale européenne du 3 mai 1996 qui prévoit un droit à la sécurité et à l'hygiène au travail, mais aussi dans la directive-cadre numéro 89/391/CEE du 12 juin 1989 qui proclame une obligation de sécurité et de prévention à la charge de l'employeur et consacre le principe d'effectivité.

Il reste possible d'identifier certains actes, qui répétés, peuvent déstabiliser un salarié.

À titre d'exemple, la transmission de courriels non sollicités et/ou menaçants, l'incitation de tierces personnes à transmettre à la victime des courriels non sollicités et/ou menaçants ou à surcharger cette dernière par un très grand nombre de messages électroniques, la transmission de virus par un courrier électronique, la diffusion de rumeurs, ou encore le harcèlement de la victime pendant une discussion en direct peuvent s'assimiler à du harcèlement moral.

En France, ce sont les articles L.4121-1 et -2 du Code du travail qui prévoient les mesures que l'employeur doit mettre en œuvre dans le cadre de son obligation générale de sécurité à l'égard des personnes sur qui il exerce une autorité. Cependant, en pratique, rares sont encore les entreprises à prendre en compte, ce type de risques dans les documents uniques d'évaluation des risques.

1.2. La reconnaissance légale du cyber-harcèlement

La législation sur le harcèlement moral a évolué grâce depuis la loi du 4 août 2014 sur l'égalité réelle entre les femmes et les hommes. Cette dernière a, en effet, étendu l'incrimination du harcèlement moral au-delà de la sphère conjugale vers les relations de travail (Article 222-33-2 du Code pénal). Cette infraction est désormais également caractérisée lorsqu'elle est commise sur internet.

L'article 222-33-2-2 interdite à présent « le fait de harceler une personne par des propos ou comportements répétés ayant pour objet ou pour effet une dégradation de ses conditions de vie se traduisant par une altération de sa santé physique ou mentale notamment lorsqu'ils ont été commis par l'utilisation d'un service de communication au public en ligne ».

Loi du 4 août 2014 (loi n° 2 014 – 873) dispose : « les appels téléphoniques malveillants réitérés, les envois réitérés de messages malveillants émis par la voie des communications électroniques ou les agressions sonores en vue de troubler la tranquillité d'autrui sont punis d'un an d'emprisonnement et de 15 000 euros d'amende ».

Le législateur a donc prévu une incrimination de harcèlement par voie de messageries électroniques (courriels). Malheureusement, le cyber-harcèlement n'est pas le seul aspect négatif sur la santé des salariés de l'arrivée des nouvelles technologies au travail.

Le travailleur doit désormais prendre également veiller à relation qu'il entretient avec ses nouveaux outils de travail.

1.3. L'infobésité, facteur de burn out

Cette situation peut provoquer du stress chez le salarié et il a été constaté que l'ère du numérique est aussi celui de l'augmentation des burn-out.

C'est dans les années 1980, avec les travaux de recherches du psychiatre et psychothérapeute Herbert FREUDENBERGER que le terme de burn-out a pris un essor nouveau.

Le burn-out, littéralement « brulure interne » n'est pas aujourd'hui reconnu comme une maladie professionnelle en France. L'INRS (Institut national de recherche et de sécurité) décrit le syndrome d'épuisement professionnel comme un ensemble de réactions consécutives à des situations de stress professionnel chronique. Il s'agit aussi d'un processus qui évolue depuis ses prémices, ses formes de consolidation jusqu'à la « chute ». Ce trouble est le plus souvent associé aux métiers à forte sollicitation mentale ou émotionnelle, à responsabilité ou avec des objectifs difficiles ou contradictoires.

Avec le développement des nouvelles technologies dans l'entreprise, les salariés peuvent se retrouver avec une surcharge d'information quotidienne. Les Québécois ont défini ce phénomène comme l'infobésité.

Il s'agira plus tôt d'ergostressie, le stress au travail né des nouvelles technologies. La juxtaposition des temps rendus possibles par l'arrivée des nouvelles technologies a transformé la façon de travailler des salariés. Ils profitent de ces nouveaux outils pour se connecter en tout lieu et en tout temps et être ainsi tout le temps liés à leur travail. Cette hyper connectivité remonte aux premières utilisations des téléphones portables et aux premiers mails dans les années 1995. Avec l'arrivée des smartphones en 2005, on observe un développement de ce genre de pratique, mais c'est surtout aux tournants des années 2009/2010 avec l'explosion de l'utilisation du numérique que les autorités publiques prennent vraiment conscience du problème.

Avec cet accès à l'information partout, tout le temps, pour tous, il existe un risque de surcharge cognitive et émotionnelle, avec un sentiment de fatigue, d'excitation. Aujourd'hui plus de trois millions de travailleurs français seraient en risque élevé de burn-out.

Pour Jean-Michel ROLLAND, coach spécialisé dans les e-comportements « Il y a effectivement un véritable problème autour de la communication par mail dans les entreprises qui peut aller jusqu'à créer des formes de stress et d'addiction chez les salariés ».

Les cadres sont particulièrement touchés par ce phénomène. Par leur rôle dans les différents échelons de l'entreprise, ils doivent accompagner les mutations des entreprises tout en étant des relais auprès des autres salariés voir de leur équipe. Deux types de comportements peuvent être évoqués.

Dans un premier temps, le salarié peut se sentir enseveli sous le nombre de mails qu'il doit traiter. Les nouvelles technologies impliquent alors une surcharge de travail avec comme conséquence une fatigue mentale, physique et un stress important dû au trop grand nombre d'informations à traiter.

Il est alors de plus en plus difficile de gérer l'afflux des informations générées par les technologies de la communication. Les exigences de rentabilité à court terme se sont développées dans les entreprises, le salarié a donc du mal à concevoir son action globale dans l'entreprise.

Un déséquilibre entre la perception qu'un salarié a des contraintes que lui impose son environnement et la perception qu'il a de ses propres ressources pour y faire face peut alors se créer. Le stress se définit alors par un niveau d'exigence élevé avec en face une insuffisance de moyen pour y répondre.

Parfois, ce sont les objectifs fixés par les entreprises qui ne peuvent pas être atteints par le salarié, mais souvent c'est le salarié lui-même qui se fixe un niveau très élevé d'exigence et manque de temps pour pouvoir répondre à ses propres limites au travail. Le problème se pose alors lorsque ce sentiment d'échec se répète et que le salarié entre dans une spirale de culpabilité avec une dépréciation de soi, qui mène au désinvestissement et à la démotivation.

L'hyper connectivité implique d'être dans une disponibilité totale et d'être sans cesse sollicité. Selon le dernier « Baromètre Stress » de la CFE CGC (syndicat des cadres), 90% des cadres ont le sentiment de travailler trop vite et 74% sont fréquemment interrompus dans leur travail. Aujourd'hui, 67% des cadres interrogés déclarent avoir des troubles de sommeil à cause de leur travail.

Ce problème d'augmentation de la charge de travail, qu'elle soit réelle ou ressentie, n'était pas jusqu'à présent traité par le législateur. Il est difficile de quantifier la charge de travail d'un salarié dans le secteur tertiaire, dont le métier est essentiellement intellectuel, qu'un ouvrier.

Le Code du travail limite la charge que doit porter un ouvrier, comment imaginer légiférer sur un nombre de mails quotidien acceptable ? Serait seul responsable s'il est très connecté, hyper connecté, surconnecté ?

Tandis que certains racontent leur burn-out numérique et leur « combat » pour réussir à débrancher, d'autre sont de plus en plus nombreux à souffrir du FOMO (fear of missing out) : la peur de rater quelque chose et s'offrent des cures de digital detox.

1.4. La connectivité à tout prix : une nouvelle addiction au travail

En effet, on remarque chez certains travailleurs un nouveau type de comportement addictifs.

Dès lors que le salarié a un sentiment de continuité avec la vie du bureau, une certaine accoutumance peut se créer. Avec le développement des courriels, un véritable cercle vicieux de « surcommunication », s'est développé, faisant de la production de courriels une preuve de travail, presque une fin en soi.

Leur traitement accapare en retour une bonne partie de la journée des cadres. Dans beaucoup de cas, le fait d'être joignable en permanence, y compris le soir, le weekend et en vacances, est devenu la norme de travail.

On parle de mode « *always on* » c'est-à-dire le fait d'être constamment connecté. Ce nouveau mal fait des ravages chez les salariés, les cadres et les dirigeants. Sous pression, nombreux sont ceux qui ne lâchent pas le travail, qu'ils soient chez eux, au restaurant ou même au lit quelle que soit l'heure.

On observe alors un phénomène totalement nouveau, les cures de déconnexion. !

Le droit social français n'était pas prêt à l'arrivée si soudaine des nouvelles technologies dans les entreprises. L'évolution des méthodes de travail fait apparaître les limites du système en place. La législation sociale, héritée de l'ère industrielle, était adaptée à un travail physiquement difficile et à des horaires stricts.

Elle se retrouve dépassée par le développement des métiers intellectuels et tertiaires. Là où un ouvrier peut décompter facilement son temps de travail, un cadre ne s'arrête pas de travailler en quittant son bureau.

Avec la mise à disposition des ordinateurs et téléphones de bureau, il peut avancer son travail de chez lui, consulter ses emails.

Or ces nouvelles plages horaires de travail ne sont plus vraiment quantifiables. Le système français basé sur le nombre d'heures effectuées ne suffit plus. Enfin, plus inquiétant encore, la législation française, pourtant si protectrice de la santé des travailleurs, n'a pas posé de limites à la connexion via les NTIC.

Les évolutions récentes ont demandé un effort d'adaptation. Or, la méconnaissance des codes d'échanges par le numérique, l'instantanéité des messages et le caractère plus impersonnel des propos ont permis le développement du cyberharcèlement. La charge de travail augmentant, les sollicitations constantes peuvent créer un réel stress chez des salariés. Ce chamboulement des notions d'unité de temps quantifiable et de santé et sécurité des salariés, impacte aussi un autre aspect de la relation de travail : les droits et libertés octroyées au salarié.

2. Le droit à la déconnection : un nouveau thème au cœur de la négociation collective

Avant même que le droit à la déconnection ne fasse son entrée dans le droit français, les partenaires sociaux ont commencé à poser les bases d'un régime juridique conventionnel du droit à la déconnexion de leurs salariés.

Cet apport de la négociation collective est important et suffit à démontrer la faiblesse du législateur qui n'a pas fait preuve d'initiative. Bien au contraire, face au développement de la négociation collective, il a été en quelque sorte presque contraint de légiférer.

Nombreuses sont, en effet, les conventions d'entreprise, voire même de branche, à avoir dégagé des grands principes éthiques pour protéger la santé et la sécurité de l'ensemble des travailleurs.

Cependant, peu d'accords prévoient des actions concrètes pour aider les collaborateurs à se déconnecter effectivement de leurs outils informatiques professionnels.

C'est pourquoi, certaines entreprises ont souhaité aller plus loin en mettant en place une réelle politique de formation et d'information des salariés sur l'usage des nouvelles technologies au travail.

2.1. L'apport déterminant de la négociation collective

L'une des premières sociétés à s'être intéressée à l'impact des nouvelles technologies est l'association APEC dans son accord sur la prévention des risques psychosociaux du 28 février 2013. Dans cette convention qui porte sur le bien-être des salariés et afin de prévenir le « *stress électronique* », un rappel de bon usage de la messagerie électronique est prévu. La communication verbale est à privilégier. Les courriels doivent être limités au destinataire concerné en évitant la diffusion systématique à un grand nombre de personnes. Enfin, l'accord préconise de ne pas adresser de message d'ordre professionnel, notamment par courriels et/ou SMS entre 20 heures et 8 heures, ni les jours de repos et jours fériés.

Un autre exemple intéressant est l'accord sur le développement de la qualité de vie au travail conclu au sein du Groupe AREVA le 31 mai 2012. Son article 20 préconise une utilisation maîtrisée des nouvelles technologies de l'information et de la communication (NTIC). L'idée n'est pas ici de refuser toute utilisation de ces nouvelles

technologies, mais de veiller à leur usage. L'accord AREVA rappelle l'importance des échanges humains, notamment dans la relation avec les managers et son équipe. Le temps de la vie privée du salarié doit être respecté et c'est pour cette raison majeure qu'est proclamé un nouveau «droit de déconnexion» à la charge du salarié qui doit se déconnecter, mais aussi à la charge de la hiérarchie qui doit être exemplaire. L'idée est aussi de respecter la finalité des outils à la disposition des collaborateurs avec une sensibilité auprès des utilisateurs.

Le 19 juin 2013, par le biais de l'Accord national interprofessionnel « vers une politique d'amélioration de la qualité de vie au travail et de l'égalité professionnelle », les partenaires sociaux s'interrogent de nouveau sur la pertinence d'un droit à la déconnexion. La disparition de la frontière entre le lieu du travail et le domicile et entre le temps de travail et le temps consacré à la vie personnelle nécessite une analyse plus poussée de la question. Un premier constat se dégage cependant dans l'article 17 de l'accord, il est nécessaire d'améliorer les formations des salariés au bon usage des TIC comme le préconisait l'accord d'AREVA.

Enfin, la branche de la vente à distance promeut la qualité de vie au travail comme facteur de compétitivité, prévu dans son accord du 13 avril 2015. Le texte rappelle que les NTIC sont devenues indispensables au fonctionnement des entreprises. Cependant, le constat est le même, les nouvelles technologies ne doivent pas brouiller la frontière entre la vie professionnelle et la vie privée ni isoler les salariés. Il est important de noter qu'ici le droit à la déconnexion n'est pas l'idée centrale comme dans les autres accords. Ce droit n'est qu'un moyen d'action qui dépendra surtout des retours des salariés qui vont être interrogés sur leurs visions des outils informatiques dans le cadre de leur travail.

En effet, avec quelques années de recul certaines entreprises ont pris la décision de modifier leur point de vue sur ce droit à la déconnexion réclamé à cor et à cri par les organisations syndicales.

Si dans l'accord de la vente à distance ce droit n'est qu'un levier, d'autres accords le modifient ou le complètent.

À titre d'exemple, il faut citer l'Avenant n°7 sur le forfait jours à l'accord sur la durée du temps de travail de GIE REUNICA du 29 janvier 2014 et l'Accord de la Branche SYNTEC du 7 avril 2014.

Dans l'avenant REUNICA « *il est rappelé qu'un collaborateur n'a pas à envoyer des courriels pendant une période de suspension du contrat de travail (congés payés, arrêt maladie, RTT....) Et n'a pas à répondre aux courriels pendant la période de fermeture des messageries électroniques ou envoyés par un collaborateur en suspension de travail* ». Ici il n'y a pas de droit à la déconnexion, mais un devoir, dans une obligation qui est faite au salarié de se déconnecter. La déconnexion prend alors un nouveau tournant, un tournant disciplinaire. En effet, l'article L.1331-1 du Code du travail permet à l'employeur de sanctionner un agissement du salarié qu'il considère comme fautif. En assimilant la déconnexion à une obligation du salarié dans un accord, on passe d'un droit à un devoir. Celui-ci sera alors susceptible, s'il n'est pas respecté, d'être sanctionné par l'employeur sur le fondement de son pouvoir disciplinaire.

Cette évolution se retrouve aussi dans l'avenant du 1er avril 2104 relatif aux forfaits jours des salariés autonomes des entreprises du numérique et du conseil (SYNTEC). Il s'agit de l'un des rares accords de branche à aborder cette problématique de l'introduction des TIC dans les entreprises et il concerne près de 250 000 salariés. La convention est le fruit d'un accord entre deux fédérations patronales, la Syntec (syndicat patronal de l'ingénierie) et le Cinov (syndicat patronal des bureaux d'études), et plusieurs syndicats salariés dont la CFE/CGC/FIECI, la CGT/FO, la CFDT.

L'article 4.8 de l'avenant porte sur les garanties relatives notamment au temps de repos, à la charge de travail et à l'amplitude des journées de travail. L'article 4.8.1 énonce que les garanties du temps de repos passent par une obligation de déconnexion. « *L'effectivité du respect par le salarié de ces durées minimales de repos implique pour ce dernier une obligation de déconnexion des outils de communication à distance* ». Il revient tout de même à l'employeur de s'assurer « *des dispositions nécessaires afin que le salarié ait la possibilité de se déconnecter des outils de communication à distance mis à sa disposition* ».

De tous ces exemples, il faut retenir qu'en dehors de tout cadre législatif, les partenaires sociaux ont alors voulu encadrer l'utilisation des nouvelles technologies par leurs salariés.

Deux conséquences en découlent.

La première porte sur la responsabilité de l'entreprise. En proclamant un droit de déconnexion à ses salariés, les entreprises ont reconnu que leur responsabilité pouvait être engagée en cas violation de ces dispositions. En cas de

litige, sur le fondement de la santé du salarié ou sur celui des heures supplémentaires, le travailleur pourra invoquer l'accord ce qui conduira très certainement à une condamnation de l'employeur. En effet, le droit à la déconnexion pour le salarié impose un nouveau devoir à l'employeur. Ce dernier en vertu de ses pouvoirs de direction devra être en capacité d'assurer l'effectivité de la déconnexion. On tend alors vers une obligation de résultat, proche de celle existante en matière de santé et sécurité au travail.

La seconde est la suivante : pour limiter cette responsabilité, certains accords prévoient un devoir de déconnexion du salarié supervisé par l'employeur. Or il ne faut pas s'y tromper, il sera fort probable dans ces hypothèses que l'entreprise sera ici encore tenue responsable de la non-déconnexion d'un de ses collaborateurs. Cependant, elle bénéficiera d'un nouveau moyen d'action. Un salarié qui refuse de se déconnecter le soir et qui importune ses collègues pourra être sanctionné disciplinairement pour ne pas avoir respecté son devoir de déconnexion. Ce nouveau dispositif devra cependant être encadré par les juges, car il peut avoir des effets pervers. Un salarié qui n'atteint pas ses objectifs, car il respecte scrupuleusement son devoir de déconnexion pourrait-il alors être sanctionné pour son manque de résultat ? La question est posée.

Le droit, voir le devoir de déconnexion doit donc s'accompagner d'une politique globale de l'entreprise pour aider ses salariés et sensibiliser toute la ligne hiérarchique. D'autres entreprises ont donc décidé de s'engager différemment. Pas seulement en proclament un nouveau droit ou un nouveau devoir, mais en agissant avec des engagements sur l'utilisation des nouvelles technologies par leurs salariés.

2.2 Le contenu du droit négocié à la déconnexion

Plusieurs mesures ou de démarches expérimentales ont été mises en place ces dernières années. Un certain nombre d'axes récurrents peuvent être dégagés :

- Volonté de remplacer en partie l'usage du courriel par les réseaux sociaux d'entreprise,
- Principe de l'exemplarité des managers,
- Expérimentations autour de la prise de conscience de l'émetteur,
- Configuration des outils.

Une des premières actions observées porte donc sur la volonté de remplacer en partie l'usage des courriels par les réseaux sociaux d'entreprise. À titre d'exemple il faut citer la société Atos. En février 2011 le PDG de cette entreprise, Thierry BRETON, se fixe comme objectif de réduire les envois de courriels entre ses salariés. La société souhaite devenir une entreprise Zéro email trois ans plus tard. L'objectif est simple, accroître la productivité des services en libérant du temps normalement passé à gérer des mails.

L'entreprise développe alors des outils collaboratifs de manière à pouvoir créer des communautés de discussion permettant d'associer l'ensemble des participants à la prise de décision et cela dans un délai très rapide. Pour ce faire, la société rachète BlueKiwi, pionnier des plateformes de réseaux sociaux d'entreprise. Aujourd'hui des dizaines de milliers de salariés utilisent la plateforme qui doit absorber des milliers de contributions chaque jour.

Si elle part d'une bonne attention, le fait de remplacer en partie l'usage du courrier par les réseaux sociaux d'entreprise ne répond pas à toutes les problématiques liées aux développements de ces technologies dans l'entreprise. En effet, l'espace de discussion reste virtuel, remplaçant définitivement les échanges physiques. Autre point, les réseaux sociaux d'entreprise accentuent le phénomène d'immédiateté, car l'échange se fait en direct.

Deuxième action observée, le principe de l'exemplarité des managers. L'idée étant que, comme l'entreprise est responsable de la déconnexion de ses salariés, et qu'elle leur impose un devoir de déconnexion, l'ensemble de la ligne managériale doit respecter ces préconisations. Ce levier d'action se retrouve dans de nombreux accords.

Le premier est l'accord du Groupe AREVA du 31 mai 2012 sur le développement de la qualité de vie au travail qui énonce dans son article 20 un droit à la déconnexion. Or dans le même article, les parties soulignent la nécessité de veiller à ce que l'usage des TIC ne devienne pas un mode exclusif d'animation managériale et de transmission des consignes de travail.

Dans le même sens, la Société Générale avec l'Accord sur l'équilibre et la conciliation des temps de vies professionnelle et personnelle du 30 mars 2015 dans son article 2.5 reconnaît un droit à la déconnexion.

L'entreprise a aussi signé la charte des 15 engagements de l'observatoire de l'équilibre des temps et de la parentalité en entreprise au même titre que cinquante autres sociétés parmi lesquelles on peut citer Allianz, Atos, BNP Paribas, Canal+, Carrefour, L'Oréal, Natixis, Safran et SFR.

Les quatre axes fondateurs dans la charte des 15 engagements pour l'équilibre des temps de vie cités dans l'article 2.5 de l'accord sont : l'exemplarité managériale, le respect équilibre vie privée et vie professionnelle, l'optimisation des réunions, et les bons usages des e-mails. Pour l'exemplarité des managers, il est précisé que « chaque manager est le premier garant de l'équilibre de vie et de la cohésion de son équipe ».

Ces actions de sensibilisation des managers à leur responsabilité sont généralement couplées avec des expérimentations autour de la prise de conscience de l'émetteur. Ainsi Frédéric OUDEA, PDG de la Société Générale interdit le BlackBerry à toutes ces réunions. L'entreprise annonce d'ailleurs dans son accord du 30 mars 2015 la rédaction et diffusion d'un guide de bon usage de la messagerie et plusieurs actions de sensibilisation pour les salariés.

Dans le même élan, le cabinet MAZARS a développé une nouvelle approche expérimentale. La première idée consistait à centraliser les messages et contenus publiés par le salarié par un système de workflow centralisé. Le but était alors de s'assurer de la protection des données confidentielles, témoignant d'une perception du numérique comme d'un outil devant être contrôlé. L'approche finalement retenue a consisté à dispenser à plusieurs collaborateurs (100 environ) des formations aux usages des outils numériques sous le format suivant ; présentation des opportunités offertes par le digital et accompagnement dans la prise en mains des outils numériques, rappel des exigences de déontologie et d'éthique. Il s'agit ici d'une régulation douce basée sur le constat que les collaborateurs hautement diplômés et fortement numérisés se sont déjà approprié eux même le digital. L'objectif s'il ne peut être celui de l'enseignement d'usages, est donc d'enseigner une conscience digitale.

Le Groupe Orange est, quant à lui, allé plus loin encore, en lançant en 2013 un programme en interne baptisé Digital Leadership, afin de contribuer à la transformation et à une meilleure efficacité des modes de fonctionnement du groupe. La Digital Academy constitue le lieu de formation de ce programme de grande ampleur. Il vise à apporter un socle commun de connaissances dans le domaine du digital à l'ensemble des 166 000 salariés de l'entreprise, quel que soit leur métier.

Enfin, le dernier levier d'action est un levier plus contraignant. Il porte sur la configuration des outils numériques eux-mêmes. Certaines préconisations existaient déjà depuis longtemps notamment pour limiter le harcèlement par mails comme le fait d'utiliser une adresse électronique sans distinction de sexe.

Pour éviter les problématiques d'heures supplémentaires et de droit au repos, certaines entreprises ont pris la décision d'aller plus loin et d'imposer une déconnexion forcée en mettant en place des coupures de réseau à certaines heures.

C'est le cas des sociétés d'ingénieries et de conseils qui ont négocié avec la CFDT et la CFE-CGC le 1er avril 2014 un « droit de coupure de réseau » pour garantir au minimum onze heures de repos consécutives.

Un an plus tard, le groupe bancaire BPCE a mis quant à lui en place un nouveau dispositif annoncé le 1er avril 2015 : interruption des postes de travail, des accès à distance et des messages entre 21h et 7h du matin.

Une application a même été créée pour permettre aux entreprises de paramétrer depuis un navigateur Web, et en fonction des plages horaires, la déconnexion totale, mais aussi d'empêcher des collaborateurs en limitant certains appels ou en bloquant les numéros couteux.

Call-door est un outil qui permet de séparer vie professionnelle et vie personnelle en facilitant la déconnexion des salariés de leurs smartphones professionnels.

Alors que tous ces dispositifs se développent dans les entreprises privées, le secteur public n'est pas en reste. La Direction Générale du Trésor du Ministère des Finances a mis en place une charte, le 14 janvier 2010, « *la charte du temps* » pour le bon usage des courriels, destiné à optimiser la gestion du temps et améliorer l'efficacité collective et individuelle tout en préservant la vie privée.

Autre exemple, en janvier 2016 la mairie de Saint-Sébastien-Sur-Loire a imposé trois journées sans mail. Résultat ; durant l'opération les agents ont reçu 75% de courriels en moins. Au vu des retours positifs des salariés et du public, ces opérations devraient se développer dans le futur.

Le droit à la déconnexion existe donc déjà un peu dans les faits. Proclamée par de nombreuses entreprises dans le cadre de leur accord, la notion est parfois complétée par une politique plus globale. L'idée étant qu'en plus d'énoncer un grand principe, il faut mettre en place un certain nombre d'actions pour permettre l'effectivité de la déconnexion des salariés le soir.

Face à ces déclarations, la question se pose aujourd’hui du rôle du législateur. Simple observateur des pratiques jusqu’à présent, il lui est apparu nécessaire d’intervenir en légiférant en créant un véritable droit à la déconnexion.

3. La nouvelle loi française sur le droit à la déconnexion

La création d’un véritable droit à déconnexion résulte en premier lieu d’une réflexion d’ensemble portant sur l’impact du numérique sur les rapports de travail. La doctrine et les forces sociales se sont, pour leur part, emparé de cette question assez tôt, ce qui a conduit finalement à une réforme législative mesurée.

3. 1 Le temps de la réflexion : les apports du rapport METTLING de 2015

Les pouvoirs publics français, bien conscients des nouveaux enjeux et des impacts du numérique sur le monde du travail, ont souhaité aborder cette question en commandant une vaste étude sur les transformations numériques et vie au travail. Le choix du rapporteur s’est porté sur Bruno METTLING qui assure le suivi du programme de simplification et de digitalisation du Groupe Orange.

Ce rapport METTLING est innovant, car il adopte une approche préventive de la transformation numérique. Après avoir analysé les principaux impacts et enjeux de cette révolution, et avoir travaillé avec de multiples personnalités du champ syndical, mais aussi des consultants, il formule 36 propositions ayant pour objectif d’aider les entreprises à adapter au mieux leur organisation.

Bruno METTLING a rappelé à plusieurs reprises qu’il était désormais important de trouver des solutions face à ce qu’il qualifie de danger réel en matière de santé au travail. Il souhaite avant tout que le développement du numérique devienne un atout pour le bien-être au travail au lieu de constituer une menace.

L’idée centrale est de faire de l’éducation du numérique une priorité. La finalité du rapport est de proposer de placer la transformation numérique au cœur des dispositifs de professionnalisation. Cela ne pourra être mise en œuvre qu’après une consultation qui permettrait de mesurer les besoins en formation.

Au niveau de l’entreprise, le rapport fait état de nombreuses évolutions constatées. Il classe les entreprises en deux catégories. Dans la première, l’articulation vie privée et vie professionnelle est faite tacitement, la frontière entre les deux est faible, mais un certain équilibre a été trouvé notamment grâce à la mise en place de mesure permettant de récupérer du temps, les congés réduction du temps de travail (RTT). Dans la seconde catégorie, l’articulation vie privée et vie professionnelle a été formalisé dans un accord. Il revient souvent au salarié lui-même de se responsabiliser.

Dans tous les cas, le salarié a une place à part entière. Il est coauteur du contrôle de son organisation de travail. Il est fortement impliqué. En s’inspirant de ses conclusions le rapport propose un droit et un devoir à la déconnexion, mais aussi une sécurisation du forfait jours (qui est un mode décompte du temps de travail en jours et non en heures pour les cadres) et une généralisation des formations au numérique.

L’idée d’un droit à la déconnexion y est consacrée, mais il est important de constater qu’il est immédiatement complété par une nouvelle notion « le devoir de déconnexion ». En effet, pour les auteurs du texte, si le droit à la déconnexion a vocation à se généraliser progressivement dans toutes les entreprises, ce qui d’ailleurs est désormais le cas avec la nouvelle loi EL KHOMRI, cette notion et ce dispositif ne suffisent plus. Face à l’intrusion du numérique dans les entreprises il est nécessaire d’impliquer tous les acteurs de cette dernière, la Direction de l’entreprise, les partenaires sociaux, mais aussi et c’est nouveau, les salariés eux-mêmes.

Pour arriver à cette conclusion, le rapport constate notamment que les accords qui ont déjà été signés dans certaines entreprises ont une valeur pédagogique. Ils font passer l’idée qu’il revient à la hiérarchie de faire respecter l’organisation de la déconnexion, le droit à la déconnexion constituant déjà une nouvelle obligation pour les entreprises. Or, l’ère du numérique doit permettre un travail commun de la Direction et du salarié. En effet, le salarié a souvent sa part de responsabilité dans sa non-déconnexion. Par addiction ou par confort, un certain nombre de cadres ne souhaitent pas forcément se déconnecter.

Les usages excessifs de certains salariés justifient donc que l’employeur ne soit pas le seul responsable de l’utilisation des outils technologiques.

Le devoir de déconnexion constituerait donc un levier permettant à l'entreprise de forcer la main aux salariés réfractaires. Le rapport n'est pas forcément favorable aux coupures automatiques de mails, car il met l'accent sur l'importance de la responsabilité du salarié. « *Savoir se déconnecter est une compétence qui se construit également à un niveau individuel, mais qui a besoin d'être soutenue par l'entreprise* », le rapport soutient les initiatives de chartes et les actions de sensibilisations qui se sont développées dans les entreprises. La recherche de solution comme la déconnexion relève donc autant d'une éducation au niveau individuel que d'une régulation au niveau de l'entreprise.

Au niveau individuel, la capacité de se déconnecter dépend des rapports de chaque individu au temps, en fonction de sa personnalité. Cette dernière se traduit, par exemple au niveau des usages numériques par des règles de « *joignabilités* » ponctuelles en fonction des contextes de travail par la séparation des adresses courriel ou des numéros de téléphone personnel et professionnel, par des usages cloisonnés des réseaux sociaux numériques, etc..

Au niveau collectif, la préconisation numéro 19 prévoit une politique plus globale. L'idée est de sensibiliser les salariés et les managers de l'entreprise sur les usages des outils numériques. L'entreprise doit mettre à leur disposition des formations en ce sens. Enfin, cela implique que soit développée une vraie réflexion dans le cadre de la négociation collective sur la charge de travail. Le dialogue social et la construction d'accords doivent permettre de clarifier les droits et devoirs de l'entreprise et les conditions de mise en œuvre de cette mesure. « *La bonne articulation entre vie professionnelle et vie privée est une condition majeure de la réussite de la transformation numérique, pour que celle-ci puisse réellement permettre une amélioration de la qualité de vie.* ».

Les idées du rapport MELTTILING ne sont pas forcément nouvelles. Elles reprennent en grande partie le souhait de la doctrine. Cependant, c'est le premier texte à recenser de façon aussi minutieuse toutes les politiques RH mises en place dans les entreprises pour améliorer l'organisation du travail de leur salarié face à la révolution numérique.

Le contenu du rapport a été par la suite discuté dans le cadre de la conférence sociale annuelle des 18 et 19 octobre 2015. Si toutes les propositions n'ont pas été reprises par la suite par le projet de loi EL KHOMRI, ce dernier s'en est fortement inspiré. Le droit à la déconnexion fait en effet désormais partie d'une pratique plus globale de négociation collective comme le réclamait le DRH d'Orange. Le rapporteur du projet de loi, Christophe SIRUGUE

(PS) a notamment voulu que les entreprises soient tenues de mettre en place des « dispositifs de régulation ». « *Pour être effectif, le droit à la déconnexion (...) doit s'accompagner de l'appropriation par les acteurs de l'entreprise d'une forme de « devoir de déconnexion » consistant en une régulation volontaire et partagée de l'usage des outils numériques* », plaidait le député dans son exposé des motifs.¹⁰⁴

Cette volonté d'organiser une régulation volontaire et partagée de l'usage des outils numériques doit donc pour être efficace, être acceptée de tous. Il ne suffira donc plus d'énoncer de grands principes, mais de réfléchir dans le temps à une politique sociale de l'entreprise face à la révolution numérique. Or cette dernière ne peut résulter que d'un travail global en collaboration avec les différents types de partenaires sociaux pour que les décisions prises soient acceptées par le maximum de salariés.

3.2 La position de la doctrine et des organisations syndicales

Il n'a pas fallu longtemps à la Doctrine française pour s'emparer de la problématique du droit à la déconnexion au vu des nombreux problèmes qu'impliquait l'utilisation des nouvelles technologies.

Au début des années 2000, l'ancien et influent conseiller doyen à la chambre sociale de la Cour de cassation, Philippe WAQUET, considérait déjà qu'il fallait prohiber « toute forme d'intervention de l'employeur pendant le temps de repos : ni appel téléphonique pour réclamer un renseignement ni fax pour communiquer telle ou telle nouvelle. La qualité du repos (...) commande une rupture totale : la coupure psychologique, qui est essentielle, ne peut exister sans coupure matérielle ».

Une grande partie de la doctrine a alors considéré avec la plus grande prudence ces modes modernes de communication pourtant indispensables. Elle soulignait alors que ces pratiques étaient variables d'un individu à un autre et que tous les salariés ne sont pas égaux face au développement du numérique. Certains s'adaptent, savent s'arrêter et d'autres non.

Or, la fracture numérique laissant certains sur le côté, ne s'est pas produite. Tous les salariés sont aujourd'hui de près ou de loin en contact avec ces NTIC.

Il convenait dès lors de penser différemment la question. Non plus selon une supposé fracture numérique mais selon le couple connexion/déconnexion.

Les conduites de déconnexions aussi multiples soient elles sont toujours ponctuelles et en grande majorité partielles. Le but est de maîtriser la technologie, de ne pas se laisser envahir par toutes les informations, incitations continues auxquelles le salarié doit faire face. Certains tentent ainsi d'échapper à l'urgence, au contrôle hiérarchique qui est de plus en plus présent. Les périodes de déconnexion sont de plus en plus assimilées à des temps de calme, de période où l'on se ressource.

Puis certains voient, avec le développement des accords et des premières actions dans les entreprises, un premier pas vers la reconnaissance d'un nouveau droit pour le salarié. Pour Yves LASFARGUE, Directeur de l'observatoire des conditions de travail et de l'ergostressie, les entreprises vont dans une bonne direction. Cependant il ne faut pas encore donner trop d'importance aux effets immédiats que l'on pourrait constater. Le plus important, c'est la valeur pédagogique de ses premiers accords. Il réfute l'idée d'une loi sur le sujet, car ce thème et les potentielles restrictions qui en découlent doivent être abordées localement, au sein des entreprises. Chaque société, chaque groupe ayant sa façon d'organiser le travail, il semble impossible de créer une norme globale pouvant s'appliquer aux entreprises de toutes tailles.

Le refus d'une loi globale est une idée partagée par grand nombre d'autres auteurs. Pour Jean Michel ROLLAND, spécialiste du management et des nouvelles technologies, une loi poserait un cadre trop rigide et trop généraliste. Il est aussi favorable à un règlement au cas par cas des situations au sein des entreprises.

Or c'est la position inverse qu'ont retenu un certain nombre de syndicats français qui se sont emparés de la question au cours des cinq dernières années. En effet, depuis 2010, la majorité des organisations syndicales ont fait du droit à la déconnexion un symbole pour protéger les salariés et garantir l'effectivité du respect de la législation. Cette prise de conscience fait suite à un certain nombre d'enquêtes qui rapportent l'importance qu'on prit les nouvelles technologies au travail.

À titre d'exemple il faut citer l'enquête TEQ Cadres, présentée par la Confédération Française Démocratique du Travail cadre (CFDT) qui rappelle que si en 2002 seulement 18% des cadres revendiquaient un droit à la déconnexion

négociée, en 2010 ils sont 60% à estimer utile une telle négociation. En novembre 2013, l'enquête CREDOC (centre de recherche pour l'étude et l'observation des conditions de vie) sur la diffusion des technologies de l'information et de la communication dans la société française rappelle que les trois quarts des cadres se connectent pour des raisons professionnelles le soir, le week-end ou en vacances. Enfin, le baromètre Qualité de vie au travail de mars 2014 de la Confédération française de l'encadrement – Confédération générale des cadres (CFE-CGC), réalisé par Opinion Way, rappelle que 80% des cadres interrogés pensent que les NTIC imposent des délais de réponse toujours plus courts et 78% qu'elles accroissent le volume d'informations à traiter. Seuls 6% des entreprises déconnectent les serveurs le soir.

Les positions de la CFE-CGC et de la Confédération Générale du Travail (CGT) reposent essentiellement sur la reconnaissance d'un droit à la déconnexion. Ce droit doit même être imposé pour la confédération française des travailleurs chrétiens (CFTC) qui dénonce un manque de législation.

Si la CFDT-cadre est la seule organisation syndicale à souhaiter un droit à la déconnexion négocié pour tous les salariés, les autres syndicats intègrent eux aussi les institutions représentatives du personnel dans leur proposition. On retrouve l'idée d'une négociation collective relative aux règles d'usage des technologies chez la CGT et la CFDT cadre. L'idée est de prévoir notamment des plages de trêve de mails ou les modalités de récupération pour les salariés absents ou en congés.

La CGT a fait du droit à la déconnexion un cheval de bataille depuis quelques années. Elle dénonce la non-rémunération des heures supplémentaires qu'entraînent les NTIC et l'abandon progressif des 11h de repos hebdomadaire prévu par la loi. Elle réclame aussi l'obligation de présenter au Comité d'Entreprise une évaluation du temps de travail de l'ensemble des salariés par catégorie professionnelle et secteur. Avec les premiers accords et notamment l'accord de branche pour les cadres du secteur du numérique, Bernard SALENGRO membre du syndicat des cadres CFE-CGC salue la protection du droit au repos ce qui est « tout à fait remarquable » et qui permet d'ouvrir le débat pour aller bien plus loin dans les prochaines années.

Il faut aussi noter que les syndicats CFE-CGC et la CFDT-cadre reprennent une approche plus globale de l'utilisation des NTIC dans la société, approche similaire à celle que l'on retrouve dans certains accords d'entreprise. Si le premier prône la formation des salariés et s'interroge sur les dispositifs de forfait jour, de télétravail et de temps

partiel, le second, et cela depuis 1995 proposent une nouvelle organisation de travail avec un cadre différent et un manager de proximité.

Contrairement aux espérances de la doctrine et conformément aux attentes des syndicats, le gouvernement a décidé en 2016 de légiférer sur le droit à la déconnexion. Profitant de la loi « *au travail, à la modernisation du dialogue social et à la sécurisation des parcours professionnels* », le gouvernement reprend l'idée de proclamer un nouveau droit et de mettre en place une négociation obligatoire dans les entreprises. C'est d'ailleurs sans doute l'une des rares mesures de la loi EL KHOMRI qui fera consensus. Le droit à la déconnexion vise ici à garantir l'effectivité du droit au repos. Le projet de loi alors en discussion, dispose que les modalités du droit à la déconnexion font partie des sujets abordés lors de la négociation annuelle dans les entreprises sur la qualité de vie au travail afin d'assurer le respect des temps de repos et de congés.

Cependant, lors des débats du 6 avril 2016, la commission des affaires sociales de l'Assemblée nationale a sensiblement enrichi le projet du gouvernement avant de l'adopter. Première modification, la mise en place de la nouvelle obligation pour les entreprises se fera dès le 1er janvier 2017 alors qu'initialement la date retenue était en 2018. Il est ainsi prévu qu'au sein de chaque entreprise, employeur et employés discutent chaque année de l'« *utilisation des outils numériques* », « *en vue d'assurer le respect des temps de repos et de congés* » des salariés. Chaque société sera donc libre de mettre en place les dispositifs les plus adaptés à son organisation de travail : blocage des emails durant certaines plages horaires, engagements mutuels de la part des employés et de leurs supérieurs, etc. À défaut d'accord, précise cependant le texte, l'employeur définira seul les modalités de ce droit à la déconnexion qu'il devra cependant communiquer aux salariés de l'entreprise.

Le droit à la déconnexion devra viser au respect des temps de repos et de congés du salarié, mais aussi à celui de sa « *vie personnelle et familiale* ». Enfin, alors que le texte de la ministre du Travail prévoyait qu'une charte soit a minima prise pour les entreprises de 300 salariés et plus, les députés de la commission des affaires sociales ont rabaisé ce seuil à 50 salariés.

En revanche, n'a pas été adopté l'amendement visant à introduire une pénalité (dont le montant aurait été fixé ultérieurement par décret) en cas de non-respect par un employeur de ses obligations liées au droit à la déconnexion. Celui-ci a été retiré sur demande du rapporteur du projet de loi.

Une « expérimentation nationale » a été défendue avec succès par la députée socialiste Corinne ERTHEL. L'idée est que sur une durée de douze mois une opération portant sur « *l'articulation du temps de travail et de l'usage raisonnable des messageries électroniques par les salariés ou les agents publics* », notamment durant les jours non travaillés et en dehors des horaires classiques. Cette opération devra avoir lieu un an « au plus tard » après la promulgation de la loi EL KHOMRI.

La commission permanente des affaires sociales a ainsi adopté le texte du projet de loi travail en nouvelle lecture le 30 juin 2016.

Dans le cadre de l'étude de la loi EL KHOMRI, la commission des affaires sociales a réclamé une concertation le 1er octobre 2016 sur « *l'évaluation de la charge de travail des salariés en forfait en jours, et sur la prise en compte des pratiques liées aux outils numériques permettant de mieux articuler la vie pro ainsi que l'opportunité et le cas échéant les modalités de fractionnement du repos quotidien ou hebdomadaire de ces salariés* ».

À l'issue de la concertation, un guide des bonnes pratiques doit être élaboré et servir de document de référence lors de la négociation d'une convention ou d'un accord d'entreprise.

3.3. Les dispositions légales sur le droit à la déconnexion

La loi n° 2016-1088 du 8 août 2016 *relative au travail, à la modernisation du dialogue social et à la sécurisation des parcours professionnels*, dite loi Travail El Khomri, a introduit dans le Code du travail un droit à la déconnexion. Il s'agit certainement de l'un des rares systèmes juridiques à prévoir des dispositions sur ce point. Il s'agit d'un nouvel alinéa de l'article L 2242-8 du code du Travail.

L'article 55 de la loi Travail prévoit qu'à partir du 1er janvier 2017, un 7^{ème} thème est ajouté à la négociation Egalité Professionnelle Qualité de Vie au Travail :

« 7° Les modalités du plein exercice par le salarié de son droit à la déconnexion et la mise en place par l'entreprise de dispositifs de régulation de l'utilisation des outils numériques, en vue d'assurer le respect des temps de repos et de congé ainsi que de la vie personnelle et familiale. A défaut d'accord, l'employeur élabore une charte, après avis du comité d'entreprise ou, à défaut, des délégués du personnel. Cette charte définit ces modalités de l'exercice du

droit à la déconnexion et prévoit en outre la mise en œuvre, à destination des salariés et du personnel d’encadrement et de direction, d’actions de formation et de sensibilisation à un usage raisonnable des outils numériques.»

La loi Travail reprend donc a minima plusieurs recommandations du rapport METTLING sur la transformation numérique. Pour autant, un autre rapport sur le sujet est attendu avant la fin de l’année 2016. Le gouvernement devra en effet remettre au Parlement, avant le 1er décembre 2016, un rapport sur l’adaptation juridique des notions de lieu, de charge et de temps de travail liée à l’utilisation des outils numériques.

À compter du 1er janvier 2017, la négociation annuelle « *égalité professionnelle et qualité de vie* » portera également sur les modalités du plein exercice par le salarié de son droit à la déconnexion et sur la mise en place par l’entreprise de dispositifs de régulation de l’utilisation des outils numériques, en vue d’assurer le respect des temps de repos et de congé ainsi que de la vie personnelle et familiale.

À défaut d’accord, l’employeur devra élaborer une charte, après avis des IRP. Ce document prévoira notamment des actions de formation et de sensibilisation des salariés à l’usage des outils numériques à destination des salariés et du personnel d’encadrement et de direction.

Une concertation nationale et interprofessionnelle doit par ailleurs s’engager, avant le 1er octobre 2016, sur le développement du télétravail et du travail à distance. Les partenaires sociaux pourront, s’ils le souhaitent, ouvrir une négociation sur ce sujet.

La concertation portera aussi sur l’évaluation de la charge de travail des salariés en forfait-jours, sur la prise en compte des pratiques liées aux outils numériques permettant de mieux articuler la vie personnelle et la vie professionnelle ainsi que sur l’opportunité et, le cas échéant, sur les modalités du fractionnement du repos quotidien ou hebdomadaire de ces salariés.

À l’issue de la concertation, un guide de bonnes pratiques sera élaboré. Il servira de document de référence lors de la négociation d’une convention ou d’un accord d’entreprise.

En définitive, l’expérience française est intéressante. C’est parce que les partenaires sociaux se sont assez tôt saisis de cette problématique qu’une loi a pu être votée. Mais si le droit à la déconnexion fait son entrée dans le Code du

travail français à compter du 1^{er} janvier 2017, il renvoie très largement à la négociation collective. Il faudra voir si au fil du temps, se crée un régime véritablement efficace au-delà des déclarations de principes d’ores et déjà prévues dans plusieurs accords collectifs qui ont préfigurés la loi.

BIBLIOGRAPHIE

Accords :

- L’association APEC accord sur la prévention des risques psychosociaux en date du 28 février 2013
- Groupe AREVA accord du 31 mai 2012 postant sur le développement de la qualité de vie au travail
- Le 19 juin 2013, 'Accord national interprofessionnel « vers une politique d’amélioration de la qualité de vie au travail et de l’égalité professionnelle »,
- Vente à distance la qualité de vie au travail comme facteur de compétitivité, accord du 13 avril 2015
- Avenant n°7 sur le forfait jours à l’accord sur la durée du temps de travail de GIE REUNICA du 29 janvier 2014
- Accord de la Branche SYNTEC du 7 avril 2014.
- Société Générale avec l’Accord sur l’équilibre et la conciliation des temps de vies professionnelle et personnelle du 30 mars 2015
- La Charte du temps Direction Générale du trésor – Ministère de l’économie de l’industrie et de l’emploi 14 janvier 2010

Articles :

- Harcèlement numérique : le droit à la déconnexion – Entretien Changer le travail Enquête Collaborative Sciences Humaines et LASFRAGUE (Y.), chercheur et consultant spécialisé dans le management des nouvelles technologies, directeur de l’Observatoire des conditions de travail et de l’ergostressie

- BABEAU (O.) « *Vers un droit à la déconnexion ? Le diagnostic mal ficelé du rapport rendu au gouvernement* » *Atlantico* 16 septembre 2015
- Maillard (D.), directeur stratégie chez Technologia « *l'entreprise du futur : travail nomade et contrats de projets : quelle forme pour l'entreprise de demain ?* », *Paris Tech Review*, Novembre 2014
- « *L'avènement de l'Homo numericus* », Sciences humaines, 27 septembre 2013
- Liaisons sociales magazine n°172 – Mai 2016 Les employeurs recourent-ils beaucoup aux heures sup ?
- Fondateur du cabinet Dialogue social et compétitivité Pascal GEIGER – Liaisons sociales magazine N°173 juin 2016
- Jean-Emmanuel RAY « la nécessaire métamorphose du droit du travail ? Commentaires, Panthéon Sorbonne magazine n°12 mars-avril 2015 N°153 printemps 2016 pp129-138
- Liaisons sociales magazine n°165 octobre 2015
- Des start-up mentors de grandes entreprises – décodages management – mai 2016 – liaisons sociales magazine n°172

Enquêtes :

- Enquête du dispositif Changements Organisationnels et Informatisation, 2006
- CREDOC Enquête « *Conditions de vie et Aspiration des Français* » la diffusion des technologies de l'information et de la communication dans la société française, décembre 2013
- Enquête Association pour l'emploi des cadres Apec sondage en ligne « *auprès de 450 cadres du secteur privé – perception des outils connectés* » réalisé entre le 6 et le 24 novembre 2014
- 2ème édition du baromètre Inria TNS-Sofres sur les Français et le numérique, mars 2014
- Baromètre Stress de la CFE CGC, mars 2008
- Enquête TEQ Cadre, 2010
- Contribution syndicats ORSE meilleur usage des outils de communication numérique dans les entreprises, janvier 2015
- L'enquête annuelle « Mobilité » de l'Apec, juin 2008
- DARES Analyses « *Les facteurs de risques psychosociaux en France et en Europe* », Décembre 2014

Rapports :

- Rapport METTLING, « *Transformation numérique et vie au travail* », septembre 2015
- Rapport de résultats « *Baromètre Qualité de vie au travail le regard des cadres français Opinion Way et CFE-CGC* », mars 2014
- Commission des affaires sociales, annexé au Rapport sur le projet de loi relatif au travail, à la modernisation du dialogue social et à la sécurisation des parcours professionnels, aout 2016



Videa Book 2016

Other relevant aspects: the protection
of workers' fundamental rights
and the potential of ICTS
to promote a preventive culture



NEW TECHNOLOGIES, EMPLOYMENT CONTROL AND INFRINGEMENT OF FUNDAMENTAL RIGHTS



José Antonio Fernández Avilés
Victoria Rodríguez-Rico Roldán
Professor and PhD Assistant,
Labour Law and Social Security
University of Granada (Spain)

Summary

1. The new technologies in work relations: a general approach

2. The administration power of the entrepreneur and the right to the worker privacy: balance requirements

- 2.1. The fundamental rights of workers within the framework of industrial relations
- 2.2. Limits on the exercise of fundamental rights
- 2.3. The proportionality trial: articulation and presuppose

3. Special reference to some of the most current problem assumptions

- 3.1. The use of e-mail for out-of-work purposes and its control
- 3.2. The installation of video surveillance cameras and closed circuit television
- 3.3. Geolocation devices: gps

4. Conclusions

Abstract

The new information and communication technologies mean a new challenge for the protection of fundamental rights in the context of labour relations. Its use allows possibilities - and an intensity - in surveillance and control of the worker activity until now unthinkable. This study analyzes the situation of Spanish law, both in the technique of balanced rights - through the proportionality judgment - about the doctrine of the Constitutional Court; and in the analysis of judicial doctrine, in the most problematic cases that have been presented in forensic praxis (especially, control of electronic mail, installation of video surveillance systems or use of geolocation devices). The conclusion is that, in the absence of more specific legislative developments, the parameters of prosecution are excessively safe and that a case-by-case search for the solution should be considered based on each circumstances.

1. New technologies in work relations: a general approach

It is nothing new to point out that information and communication technologies have long been installed, among many other scenes, in the field of labour relations. Certainly, work centres attend to a growing technological (and innovation) implementation in the searching of reduction of the costs and the improvement production. Some aspects such as productive processes, with the emergence of atypical forms of dependent services and the flexibilities of the traditional working hours, business management, economic organization or the same selection of personnel are embedded in a dynamic process of tecnification.

Managerial power find in new technologies, a key instrument to improve the organization effectiveness and the performance of the worker, whose activity is facilitated by the use of work tools adapted to new technologies. But the technological generalization that is being attended today does not only translate into advantages, because the use of technological devices in the company generates dilemmas. As has been argued Rodríguez Escanciano, 2015:14-15), the abusive use of technological labour instruments implies an economic harm for the employer, *lucrum cesans*, settle on time that worker devotes to different and non-labor issues; On the other hand, there is a threat to the capacity of the corporate computer system and the security, image and competitiveness of the company in case that confidential data are transmitted outside the workplace. In any case, in business control faculties the aforementioned dilemmas become more evident in the form of legal disputes not always easy to solve. And it is that the advances in technology enable new possibilities of supervision that, in many simultaneous cases, favor the storage and processing of information, by records of computerized media that being owned by the company are made available to the worker, or by stored filming, from which the entrepreneur can reconstruct the

workers profiles. This is how the more traditional methods of the Fordist production system, based on direct and immediate personal supervision of the work execution, are gradually displaced because the technological advances that allow a more penetrating and incisive continuous control and exhaustively panoramic (Goñi Sein, 1988:147). In this sense, the new ways of technological control shape the managerial management power with new tools that allow a remote surveillance in spatial and temporal terms and an intense collection of data, many of which are cut off from work, others being outside the context of jobs. No wonder, then, that the Orwellian prophecy of the great brother has come to be asserted in terms of labor (Tascón López, 2007).

By way of illustration, next to the techniques of image and sound reproduction, computer monitoring, or internet connection monitoring and electronic correspondence by the installation of spy programs, new ones emerge as the ones of geolocation (the system Of global positioning or GPS allows to know the exact situation of the users through satellites) or biometric control of the workers. The technological advance allows, therefore, that the business control gains in quantity and quality, because it enables a greater number of instruments capable of controlling more aspects of controllable ones through the traditional monitoring, being also more precise and detailed, while they open a big number of storage and reproduction possibilities. As has been denounced (Rodríguez Escanciano, 2009:89), these techniques allow the entrepreneur to obtain a fairly finished profile of the worker from sectarian, arbitrary, outdated and, above all, uncontrolled reelaborations and interconnections that can lead to continuous inaccurate assessments throughout the different phases of the contractual relationship: from the moment of selection, to the development of the contract (by serving to assess, for example, performance for remuneration or promotion purposes) and even to the possibility of its end (justifying a dismissal by a voluntary and continuous decrease in performance, an objective dismissal also linked to productivity, or even acting as a criterion for the selection of workers when it comes to paying jobs or to collective redundancies for technical, economic, organizational or production reasons). In addition, due to the worker's effects, several studies have concluded that workers monitored are more likely to be distrustful, to lose initiative, to become discouraged in order to cope with higher workloads or to hold positions of responsibility, Have less feelings of loyalty and suffer greater stress, with the risk of certain "panoptic effects", including a reduced sense of privacy, increased insecurity at work and less communication (Gude Fernández, 2014:46-47).

Contrary to what one might think, the huge technological sophistication of the productive process does not introduce greater doses of flexibility in the subordination of the worker. The high supervisory possibilities that foster technological advances and give rise to an extremely intense type of business control lead to a rigidity of legal

dependence as service benefits undergo a maximum intensification of previously unknown business control (Selma Penalva, 2009:95). The issue is complicated if one takes into account that the technological generalization demands a continuous process of legislative update because, as has been indicated in a very illustrative way, "one of the characteristics of the new technologies is that, in reality, they are always new"(San Martín Mazzucconi, Sempere Navarro, 2015:10-11). In this sense, technological control instruments are under constant evolution, so that the solutions currently given to legal disputes arising from their use in the workplace will sooner or later become out of phase because the possibilities offered by the Instrument would have been overcome and the problems would be different.

Due to the above it is not difficult to deduce that technological innovation poses different challenges in a novel dialectic: that which faces the managerial power of the employer and the fundamental rights of the worker. While it is true that the impact of new technologies on production processes is directly connected with the powers of business control, which are enhanced by this technological change, it is no less true that the right to privacy of the worker is imposed, a right that constitutes a limit in workers job. Indeed, the development of new technologies has been served with a parallel process of centrality of the right to privacy of the worker, as it assumed the risk generated by those in the protection of this right. In this dichotomy, inherent to the legal-labor relationship, the present article is inscribed precisely and the pages that follow are dedicated to it. It is a question of assessing the harmful potential that the technological control incorporates with respect to the fundamental rights of the worker, mainly the one of the intimacy, without prejudice to the fact that the right to the secrecy of the communications and to the protection of data is invoked increasingly. In this sense, to argue that the development of the technique should not be accompanied by the necessary guarantees of the fundamental rights of the workers would mean discarding a crucial starting point. The main problem is to determine the extent to which the advanced techniques allow controlling the activity of the worker or the same person of the worker. At the beginning, it is clear that such techniques must refrain from any interference in the private and intimate sphere of the worker and make use of what is known, but this is where the main difficulties of demarcation lie.

The problem of the collision between business surveillance and the right to privacy of the worker is in a material nature, linked to the scope of the employer's control power in the execution of the job but also of a procedural order, because this issue usually emerges strongly with regard to the validity of the evidence to determine whether or not it has been obtained through violation of fundamental rights, proceeding as the case may be the declaration of nullity

of the terminating decision of the employment relationship, with the consequent obligation to reinstate the worker in the Company (Desentado Bonete y Muñoz Ruiz, 2014:2 y ss). Indeed, by the techniques listed above, employers obtain data that can later serve in court to prove the contractual breach of the worker. When such breach had been established through unlawful means as a violation of any of the fundamental rights of the worker, there would be no defense of the validity of the dismissal, imposing the need to use other means of proof that were respectful of such rights. In this sense, it should be remembered that art. 90.2 of Law 36/2011, of October 10, social jurisdiction forbids the admission of evidence that originated or that had been obtained, directly or indirectly, by “procedures involving a violation of fundamental rights or public freedoms” . In any case, the question of the validity of the evidence which has served as a basis for dismissal through the special process of protection of fundamental rights is rarely resolved because the worker has directly challenged a particular means of control.

2. The power of entrepreneur management and the right to privacy of the worker: balance requirements

2.1. The fundamental rights of workers within the framework of industrial relations

By the conclusion of the employment contract, the so-called power of management is born in favour of the entrepreneur. Insert with more general character in the freedom of enterprise that enshrines art. 38 EC within the framework of the market economy, this power includes the power of control to monitor the worker’s compliance with the contractual obligations in all cases complying with the instructions given by the employer in the exercise of the power referred to¹. Thus, the worker is sign up in the same business organization and he is subject to the supervision of the employer in the development of the provision of services. This is only a direct consequence of *dependence* as one of the defining marks of the legal-labor relationship². In this respect, it should be emphasized that the evolution of technology has fueled business control, but also the debate on the limits that it can oppose to the right by virtue of the right to privacy of the worker.

The art. 20 of Royal Legislative Decree 2/2015, of 23 October, which approves the consolidated text of the Workers’ Statute Law (hereinafter ET), after prescribing in its first paragraph that the worker will be obliged to perform the

¹ El art. 5.c) ET señala, entre los deberes básicos de los trabajadores, el cumplimiento de las órdenes e instrucciones del empresario en el ejercicio regular de sus facultades directivas.

² The art. 1.1 ET states that “this law shall apply to workers who voluntarily render their paid services for hire or reward and within the scope of organization and management of another person, whether physical or legal, known as an employer or employer.”

convened work under the direction of the employer or person to whom he delegates, it states in the third paragraph that the employer may adopt the measures he deems most appropriate for supervision and control to verify the worker’s compliance with his obligations and duties, by keeping due consideration to their dignity and taking into account, where appropriate, the real capacity of workers with disabilities.. The precept has, of course, a very imprecise character because of its lack of content, while currently it is somewhat outdated by omitting any reference to the technological implementation that characterize the new forms of current business control. There are only two limits that art. 20.3 ET seems to impose on the delimitation of the employer power of control, so that it could not be understood that, in its execution, it had absolute freedom (López Ahumada, 2007:9; Chacártegi Javea, 2013:91). On the one hand, the business activity must necessarily be oriented to the control of the due fulfillment of the obligations linked to the work agreed upon in the contract, without being included in this power the inquiries that exceed the labor scope in which the service provision is developed. The control of the employer is conditioned by the limits of the legal employment relationship, so that it can only achieve the ends that are in direct connection with it, which prevents any control of the private life of the worker untied of the technical-organizational aspects of the work. On the other hand, any means used to monitor the work activity must respect the dignity of the worker. It is recognized in art. 10.1 CE as the foundation of the political order and of social peace, human dignity stands at a far-reaching limit because, as the Constitutional Court³ has pointed out, “it obliges to recognize any person, regardless of the situation in which he is, Those rights or contents of the same essential to guarantee it”. Even if company control is based on a legitimate aim of supervising the work activity, it will be necessary to decide whether the way in which it is carried out, that is to say, the mechanisms for monitoring the employment activity used by the employer, comply with the dignity of the worker.

In any case, it is necessary to clarify, the required respect for the dignity that must be kept by any instrument of control does not enable the worker to invoke a so-called “right to unconditional privacy”, because the special characteristics of the contract render it illegitimate a certain reduction of the area protected by the norm, so that the very idea of entering the business organization entails a certain compression of the rights of the individual owner (Cardona Rubert, 2003: 167-168),, without this in any case justifying measures incompatible with dignity of the worker’s person. Finding the balance in this dynamic is sometimes as complex as necessary.

³ STC 236/2007, de 7 de November.

The reference to human dignity, common reason of all fundamental rights, necessarily links with the discourse of rights at work. The truth is that fundamental rights have implications not only between the public authorities but also between private agents within the framework of their private relations. It is the so-called theory of the horizontal effectiveness of fundamental rights or *drittwirkung*. Labour is precisely one of the most privileged contexts to assert this projection of subjective rights in private law relations. It is a constitutional doctrine that “the conclusion of an employment contract in no way implies the deprivation of one of the parties, the worker, of the rights granted to him by the Constitution as a citizen”, so that “neither organizations Entrepreneurs form separate and sealed worlds of the rest of society, nor the freedom of enterprise established by art. 38 of the constitutional text legitimizes that those who render services in those on behalf of and under the dependency of their holders must bear transitory spoils or unjustified limitations of their fundamental rights and public freedoms, which have a central and nuclear value in the constitutional legal system. The manifestations of industrial feudalism are repugnant to the social and democratic State of Law and to the higher values of freedom, justice and equality through which that State takes shape and is realized (Article 1.1) ⁴. Worker not only has labour rights in the strict sense, that is, specific rights inherent to his status as a worker, which have concrete effects in the field of labour relations, because he also owns the commonly known rights of the person to does not resign because it constitutes a contractual part of the legal employment relationship. Therefore, fundamental rights are fully effective also in the labour context. As the Constitutional Court has pointed out, the employment contract cannot be considered as a legitimating title for cuts in the exercise of the fundamental rights of the worker as a citizen, which does not lose its status as a member of a private organization⁵. These are non-specific fundamental rights, defined as those recognized to all persons (characterized by their universality, unavailability and express recognition in the constitutional norm) and are exercised by workers in the framework of the employment relationship, becoming real labor rights by Reason of the subjects and of the legal relation in which they are asserted. Precisely because they are exercised within the business organization, these rights will be subject to a series of justified limits in the business power and the obligations of the labour contract, thus forming a peculiar citizenship in the company for the worker (Gutiérrez Pérez, 2011:17-40). Among these non-specific fundamental rights, it is important to stop, due to the object of the present work, in the right to privacy.

The nexus between freedom and privacy is evident to these effects, because privacy implies autonomy in the sense of self-determination of the information that the others obtain from us. With BOBBIO it can be affirmed

⁴ STC 88/1985, de 19 de july.

⁵ STC 126/2003, de 30 de juin.

that the development of the theory of freedom includes that “every human being must have a sphere of personal activity protected against the interference of all external power” (Bobbio, 1991:144). In this sense, the Constitutional Court maintains that the most important attribute of privacy, as the central nucleus of the personality, is the faculty of exclusion of others, of abstention from interference on the part of another, both with regard to the taking of intrusive knowledge, and to the illegitimate disclosure of these data (STC 142/1993, of April 22). In other words, the acknowledgement of the right to personal privacy aims to guarantee the individual a reserved area of his life, linked with respect for his dignity as a person, against the action and knowledge of others, whether public authorities or private persons, in such a way that it attributes to its holder the power to protect that reserved area against the knowledge of third parties and to undesirable publicity, thus avoiding arbitrary interference with privacy (SSTC 231/1988, 2 December and 197 / 1991, of 17 October). Also, and in the labour context, the highest interpreter of the Constitution has confirmed that the right to privacy implies the existence of a proper and reserved area in front of the action and knowledge of others, necessary according to the patterns of our culture “To maintain a minimum quality of human life” (SSTC 98/2000 of 10 April and 186/2000 of 10 July). At present there is an updated concept of privacy, which has evolved from its original definition as a “right to be left alone” to the power to control the information that concerns each one and to decide the modalities of construction of the private sphere.

The right to privacy, right of personality with the rank of fundamental right, is constitutionally enshrined in art. 18.1 of the Constitution (“the right to honour, to personal and family privacy and to one’s image” is guaranteed). In the development of the constitutional precept, Organic Law 1/1982, of May 5, on Civil Protection of the Right to Honour, Personal and Family Intimacy and to the Own Image enunciates in its art. 7 what is considered to be “illegitimate interference” and, in particular, the location in any place of listening, filming, optical devices or any other means suitable for recording or reproducing the intimate life of persons; As well as the capture, reproduction or publication by photograph, film or any other procedure of images of a person in places or moments of his private life or outside them, except for the cases provided for in art. 8.2 of the same legal text. In the labor field, the right to privacy is recognized in art. 4.2.e) ET, according to which, the worker has the right “to the respect of his privacy and due consideration to his dignity” in the employment relationship. It is thus noted that the value of dignity is referred to again in this precept as being inextricably linked to the intimacy to which the worker is entitled in the development of his work activity.

2.2. Limits on the exercise of fundamental rights

Concluded as it has just been done that the conclusion of an employment contract does not except the recognition of the different fundamental rights that assist the worker, the truth is that it does somewhat modulate the scope of its. Even though workers are recognized as equal rights as other citizens, protection may be more limited because it is restrictive in the logic of labour relations (Sempere Navarro y Mateos de Cabo, 2014:114). In this sense, the Constitutional Court has maintained that the contract between worker and employer generates a complex of reciprocal rights and obligations that conditions, along with others, also the exercise of the rights of which the workers are entitled, so that manifestations legitimated in another context, do not necessarily have to be in the context of that relationship⁶. It should be noted that constitutional interests also operate within the framework of labour relations. The freedom of enterprise implies entrepreneurial powers among which the control by the employer of the labour obligations is an example. The worker is inserted in the organizational framework and is subordinate (according to the nature of the positions inherent to the contract of employment) to the instructions of the former, limiting the scope of workers' rights. But limitation, it should be stressed, is not tantamount to deprivation. It is necessary to protect legal ways that allow to reconcile the own requirements of the dignity and privacy of the worker with the renovation of the production systems (Pérez de los Cobos Orihuel, 1990:90). When the conflict or collision between the rights of both parties was raised, the solution would be channelled through the weighting. And, in turn, the recognition of fundamental rights within the company will have, among other effects, the modulation of business powers, in particular the control, so that they represent a decided limit in its operation, overcoming the strictly patrimonialism version of the relationship and operating as a right of defence against the illegitimate exercise of such powers (Gutiérrez Pérez, 2011:165-167, 185).

Paying attention, the above, the right to privacy, far from absolute, may be subject to limitation. This limitation would only be justified in the correlative protection of another value considered worthy of protection in the legal order. Even though the existence of the contractual relationship may impose limits on the exercise of fundamental rights, these limits are also limited by "the notion of indispensability", which is a consequence of the prevailing position that fundamental rights have in our system⁷. The Constitutional Court has emphasized that the exercise of fundamental rights of the worker only admits sacrifices to the extent that it operates within an organization that

⁶ SSTC 120/1983, de 15 de December; 6/1988, de 21 de January; 4/1996, de 16 de January; 106/1996, de 12 de June; 1/1998, de 12 de January; 20/2002, de 28 de January; 126/2003, de 30 de June; o 151/2004, de 20 de September.

⁷ SSTC 90/1999, de 26 de mayo, y 213/2002, de 11 de November.

reflects other rights recognized constitutionally, such as the right to freedom of business of art. 38 EC, from which it is necessary to assess the specific limitations which fundamental rights may impose on the development of its employment relationship. However, without prejudice to the fact that the right to privacy is not absolute, neither can such character be attributed to the limits to which its exercise may be subject⁸. The right can be modulated by the interest of the employer, but the employer can not acquire in any case a main, or even pre-eminent, importance.

Given that there are no clear guidelines at the legislative level (apart from the brief reference to the proper consideration of the dignity of the worker in the adoption and application of supervision measures), it is for the judicial bodies to preserve the necessary balance between the obligations of the worker arising from the employment contract and the scope of their constitutional rights and freedoms. And if we take into account the pre-eminent position of these in the legal order, as projections of the essential core of the dignity of the person and foundations of the democratic State, the modulation the contract of employment can produce in its exercise must be the strictly necessary for the achievement of legitimate business interests, proportional and appropriate to the achievement of such purpose⁹.

2.3. The proportionality trial: articulation and presuppose

As the Constitutional Court has pointed out, the employer is not empowered to carry out, under the pretext of the powers of supervision and control conferred on him by article 20.3 LET, unlawful interference with the privacy of his employees in the workplace. The reciprocal balances that arise for both parties from the employment contract mean that the organizational powers are also limited by the fundamental rights of the worker, and the employer is obliged to respect them (STC 186/2000 of 10 July). In this way, the exercise of the employer's disciplinary and organizational powers cannot serve to the unconstitutional or detrimental results of the fundamental rights of the worker. Precisely to determine whether they are legitimate or not, it will have to be in the proportionality judgment, which allows correcting the taxable limits to fundamental rights. This test of proportionality, applied at workplace by constitutional doctrine since STC 99/1994, dated April 11, implies that the constitutional doctrine does not accord the same value to the interests of workers and of the company, in a way that the balance between the fundamental rights of the worker and the power of management of the employer is not in the middle between the two, since both do not coincide in the same plane of constitutional

⁸ STC 98/2000, de 10 de April; 99/1994, de 11 de April; 6/1995, de 10 de January; 106/1996 de 12 de June; y 136/1996, de 23 de July.

⁹ SSTC 213/2002, de 11 de Novembre; 20/2002, de 28 de January; 151/2004, de 20 de Septiembre; y 170/2013, de 7 de October.

relevance. Only when this test is exceeded can limits be imposed on workers' rights (Sempere Navarro y Mateos de Cabo, 2014:121-122), that is, only in those cases in which those limits are necessary to achieve a constitutionally legitimate aim, proportionate to achieve it and, in any case, respectful of the Essential content of the right¹⁰.

The proportionality judgment, fully established in the jurisprudence of the ECHR (Arold Lorenz, Groussot, y Petursson, 2013:81) and proclaimed at Community level in art. 52 CDFUE emerges in this context in an indispensable tool that becomes a parameter for determining the validity of possible actions restricting rights, verifying their adequacy according to a purpose that must be legitimate and proportionate. It is a question of determining, finally, the suitability, necessity and proportionality of the measure to achieve a legitimate purpose. In the game of reciprocal obligations of businessman and worker, therefore, certain conditions or modulations are allowed to the exercise of the fundamental right to privacy, always in the light of the principle of proportionality. In any case, it is not sufficient to claim the pure convenience of introducing a certain restriction on rights, since objective grounds must be invoked. This is understood by the Constitutional Court, which asserts that, since the prevalence of such rights, its limitation by the entrepreneurial faculties can only derive either from the fact that the very nature of the work contracted implies the restriction of the right¹¹, or a proven necessity or Business interest, without its mere invocation to sacrifice the fundamental right of the worker¹².

It is therefore necessary to ensure the necessary balance between the obligations arising from the contract for the worker and the scope (modulated by the contract, but in any case subsisting) of its constitutional freedom, given the pre-eminent position of fundamental rights in our system, this modulation should only take place to the extent strictly necessary for the correct and orderly respect of the fundamental rights of the worker, and especially the right to personal privacy that protects art. 18.1 EC, always bearing in mind the principle of proportionality¹³. Hence, the constitutionality of any restrictive measure of fundamental rights is determined by the strict observance of that principle. Consistently, there must be a balance of the legal purposes and legal rights protected, so that the identity of the values of the fundamental right in question (and that make it recognizable as such) is not affected by any Restriction or limitation that is contrary to the requirements of proportionality. In particular, in order to verify

10 SSTC 57/1994, de 28 de February; 143/1994, de 9 de May; 98/2000, de 10 de April; 186/2000, de 10 de July; y 156/2001, de 2 de July.

11 SSTC 99/1994, de 11 de April y 106/1996, de 12 de June.

12 SSTC 99/1994, de 11 de April; 6/1995, de 10 de January; 136/1996, de 23 de July; y 98/2000, de 10 de April.

13 STC 6/1998, de 13 de January.

if a measure restricting a fundamental right exceeds the proportionality test, it is necessary to determine whether it satisfies the following three requirements or conditions: if the measure is capable of achieving the proposed objective (suitability judgment); if it is necessary in the sense that there is no other more moderate measure for the attainment of that purpose with similar efficacy and, therefore, that it proves to be the least aggressive of the possible measures (judgment of necessity); to be balanced, as it derives from it more benefits or advantages for the general interest than damages on other goods or values in conflict (strict proportionality judgment)¹⁴. From the maxim of proportionality in the strict sense, that is to say, the mandate of weighting is followed in ALEXY theory (Alexy, 1193:111), the principles are mandates of optimization in relation to legal possibilities, while the maxims of necessity and adequacy follow the character of the principles as mandates of optimization in relation to the factual possibilities.

The proportionality trial, with the three requirements just mentioned, was used to determine the constitutionality of the intrusion into the privacy of the worker that caused STC 86/2000, of April 10. In that ruling, it was concluded that "the measure of the installation of a closed circuit television system that controlled the area where the plaintiff carried out his work was a justified measure (because there were reasonable suspicions that the appellant had committed serious irregularities at workplace); suitable for the purpose intended by the company (verify if the employee actually committed the suspected irregularities and then take the corresponding disciplinary measures); needed (As the recording would serve as proof of such irregularities); and balanced (since the recording of images was limited to the box area and to a limited time duration, enough to prove that it was not an isolated event or a confusion, but a repeated illicit behavior). The overcoming of such requirements led the Constitutional Court, on that occasion, to rule out any injury to the right to personal privacy enshrined in art. 18.1 EC.

3. Special reference to some of the most current problems

3.1. The use of e-mail for out-of-work purposes and its control

E-mail is today a common work tool that incorporates undoubted advantages on the productivity side, while favoring the worker's contact with both the company's staff and third parties (for example, customers or suppliers). However, it is widely known that an abusive or deviant use of this tool may cause serious damages to the company.

14 SSTC 207/1996, de 16 de Decembre; 49/1999, de 5 de April; 159/2009, de 29 de June; 86/2006, de 27 de Mars; 206/2007, de 24 de Septiembre; 173/2011, de 7 de Novembre; y 96/2012, de 7 de May.

In this sense, it is usually alluded to the economic damage, in its version of *lucrum cesans*, valued in the time that the worker stops dedicating to the effective delivery of the work to focus on activities or tasks that in addition to implying the reduction of their performance, They accrue to that of the other partners to whom it sends the messages. Likewise, an excessive use of e-mail may compromise the ability of the computer system to transmit information, security, image or competitiveness of the company, providing confidential data regarding employees, customers or suppliers, or even third parties outside the Company (Cardona Rubert, 2003:166). As a means that the employer makes available to the worker, the use of electronic mail must submit to the instructions received in this regard, which can not lead one to think that business silence implies a permit for all kinds of misuse, as this would mean a transgression of contractual good faith (article 5.a. ET).

From the above it is explained that the control of any excess in the use of the courier services can be very useful in the frame of the power of surveillance that assists to the employer, since it is taken into account that the mail is not a means of the corporate patrimony, that it is made available to the worker to be used in the labour provision. The question is, as always, to determine the extent to which this interference collides with the right to privacy of the worker, if not with the right to the secrecy of communications (Algar Jiménez, 2007:195-197), because the personal use of computer media, and to the fact that such control is even projected on third parties who are not related to the employment relationship that are in communication with the workers (Desdentado Bonete y Muñoz Ruiz, 2012:139). And, as says the ECHR stated in its Judgment of 3 April 2007, *Copland v. United Kingdom*, “emails sent from the workplace are included in the scope of protection of art. 8 of the European Convention for the Protection of Human Rights and Fundamental Freedoms, as they may contain sensitive data affecting privacy and respect for the privacy of the worker. Consistent with this, the Constitutional Court has specified that the coverage of the fundamental right to privacy is extended to the content of electronic messages, insofar as these mails, written or already read by its addressee, are stored in the memory of the Computer terminal used (STC 173/2011, of November 7).

As a guarantee of a balanced exercise of corporate control, it has been demanded to the monitoring of communications, and in coherence with the requirements of good faith, the explicit policy on the use of computer tools and the way of articulating its control must be notified to all workers so that they can follow the guidelines. In this sense, from the aforementioned STEDH (which censored the collection and storage of information about e-mail and Internet browsing without the worker concerned), it is understood that the expectation of privacy in the use of a computer tool only disappears with the previous information that the company provides to the worker about the surveillance

that can be exercised. Thus, employees must be warning about the exclusively labor use of the electronic mail and about their possible control, a warning that is generally incorporated in protocols, instructions, circulars or agreements, despite the small number of agreements that incorporate clauses in this respect and despite the current relevance of the issue and its unrest¹⁵.

Therefore, it is reasonable that any use that contradicts the instructions provided enables business control without being able to invoke otherwise a supposed expectation of confidentiality on the part of the worker. This position was ratified in the SSTS of September 26, 2007 and March 8, 2011. In both the High Court understands that the worker does not have the right to personal use of the means that the company makes available to him, although in any case the control must be made with guarantees that start from the previous information to the workers in this respect and rules of use that have to be known by the employees. It is because, given the expectation of intimacy that assists the worker in his daily life, the use of means of control that may affect his right requires the company to previously report its existence. The mentioned pronouncements set important criteria in the context of the control of electronic mail in the Company (SanMartín Mazzucconi y Sempere Navarro, 2015:14), namely, art. 20.3 ET allows the employer to supervise the use of the computer of his employees, without the regulation of personal registration (Article 18), which is designed for exceptional cases; The practice of computer controls does not require the protection of corporate assets to be involved, nor does a specific justification be required on a case-by-case basis, or carried out at the time and place of work or in the presence of the worker; In any case, in order to avoid possible violations of the fundamental rights that protect the worker, the company must make clear that the content of the computer or communications can be examined and brought to the attention

However, the Supreme Court, in its Judgment of October 6, 2011, qualified this position in what can be interpreted as a step back, by making the control of the legality of corporate action more flexible (Carrizosa Prieto, 2012:251-267; Sepúlveda Gómez, 2013:197-214). And is that in this ruling are no longer demanding strict protocols of use and

¹⁵ Only in collective agreements such as the IV Collective Agreement of Iberdrola Inmobiliaria, SAU, BOE of February 23, 2016, (article 42); The State collective agreement for the sector of orthopedics and technical aids, BOE of March 15, 2016 (article 54.9); The collective agreement of companies linked to Telefónica de España, SAU, Telefónica Móviles España, SAU and Telefónica Soluciones de Informática y Comunicaciones, SAU, BOE of January 21, 2016 (article 168); Or the eighteenth general collective agreement of the chemical industry, BOE of 19 August 2015 (article 8), contains clauses relating to the use of computerized means owned by the enterprise for purposes other than those related to the content of the Employment benefit.

information to understand that an absolute prohibition of the use of computer tools for purposes other than those strictly labor to understand inoperative the expectation of confidentiality. That is to say, the High Court considers in the aforementioned pronouncement that the prohibition of the personal use of computer tools can be interpreted as a kind of implicit warning about the installation of control systems, without invoking any injury to the right to privacy of the worker whose Activity is monitored.

In a clear line of continuity with this more flexible view of the duty of information, STC 170/2013, of October 7, also considers the prohibition of a certain behavior is sufficient the employer to control the action of the workers without necessity of having to provide them any additional information on the possible means of control to be used to verify the exclusive use of mail. In particular, the previous information to the employee is understood saved in that judgment with the conventional provision that catalogs as a slight lack the use of the instruments for purposes other than those related to the job. The Constitutional Court implicitly considered in this clause the possibility of implementing control systems, eliminating for the worker any reasonable expectation of confidentiality¹⁶ regarding the knowledge of the communications maintained through the email account provided by the company. This is because, “in view of the binding nature of the collectively agreed regulation, it can be concluded that, in their employment relationship, only the professional use of e-mail with business ownership was allowed; while its use for purposes other than the content of the job was classified as an offense punishable by the employer, therefore ruled in the company an express prohibition of extra-work use, not stating that such a ban had been mitigated by the entity. This being the applicable regime, the power of control of the company on the computerized tools of business ownership made available to workers could legitimately be exercised, ex art. 20.3 LET, both for the purpose of monitoring the fulfilment of the work performed through the professional use of these instruments, and to verify that their use was not intended for personal purposes or other than the content of their work. In such circumstances, according to the constitutional case-law set out, it is also possible to understand in the present case that there could be no expectation of confidentiality regarding the knowledge of the communications maintained by the worker through the email account provided by the company and that had been registered in the Company computers. The express prohibition on the use of electronic mail and its consequent limitation for professional purposes implied the company’s ability to control its use, in order to verify the worker’s compliance with his obligations and duties, including the adequacy of his work. Provision to the requirements of good faith”.

¹⁶ Concept of American origin and used by the Court of Strasbourg in the SSTEDH of 25 June 1997, Halford v. United Kingdom, and of 3 April 2007, Copland v. United Kingdom.

In any case, if there is no provision in this regard, it is not generally accepted that business ownership of the work environment (reasoning traditionally invoked on the business side) is a sufficient justification to control the electronic mail used by the worker in the company. In these cases, the worker would have a general expectation of confidentiality. And is that the lack of instructions is understood as a kind of business tolerance to the use of the computer tolos out of work. For reasons of good faith, any change in this position would require prior communication to the worker.

But not only information plays a decisive role in this area, because the proportionality judgment continues to be decisive in the assessment of possible violations of workers’ rights. In this sense, any kind of indiscriminate interference must be avoided, that is, control must be carried out in a proportional way to the purpose pursued, surpassing the triple test of proportionality referred to in the previous epigraph (Segoviano Astaburuaga, 2004:150-161). It is therefore appropriate to use means that detract from the content of the mail, preferring to control circumstantial elements such as the recipient of the message or its subject matter, as well as the number and frequency of messages sent (Thibault Aranda, 20016). Surveillance in relation to electronic messaging follows the same standards of performance as those generally accepted in connection with Internet browsing and its control in order to verify possible page queries for particular purposes (Rodríguez Escanciano, 2013:86)¹⁷. Also in this area, the maximum of proportionality, with its three partial maxims of adequacy, necessity and proportionality in the strict sense, requires that an indirect control should be chosen regarding the frequency and time of connection to websites not authorized by others, if it is sufficient for the intended purpose, rather than control of the content of the pages (Roig, 2011:22-24). In this way, business control must be restrictive, as long as there is a relevant justification, there should be no other measure to obtain the same results, while the duration of this control can not be unnecessarily lengthened or undefined. It seems that, in this area, the so-called proportionality judgment advises the adoption of precautionary measures such as the installation of automatic warnings or filters that prevent seeing unauthorized.

3.2. Installation of video surveillance cameras and closed-circuit television

Video surveillance of the workers constitutes another common modality of technological control of the labour activity with which the entrepreneurs count by the capture of the image in a physical support on closed circuits of television,

¹⁷ Today’s control systems in relation to visits to web pages are usually implemented in monitoring programs that allow real-time knowledge of the pages visited, the duration of the connection and the frequency of visits; Firewalls that prevent access to certain pages; And sniffers that, installed in the server, alert on what the worker performs in the working day.

installation of cameras or devices webcam. In this regard, one of the main issues to be decided is the specific place of installation the audio-visual control media. According to the Constitutional Court, surveillance in areas of rest and recreation, changing rooms, toilets, dining rooms and similarly in any case harmful the worker's privacy right (not so if access to such spaces is recorded), because they are not related to the job, without prejudice to the fact that it may adversely affect other fundamental rights, such as freedom of association, if the installation takes place in the premises of staff delegates or trade union sections. But this does not mean that such injury cannot occur equally in those spaces where the work activity occurs, if the installation of such devices does not exceed the test of proportionality. The specific physical location of the chambers is no longer the decisive element in assessing whether or not the right to workers' privacy, as traditionally considered, has been violated. These criteria, focused on the place of recording, has been displaced by the judgment of the circumstances of the particular case in the light of the proportionality judgment.

Thus, it is commonly accepted that the requirements of adequacy, relevance and prohibition of excess operate as limits to the collection and storage of data. In particular, the chambers must be the only devices by which the employer can go to gain the surveillance of his company by not having another instrument less restrictive of the fundamental rights by searching this objective. In this respect, simple recording of images without sound is less burdensome for the right to privacy than the simultaneous acquisition of images and sound, as it may affect the content of non-work conversations that employees may have lawfully and that employer does not have to know. Thus, such techniques are only admissible when they are indispensable for the proper functioning of the company and there is no other less invasive mechanism (Poquet Catalá, 2013:255). In addition, it is convenient to discard the location of cameras throughout the company, should be limited to recording exclusively to those places where it is strictly necessary, to monitor compliance with labour obligations and duties and for the minimum time required to satisfy legitimate interest of the entrepreneur.

In general, in the constitutional doctrine there is no radical prohibition on the use of video cameras, but calls for due balance in their articulation. Thus, in STC 186/2000, dated 10 July, it was concluded that the measure for the installation of a closed circuit television system that controlled the area where the plaintiff was working was a justified measure (since there were reasonable suspicions of the commission by the appellant of serious irregularities in his job), suitable for the purpose intended by the company (check the commission of suspected irregularities), necessary (since the recording would serve as proof of such irregularities) and balanced (Since the recording of images was limited to the box area and limited time duration). In particular, it was considered at that time that the privacy of the appellant was

not attacked by the mere fact of filming how he performed the tasks entrusted to his job, because that measure was not arbitrary and was not intended to disclose his conduct, but that it was a matter of obtaining an understanding of what their work was, a claim justified by the fact that irregularities were detected in the professional performance of the worker, constituting a breach of contractual good faith.

In any case, and in e-mail control, the legality of corporate control is not only subject to the three-step test of proportionality, since the requirement to inform workers about the audit activity by audiovisual devices (Rodríguez Escanciano, 2013:70-71). In fact, the prior knowledge of the installation of video surveillance cameras and their purpose of business control is an essential requirement in determining the validity of such control. But, it should be emphasized, information does not amount to consent and, in this sense, art. 6 of the Organic Law 15/1999, of December 13, on the protection of personal data (hereinafter LOPD), after establishing in its first paragraph that the processing of personal data will require the unequivocal consent of the affected, and in the second part it specifies a series of exceptions in which consent is not required, including "when referring to the parties to a contract or pre-contract of a business, employment or administrative relationship and are necessary for its maintenance or compliance". Therefore, the entrepreneur can implement video surveillance systems even without the authorization of the worker, based on the power of surveillance provided by Article 20.3 ET. Its knowledge is demanded, without the acceptance by the same one being a requirement of the legality of the means of control.

It is therefore necessary that the control of the activity should be notified, without any simple signs or posters indicating the monitoring devices being sufficient. This was considered in STC 29/2013, dated February 11, in which it was concluded that only business use of the information obtained by these means for the purposes that had been communicated to the worker expressly, so that the Installation of cameras in order to prevent crimes so communicated to the worker could not serve to invoke the justification of disciplinary dismissal as a result of the images obtained. This ruling is of great importance since it was the first pronouncement in assessing the controversy in the light of the principles of data protection¹⁸, taking into account the so-called right to self-report and leaving aside the privacy,

¹⁸ Please note that Article 5.1.f) of Royal Decree 1720/2007, dated December 21, approving the LOPD Development Regulation, incorporates as a definition of personal data "any numerical, alphabetical information, Graphic, photographic, acoustic, or any other kind concerning identified or identifiable natural persons". According to constitutional doctrine, are characteristic elements of the constitutional definition of the fundamental right to the protection of personal data "the rights of the affected to consent to the collection and use of their personal data and to know of them. And they are indispensable to make effective this content the recognition of the right to be informed of who owns their personal data and for what purpose. STC 292/2000, of 30 November.

even though it was the latter had been invoked by the appellant (De Vicente Pachés, 2004:30)¹⁹. Specifically, within the framework of art. 18.4 EC²⁰, and not in that of art. 18.1 EC, the Constitutional Court determined the illegality of recordings used for purposes other than those envisaged with its implementation, thus failing to comply with the duty of information of art. 5.1 LOPD. Specifically, this provision declares that interested parties to whom personal data are requested must be previously informed in an express, precise and unequivocal manner: a) of the existence of a file or processing of personal data, the purpose of the picking up and the recipients of the information; B) the obligatory or optional nature of their response to the questions raised; C) the consequences of obtaining the data or the refusal to supply them; D) the possibility of exercising the rights of access, rectification, cancellation and opposition; E) the identity and address of the controller or, where appropriate, his representative²¹. Thus, the breach of the duty of prior information to the worker about the installation of audio-visual control systems and their purpose was considered sufficient to declare the existence of an injury to Article 18.4 of the EC, without the Constitutional Court proceeding to assess whether Judicial body had previously and adequately considered whether the use made of the images taken by the security cameras had respected the right to privacy of workers in accordance with the proportionality test. Recall that art. 4.2 LOPD establishes that the personal data being processed cannot be used for purposes incompatible with those for which the data had been collected.

The lack of prior information on the purpose of the control of the work activity also justified the nullity of the evidence sought in the case that gave rise to the STS of May 13, 2013, regarding the use of video surveillance cameras to sanction a worker for the breach of her employment obligations. This involved, in particular, the non-consented or previously informed use of image recordings for an unknown purpose by the worker concerned and other than that expressly indicated by the company (prevention of theft by clients and not for the control of work activity). This sentence emphasizes previous information as a necessary requirement of the legitimacy of control and it is argued that the worker must know not only that it is being recorded, but also that such recording can be used for disciplinary purposes. He literally concludes that “the only fact of the installation and knowledge of the existence of

such cameras may entail the consequence of understanding that there is evidence that they could be used for the control of labour activity and for the imposition of disciplinary sanctions for breach of contract, since, as we have indicated, in the present case the business representation, after the installation of the cameras, communicated to the workers’ representatives that the exclusive purpose was to prevent customer theft and that it was about a system of labor surveillance.”

Considering an evolution of a more guaranteeing thesis with the rights of workers to a position aimed at ensuring the business interest (Ferrando García, 2016:45), STC 39/2016, of March 3, gives a twist to the problem of previous information. With substantial disregard for accounting, the company (an Inditex store) decides to install a recording device in the space in which the cash register was located. The controversial issue was that the camera was installed without prior communication to the workers, although an informational badge was placed in the shop window in a visible place. The video surveillance cameras installed in the store where she served the appellant captured her image appropriating money and performing, to hide such appropriation, false operations of returns of sale of garments. Faced with these facts the worker was dismissed. In this occasion, the Constitutional Court understands that the informational mark placed in the shop window of commerce is enough to be understood that workers are aware of the control techniques, without being informed about the exact purpose assigned to such control, clearly disregarding STC 29/2013. This interpretation could be questioned in the light of art. 5 LOPD that explicitly requires information to the interested parties, collective in which the workers would be included. In any case, the truth is that the STEDH line of argument of January 12, 2016, Barbulescu c. Romania, in which it was considered that the worker’s right to privacy had not been violated by the business inspection of the messenger service installed for work purposes and the use for others was forbidden. The Strasbourg Court rejected there was an infringement of art. 8 of the European Convention on Human Rights, under which “every person has the right to respect for his private and family life, his address and post”.

Once the information duty had been complied with, the Constitutional Court, in the aforementioned judgment, also understood that the measure of the installation of security cameras that controlled the cash area where the plaintiff was working exceeded the proportionality test. This was because it was a justified measure (since there was reasonable suspicion that some of the workers serving in that box were appropriating money), suitable for the purpose intended by the company (check whether some of the workers actually suspected irregularities and, if so, to adopt the corresponding disciplinary measures), necessary (since recording would serve as proof of such

¹⁹ It is a right that gives its owner the power to decide on the disclosure and use of personal data, at all stages of their elaboration and use, that is, their accumulation, transmission, modification and cancellation

²⁰ The precept provides that the law will limit the use of information technology to guarantee the honor and personal and family privacy of citizens and the full exercise of their rights, being after the Portuguese one of the first constitutional texts to recognize this premise.

²¹ The art. 18 of Royal Decree 1720/2007, of 21 December, approving the Regulation of development of the LOPD, specifies that this information obligation must be carried out through a means to prove compliance.

irregularities) and balanced (because the recording of images was limited to the area of the box). Consequently, any injury to the right to personal privacy enshrined in art. 18.1 EC.

3.3. Geolocation devices: GPS

GPS is among the latest technologies to join the business control of the work activity. It consists of a geolocation system (Global Positioning System) that is coupled to a digital network of mobile communications GSM (Global System for Mobile Communications). Specifically, it is articulated through the installation of locators in vehicles, mobile phones, tablets and other devices of the company that are programmed to permanently determine the location of the person or the vehicle and verify, thus, the fulfilment of the contractual obligations. The usefulness of this surveillance system is mainly seen in the case of workers who provide their services outside workplaces, as is the case of security guards, transporters or commercial workers, to cite a few examples. GPS has come to replace the traditional tachograph by which certain data of interest such as the duration of the trips, the kilometres travelled, the stops or the start-up schedule were controlled. In front of that, the GPS allows much more exhaustive information and a more precise follow-up, but also, all that being said, poses greater problems of confrontation with the worker rights.

Data collected by the GPS, as associated with the information of an identified or identifiable individual, are included in the consideration of personal data whose treatment is subject to the regulation of the LOPD. Hence, the Spanish Agency for Data Protection recalls in its report 193/2008 that it is necessary to ensure the proper information on the GPS devices to workers through information notes, being cited to be present during the installation of the corresponding device. Then companies that claim to use this means of control must inform the worker beforehand, without obviating their purpose, making sure that their use meets the requirements of the LOPD. Thus, not only must the requirements of the test of proportionality be overcome, avoiding abusive controls that exceed work hours, since sufficient knowledge will also be necessary in advance by the worker supervised by these techniques. In this sense, the STSJ of Castilla-La Mancha, dated March 23, 2015, has stated that “it will not be enough that the processing of data results in a legal principle, because it is covered by the Law (articles 6.2 LOPD and 20 LET), Or which may eventually result, in the specific case in question, proportionate to the aim pursued; The business control by that route, but, although it may occur, must also ensure due prior information on the installation and purpose of these techniques”. As it is noticed, the control by GPS devices does not distance of the planned with regard to the use of electronic mail or the installation of video surveillance cameras, so that again in this area the worker

must know properly that the GPS can be used to monitor where it is at any time for labour control purposes, and can not be used for other purposes. This was indicated in the SSTSJ of Madrid on September 20, 2014, in Galicia on June 6, 2014, in Castilla-La Mancha on June 10, 2014 and in the Basque Country on May 10, 2011. Consistent with this reasoning, records obtained with the GPS cannot be enforced for purposes other than those that were communicated to the worker under control.

It should be emphasized that information is the requirement, but not the consent of the worker. As the AEDP argues, art. 6 LOPD establishes that “the treatment of personal data will require the unequivocal consent of the affected person, unless otherwise provided by law.” However, its second paragraph provides that such consent may be exempted in certain cases, which for the purposes here are limited to that contained in the first subparagraph of that paragraph, according to which “consent is not required when the data of personnel character are picked up in exercise of the functions of public administrations within the scope of their powers; When they refer to the parties to a contract or pre-contract of a business, labor or administrative relationship and are necessary for its maintenance or compliance”. This exception is based on the existence of prior consent, granted at the time the relationship was formed, to the processing of personal data necessary for the maintenance or fulfillment of said relationship. The above serves the AEPD to conclude that the treatment of the location data of an escort during the provision of the service (beginning and end of service or incidents occurring during its provision) requires the prior fulfillment of the duty of information to the affected. In this line is inscribed the constitutional doctrine, which maintains that in the labor field the consent of the worker passes, as a general rule, to the background because the consent is understood implicit in the business relationship, provided that the processing of personal data is necessary for maintaining and performance the contract signed. Thus, if the dispensation of the consent provided for in art. 6 LOPD refers to the data necessary for the maintenance and fulfillment of the employment relationship, the exception undoubtedly covers the processing of personal data obtained by the employer to ensure compliance with the obligations arising from the employment contract. Consent is ultimately implied in the acceptance of the contract itself, which implies recognition of the managerial power of management (STC 39/2016, dated March 3).

But, as has been advanced above, not only compliance with the duty of information will be key in the admission of the aforementioned control through GPS, as it is also mandatory to overrule the proportionality judgment. This is generally dissatisfied when the inspection exceeds the worker’s working day. At this point, it is worth noting the STS of June 21, 2012, which brought about the disciplinary dismissal of a worker for breach of contractual good faith,

disloyalty and abuse of trust, based on the activities he performed during the period of time in he was in temporary disability and of which the company had knowledge through the installation and later use of a GPS locator in the private vehicle of the actor by a private detective. The sentence confirms the STSJ of the Basque Country of May 10, 2011. The latter was to determine if the placement of the GPS without knowledge or authorization and without any special circumstances that could justify such an installation, involved or not a disproportionate interference in personal privacy rights. After the application of the proportionality judgment, the TSJ throws a positive response to the previous question. Specifically, it argues first that the implementation of a real-time monitoring system of the plaintiff's private vehicle during a week in which his contract of employment was suspended affects one of the manifestations of his right to privacy, understood as the right not to be located continuously by electronic means placed in their property against the wishes of the worker. And that technique allowed the detective, and by extension to the employer who hired him, "to have a permanent knowledge, throughout the day and night, of the place where the worker is, by the position of his vehicle, as well as other complementary data, such as the times of use of the vehicle, the routes, the pauses, the kilometers traveled, or the speed". It was also concluded that the way was totally unnecessary by viewing the objective pursued to verify the activities carried out by the complainant in public and private spaces of free access, responding to the mere convenience of the investigator, which did not justify the use of this devices so invasive of private life, and confirm that other direct and less invasive methods of surveillance may have been used.

4. Conclusions

Generalization of new information and communication technologies in companies has meant important advances in production systems, which have been streamlined, but also has incorporated new challenges from the point of view of business control of labor activity, which is essential for the smooth running of the productive organization. And it is that the technological innovation has reinforced the business power of control of the execution of the provision of services by increasing the possibilities of control. However, the problem arises when confronting those assumptions, not infrequent, in which these techniques of business control collide with the protection of fundamental rights of the worker, notably the right to privacy.

The fact is that there are not enough normative provisions that, assuming the intensification of the use of new technologies, contribute to resolving conflicts between control and privacy, conflicts that inherent to the dichotomy that characterizes the labor legal relationship. The art. 20.3 ET, impregnated with indeterminate legal concepts,

contains an imprecise regulation where they exist and, therefore, nothing adds to demarcate the powers of business control and the limits that can be imposed on the fundamental rights of workers. It should be noted, therefore, that technological changes have not been positivized in terms of control in this third section of art. 20 ET, in what can be considered a clear gap between the reality of the facts and the legal regulation. In other words, legislation has not evolved at the rate at which new technologies pose challenges in the objective scope of labour relations.

In the absence of a specific legal regulation to deal with legal disputes arising from the use of new technologies in the workplace, jurisprudence plays a decisive role in the construction of legal criteria due, in large measure, to the large casuistry that incorporates the subject in question. Certainly, this is characterized by a marked circumstantiality, so that any approach requires a demanding task of searching factors that concur. This is because, in general, the powers of corporate control and the demands of the workers' rights do not present themselves in their conceptual purity, but they do so in circumstances that often hamper their jointly peaceful articulation. It is commonplace to point out that the right to privacy of workers can not insurmountably oppose the use of the different techniques of business control, since it is not absolute. Although, in their articulation, these are modulated in the light of the principle of proportionality. That being so, it is only possible to impose limits on the rights of workers in cases where they prove necessary to achieve a constitutionally legitimate aim, proportionate to achieve it and, in any case, respectful of the essential content of the right in question. Hence, the maximum of proportionality, with the three partial maxims that it incorporates (suitability, or that the measure is likely to achieve the proposed objective, need, or that there is no other more moderate measure for achieving the goal with equal effectiveness; And proportionality in the strict sense, or that the measure proves to be balanced, as it derives from it more benefits or advantages for the general interest than damages) constitutes a parameter for determining the validity of possible restrictive actions, verifying their adequacy according to a purpose that must be legitimate and proportionate.

However, given that the solution of the proportionality judgment may be settled, it must be admitted that it is imprecise and is condemned to the casuistic search for a solution to know when the restrictive measure of the right is necessary, appropriate and proportionate. In this sense, it should be noted that the case law is not fully consolidated and is often hesitant in articulating the limits of the right to privacy of individuals within the framework of their working relationships and the scope of control by the entrepreneur, which is fundamentally noticed in the determination of the duty of information to the worker of the installation of technological means of control (e-mail surveillance or internet spy programs, installation of video surveillance cameras or geolocation systems). And the

intended purpose with them. Certainly, it is at this point that the doubtful judicial doctrine is more evident in this respect, for it is not strange to find pronouncements that, in a pendular dynamic, make difficult the construction of solid criteria that can be applied for different cases, neglecting in many occasions previous solutions and the sense of them (as does STC 39/2016 with regard to STC 29/2013). Not infrequently, pronouncements that resolve the tensions between the faculties of corporate control and the rights of workers in the company, often based on the balance of interests of both parties, incorporate particular votes, in what is but full evidence of the controversy of the question.

In the course of the years, therefore, divergent positions are seen that, far from putting order and coherence in the treatment of the subject, are even more confusing. In conflicts between the right to privacy of the worker and the business interest to control the fulfillment of contractual obligations, more rigid interpretations (of the type contained in STC 29/2013, of February 11 and STS of 13 May 2013, in relation to recording techniques) that require the worker to be informed both of the existence of means of surveillance and of the purpose of their implementation so that it can be estimated that the worker's expectation of privacy disappears, (STS of 6 October 2011 and STC 170/2013, in the field of the use of electronic mail) which implicitly consider that duty to be fulfilled by the mere prohibition of a certain conduct, and thus leave the door Open to the use of appropriate means of control. Moreover, the mere prohibition contained in a collective agreement would implicitly imply the ability of the company to control the use of the computer tool in question, without having to provide any additional information to the workers. This hesitant character in the various judicial solutions (the last exponent has come from the hand of STC 39/2016, March 3, which has considered that the simple informational sign on the installation of recording devices in the shop window of a trade is sufficient to make it understood that workers are aware of the control techniques, without being informed about the exact purpose assigned to such control) is also evidenced in relation to the requirement of prior information on the installation and use of devices GPS, without it being unusual to encounter with disparate pronouncements of the Superior Courts of Justice in this respect.

The issue, it is noted, is by no means closed. The vast dynamism that oozes the technological matter makes it difficult to find unanimity of criteria in this respect, without prejudice to certain basic guidelines that, like the proportionality judgment, commonly appear in the main argument of all judicial pronouncements. Everything seems to indicate that it will continue to be the jurisprudence and the constitutional doctrine that, taking into account the circumstances of each case, assume the leading role in the treatment of the subject. It would be desirable, in any

case, to adopt a clear line of interpretive continuity in the articulation of the corresponding solutions, in order to put an end to the legal uncertainty generated by solutions inconsistent with previous ones. From these lines, of course, the difficulty of answering all the questions at the same (frenetic) pace with which technological evolution raises the problems in question is not unknown, but this is not an obstacle to appeal to the need for articulation Consistent and consistent response.

BIBLIOGRAPHY

Alexy, R.: *teoría de los derechos fundamentales*, centro de estudios constitucionales, madrid, 1993.

Algar Jiménez, C.: *el derecho laboral ante el reto de las nuevas tecnologías*, difusión jurídica y temas de actualidad, madrid, 2007.

Arold Lorenz, N.-L; Groussot, X. Y Petursson, G. T., *The European Human Rights Culture - A Paradox of Human Rights Protection in Europe?*, Martinus Nijhoff Publishers, Leiden, 2013.

Bobbio, N.: *El tiempo de los derechos*, Sistema, Madrid, 1991.

Cardona Rubert, M. B.: "Las relaciones laborales y el uso de las tecnologías informáticas", *Lan Harremanak. Revista de Relaciones Laborales*, núm. extra, 2003.

Carrizosa Prieto, E.: "El control empresarial sobre el uso de los equipos informáticos y la protección del derecho a la intimidad de los trabajadores", *Temas Laborales*, núm. 116, 2012.

Chacartegui Jávega, C.: *Dignidad de los trabajadores y derechos humanos del trabajo según la jurisprudencia del Tribunal Europeo de Derechos Humanos*, Bomarzo, Albacete, 2013.

Pérez De Los Cobos Orihuel, F.: *Nuevas tecnologías y relación de trabajo*, Tirant lo Blanch, Valencia, 1990.

De Vicente Pachés, F.: "Las facultades empresariales de vigilancia y control en las relaciones de trabajo", *Tribuna Social*, núm. 57, 2004.

Doctor Sánchez-Migallón, R.: “La vigilancia de la actividad del trabajador mediante videocámaras y circuitos cerrados de televisión”, *IUSLabor*, núm. 3, 2014.

Gude Fernández, A.: “La videovigilancia laboral y el derecho a la protección de datos de carácter persona”, *Revista de Derecho Político*, núm. 91, 2014.

López Ahumada, J. E.: “La tutela del derecho a la intimidad del trabajador y el control audiovisual de su actividad laboral”, *RGDTSS*, núm. 14, 2007.

Desdentado Bonete, A. Y Muñoz Ruiz, A. B.: *Control informático, videovigilancia y protección de datos en el trabajo*, Lex Nova, Valladolid, 2012.

- “Trabajo, videovigilancia y controles informáticos. Un recorrido por la jurisprudencia”, *RGDTSS*, núm. 39, 2014.
Ferrando García, F. M.: “Vigilancia y control de los trabajadores y derecho a la intimidad en el contexto de las nuevas tecnologías”, *RTSS. CEF*, núm. 399, 2016.

Goñi Sein, J. L.: *El respeto a la esfera privada del trabajador: un estudio sobre los límites del poder de control empresarial*, Civitas, Madrid, 1988.

Gutiérrez Pérez, M.: *Ciudadanía en la empresa y derechos fundamentales inespecíficos*, Laborum, Murcia, 2011.

Poquet Catalá, R.: *El actual poder de dirección y control del empresario*, Thomson Reuters Aranzadi, Cizur Menor, 2013.

Rodotà, S.: “Democracia y protección de datos”, *Cuadernos de Derecho Público*, núms. 19-20, 2003.

Rodríguez Escanciano, S.: *El derecho a la protección de datos personales de los trabajadores: nuevas perspectivas*, Bomarzo, Albacete, 2009.

- *Poder de control empresarial, sistemas tecnológicos y derechos fundamentales de los trabajadores*, Tirant lo Blanch, Valencia, 2015.

Roig, A.: *Derechos Fundamentales y Tecnologías de la Información y de las Comunicaciones (TICs)*, Bosch, 2011.

San Martín Mazzucconi, C. Y Sempere Navarro, A. V.: *Las TICs en el ámbito laboral*, Francis Lefebvre, Madrid, 2015.

Segoviano Astaburuaga, M. L.: “El difícil equilibrio entre el poder de dirección del empresario y los derechos fundamentales de los trabajadores”, *Revista jurídica de Castilla y León*, núm. 2, 2004.

Selma Penalva, A.: “Las peculiaridades prácticas del control en la empresa”, *Anales de Derecho*, núm. 27, 2009.

Sempere Navarro, A. V. Y Mateos Y De Cabo, O.: “Uso y control de herramientas informáticas en el trabajo (marco legal, pautas judiciales y convencionales)”, en AA. VV.: *Tecnologías de la información y la comunicación en las relaciones de trabajo: nuevas dimensiones del conflicto jurídico*, SAN MARTÍN MAZZUCCONI, C. (Dir.), Eolas, 2014.

Sempere Navarro, A. V. Y San Martín Mazzucconi, C.: *Nuevas tecnologías y Relaciones Laborales*, Aranzadi, Cizur Menor, 2002.

Sepúlveda Gómez, M.: “Los derechos fundamentales inespecíficos a la intimidad y al secreto de las comunicaciones y el uso del correo electrónico en la relación laboral. Límites y contra límites”, *Temas Laborales*, núm. 122, 2013.

Tascón López, R.: “El lento (pero firme) proceso de decantación de los límites del poder de control empresarial en la era tecnológica”, *Aranzadi Social*, núm. 17, 2007.

Thibault Aranda, J.: *Control multimedia de la actividad laboral*, Tirant lo Blanch, Valencia, 2006.



THE USE OF NEW TECHNOLOGIES TO PROMOTE PREVENTIVE CULTURE



Manuela Durán Bernardino
PhD in Labour Law and Social Security
Expert in Prevention of Labour Risks

Summary

1. Introduction.

2. Technologies applied to the prevention of occupational hazards. New tools.

- 2.1. Applications.
- 2.2. Games.
- 2.3. Websites.
- 2.4. Social networks.
- 2.5. Equipment.

3. New technologies for the prevention of occupational hazards. Good practices.

- 3.1. The influence of new technologies in protecting the safety and health at work.
- 3.2. New technologies and transmission of information and training.

4. Conclusions.

Abstract:

Scientific and technological advances are a useful tool to promote preventive culture and occupational risk prevention. In the field of prevention of occupational hazards, new technologies offer many options and tools that must be known in order to improve the efficiency of the productive activity of the company reducing workplace accidents. For this reason, the chapter here is introduced is divided into two broad headings, which carried out a qualitative and quantitative analysis of the use of new technologies to promote the prevention of risks to which they are exposed workers in their workplace. In the first section, a study of the main options offered by the application of new technologies in prevention of occupational risks and an analysis of the different tools aimed at improving the management of safety and health at work is offered. In the second section, trying to offer a practical view, they highlight some of the most innovative and creative experiences, existing at European and national level in the use of new technologies for this purpose.

1. Introduction

The information and communications technology (ICT) ¹ have transformed the way we work, becoming a fundamental tool, which has led to the optimization of resources, cost reduction, improved results and especially the increase in productivity.

Similarly, the emergence of new technologies², in particular microelectronics, computer science and robotics have involved some advantages such as the disappearance of jobs hazardous to health work, which has helped to significantly improve certain working conditions, decreasing so both accidents and occupational diseases and improving the quality of life and work (more flexible schedules, reduced physical exertion, etc.). But in turn, these technologies have some drawbacks such as the decline of autonomy and capacity in decision-making (Salinas García, 2010, p. 2), in addition to the new risks that are generating.

That's right, its impact on the health of workers has also been notorious, generating mental overload, stress and new risks and occupational diseases arising from their use. Among the main risks arising from new technologies are: the reduction or loss of vision, risk of explosion, central nervous system disorders or fire (derived from microelectronics);

¹ They are the set of technologies developed to manage information and send it from one place to another.

² New technologies are the practical applications of scientific advances that share a common denominator, their high capacity to treat information. Examples include microelectronics, biotechnology, robotics, new sources of energy, telematics, etc.

postural problems, work stress, radiation (derived from computer); burns, electrical hazards, downloads (derived from telematics); emission of toxic products, generating high temperatures (by the use of new products); skin cancers, respiratory injuries, entrapments (by the use of new industrial processes).

Measures of prevention and protection from new technologies must agree, in general, the principles of preventive action to be implemented in any policy of prevention, regulated in art. 15 of Law 31/1995 of 8 November on Prevention of Occupational Risks³, but require specific and concrete treatment, prevention and protection measures applicable to the risks arising from the use and use of new technologies, which he has forced all industrialized countries to update their legislation on the prevention of occupational hazards, adapting to a new labour reality.

However, using new technologies we can find a solution to labour risks that workers face daily. That is, different technologies are a useful tool to promote preventive culture and occupational risk prevention tool. In the field of prevention of occupational risks, new technologies offer many options and tools that should be known by responsible for preventing companies, prevention technicians and entrepreneurs in order to improve the efficiency of the productive activity of the company through resources based on new solutions offered by technological advances.

Therefore, the objective of this work is to answer the following question: How can you use new technologies to promote preventive culture in the workplace? To this end, first the main options offered by the application of new technologies in the field of occupational health and safety, providing a detailed analysis from the perspective of its functionality- tools to improve management are studied security and health at work. Secondly, the influence of new technologies on psychosocial risks is discussed, highlighting the most innovative and creative, existing at national and European level experiences.

All this in order that the work environment has available knowledge and tools continuously updated to combat workplace accidents.

³ BOE nº 269, de 10 de noviembre de 1995.

2. Technologies for the prevention of occupational hazards. New tools

New technologies offer a variety of options and useful tools not only to prevent occupational hazards but also to encourage and promote prevention culture at work. Webs, applications, games, platforms, etc., are often integrated into prevention systems in order to facilitate issues such as communication, training and access to useful information in this matter.

Seeing the variety of existing tools, this sections offers a compilation of the most important, classifying them into categories based on their practical functionality, which will be useful to all interested to introduce new technologies in daily work and improve working conditions (CROEM, 2013).

2.1. Applications

An application is a computer program that allows the user to perform one or more tasks through a computing device, facilitating and allowing the execution of certain tasks in which there is a need. Its functionality and diversity have become a widely-used tool, consolidating its use as a habit, so it is of great interest to know those Apps specifically developed in the field of prevention of occupational hazards.

- a. ApprevenirT. It is a tool that allows access to different content on prevention of occupational hazards, available in different formats (short texts, videos and didactic images), making it an ideal tool support training activities and information directed specifically to employers and workers.

The application also has several tools that can be useful for both workers and prevention technicians and entrepreneurs.

- b. Apptualize: the application allows data collection for further management and analysis effectively and easily. Among other benefits, it allows: report incidents or risks prevention service, preventive safety observations, reporting of incidents and / or accidents, data for risk assessment.
- c. Risk assessment: It is a tool for mobile devices that enables occupational risk assessments, aimed at technicians of prevention of occupational hazards, designated safety representatives, workers and entrepreneurs to anyone interested in workplace risk assessments.

- d. Safety Inspector: is a tablet that allows inspections of different types (security, fire, hygiene, maintenance, etc.) to this end has a camera and recorder for pictures and record voice memos associated with each observation.

2.2. Games

The Gamification is the use of game mechanics in environments and not recreational applications in order to enhance motivation, concentration, effort, loyalty and other common and present positive values in all games.

In the field of prevention of occupational risks the gamification has great potential as a mechanism to increase the participation of workers and encourage the habit of safe behaviour in the workplace. The most common use of gamification is to encourage people to do things they consider boring or who have difficulty in applying, creating attractive to involve the user expectations, so in the field of safety and health at work is feasible to implementation, in order that workers perceive their training as fun and appreciate the usefulness of standards. This is reinforced by the technology, which helps promote these activities more accessible and attractive to all.

As shown in the examples below, it is concern to copy from the classic games those elements and features that make them attractive to so fun and make the most.

- a. 50x15 ç. Do you want to be expert in prevention? The game is inspired by a TV game show and is to answer questions whose difficulty increases as you go up the level of knowledge of prevention. The success of the 15 questions asked indicates a high knowledge of prevention.

This game fits a wide range of training and/or awareness of safety and health in schools and workplaces.

- b. Prevengame: the game is solving puzzles related to different risks at work and answer a set of questions on specific occupational hazards (falling objects, bumps, cuts, bruises, etc.) and professional activities, so that the user puts test their knowledge related to professional risks to which people may be exposed in certain occupations.
It can be a useful tool to complement the training activities in prevention.

- c. Manual Handling: This game aims to facilitate learning or reinforcement of behaviours and attitudes against occupational risks associated with manual handling of loads, allowing develop the skills needed in this activity. To this end, the user is put in the situation of a warehouse operator must transport the largest possible number of loads of different weights, from one point to another warehouse without suffering injury.

For simplicity in use, this tool is suitable as a catalyst in training related to the risks of manual handling of loads.

- d. PRivial: it is a game of questions and answers related to the prevention of occupational hazards. You can play both individually and in groups. Its aim is to convey and consolidate safe habits and promote preventive culture among workers through teaching methods that allow learning through play.
- e. First Aid simulator: This is a game designed by the Ministry of First Aid Industry, Tourism and Trade and Ministry of Education.

The user takes on the role of an operator of a reception centre for emergency calls, many of which can happen in the workplace, such as fractures, heat stroke, burns, etc. So, you must identify the symptoms of the injured, the guidelines for action, and properly transmit recommendations for action. As a result, we will know whether the technical knowledge related to first aid, such as: identifying symptoms of the injured, identify correct guidelines of action, transmission of the recommendations of good performance (first aid techniques, life support basic and psychological support) and interpersonal interaction.

The game requires some previous knowledge and basic first aid but has a teaching area in which recommendations are included to maximize performance teaching to the game.

Another current tendency that promotes the use of games in the companies is the prevention the addiction of gambling, which involves the application of recreational prevention of occupational hazards to workers to better assimilate the rules and occupational accidents and diseases to avoid technical professionals.

In training and sensitization of workers in safety and health at work, strategies traditionally it used, such as courses, videos, keynote presentations, should be re-evaluated and rethought to have a low impact on learning. A lot of studies show that through simulations and learning activities is deeper than any other technique. Through games workers can more easily internalize the content that they want to convey and put it into practice. For example, to teach operators goods lift the performance standards of machinery and good security practices in the stores, it would be very productive to use a video game that simulates the conditions of the workplace, the procedure and rules you must learn.

As tools in teaching and learning, games promote the construction of knowledge and/or capacity building in the player from exposure to different situations or problems in an attractive and playful way.

Although integrating into recreational environments is a relatively recent phenomenon, its use will continue to expand given the many possibilities and good results being obtained.

2.3. Websites

A portal is a website that allows a user to easily access different services, resources, applications and possibilities in one place and on a topic.

Specialized websites in the field of prevention of occupational risks have increased markedly in recent years both nationally and internationally. The user can find by webs such as allowing access to generic content in prevention, also can find other more specific issues such as coordination of business activities, hazardous substances (chemical, biological), ergonomics, work organization, psychosocial issues, etc.

For example, we describe below some useful tools in preventive activity.

- a. CEOE: It is a website dedicated to the Occupational Health and Safety, it shows news, publications, tools or queries.
It consists on different sections that allow access to the latest developments related to conferences, national and international events, seminars and other events related to the prevention of occupational hazards; information on the direct actions requested by CEOE and approved by the plenary of the Foundation for Occupational Health and Safety; Legislation and Case-law on prevention of

occupational risks; access to documentation on Occupational Health and Safety that have been developed by CEOE or its Member Organizations; obtain full and adequate information on how to maintain healthy habits in daily life, given the direct impact of lifestyle on health status of the worker.

- b. CROEM PRL: CROEM website dedicated to the Occupational Health and Safety, news, publications, tools or queries.
It offers consulting services, studies and reports, collection and dissemination of information and projects in the field of occupational health and safety. In addition, among other features, allows access to a set of summary sheets with advices on different subjects such as: first aid in case of falls, criteria for the selection of safety shoes, individual techniques for stress prevention, etc.
- c. Self-assessment surveys: With this tool you can check online the degree of compliance with the company in different aspects of the Occupational Health and Safety as well as the rules to be applied in each case.
The user must answer questions regarding risk control (hygiene, ergonomic, psychosocial, etc.), staffing, intercompany coordination, emergency, accident research, reviews, information, training and participation of workers, risk assessment, organization of prevention in the company. Upon completion of the self-assessment a report is obtained and it shows the status of System Safety Management (correct, improvable, poor, very poor), with recommendations as references to the legal requirements to be applied and enforced in each case.
- d. Estimated cost of accidents: the INSHT website has an automatic calculator that allows an estimate of the cost of work accidents
The application also has a link to additional resources on estimating costs of accidents: NTPs and diverse references
- e. INSHT: The National Institute for Safety and Health at Work is the scientific-technical body of the General State Administration and has a purpose to promote and support the continuous improvement of safety and health at work.

His website is as a supplier to the Ministry of Employment and Social Security. It is a virtual site with references in prevention of occupational hazards, which offers a wealth of information and allows access to websites in specific sectors and preventive disciplines, technical documentation (catalogues, teaching materials, publications, library INSHT, etc.), training offers, mainly directed at technical college graduate's active prevention and news and prevention tools. In addition to many direct accesses to interesting websites in the subject matter (CIS, ILO, WHO, ISSO), it contains information on INSHT collaboration with international organizations and development of international cooperation programs in the field of prevention.

It contains a lot of portals classified by materials: individual protection equipment (PPE), ergonomics, health promotion at work, social psychology, chemical, agriculture, etc.

It stands out by its innovative publishing in RSS format the contents of many sections, which gives users the ability to subscribe and receive information on the topic of interest immediately and free.

It is, in short, the site with the most comprehensive content on prevention of occupational risks, and it is recommended as a tool for daily consultation by experts in prevention.

- f. Noticias jurídicas: on this website, you can find all the published legislation and case law and amendments and exemptions. It shows current news, contains specific articles on different specialties of law, allows access to the latest published collective agreements and to information on courses and masters of legal issues.

- g. Prevencion10.es: is a Ministry of Employment and Social Security of Spain free public service to advice on prevention of occupational risks for microenterprises and self-employed workers.

It allows preventive activities, different technical or legal publications on microenterprise prevention, provides information on prevention of occupational risks (health monitoring, prevention plan, emergency acts...) in many sectors and on the training activities carried out, allowing access to the T-forms web, where training courses are available. Also, it offers a forum to share problems and solutions with other companies with similar characteristics and problems or the views of relevant people in the world of prevention.

Similarly, it has a tool for self-employed workers without charge, allowing them to meet the obligations and rights they have in the coordination of business activities.

By the site you can access two other tools designed to facilitate information and technical assistance needed for compliance in prevention of occupational risks of the company (evalúa-t) or the self-employed (autopreven-t).

- h. European Agency for Safety and Health at Work (EU-OSHA) Web belonging to the body of the European Union responsible for collecting, coordinating and distributing information on safety and health at work among member states of the EU and interested parties. It allows access to different sections with practical information on specific issues of safety and health at work, on certain groups with special sensitivity and on certain sectors is provided.

EU-OSHA makes "Healthy Workplaces" campaigns in which participating organizations of all Member States of the EU, countries of the European Economic Area, candidate countries and potential countries, which offers free information, practical tools, guides, and advertising materials translated into more than 20 European languages. In the European Week for Safety and Health at Work, held annually, acts of awareness of these campaigns are centralized and award ceremony of Good Practice of the campaign is done.

In the same way, it provides information on global strategies for safety and health at work in order to improve working conditions of the Member States of the EU; it shows the contact addresses of reference centres of the UE countries, provides information on EU legislation and its implementation; offers statistical reports of the European Agency on certain issues relating to the subject matter be about.

- i. PCAE: The Program of Coordination on Business Activities for the Prevention of Occupational Risks is a common channel of communication for entrepreneurs, free, organized, accessible and universal, made available to employers to help them in organizing and managing prevention when they meet with others Entrepreneurs or self-employed in the same workplace.

2.4. Social Networks

A social network is a virtual community platform that provides information and interconnects to individuals or organizations that are related. It links users with a common subject, because the principle of open and non-hierarchical community. They represent, by themselves, a change in a communication paradigm.

The possibilities offered should take advantage in the field of prevention of occupational hazards, because their use is a major innovation in this field and its availability allows for access this tool easily. By any device with internet access you can be connected 24 hours, sharing and exchanging information in any format (video, image, document, etc.). Innovation is the use that this tool is made (Briceño, 2011, p. 35), as a channel that allows us to produce information, identify information sources and sharing it with others, create communities based on the collaboration of a lot of disciplines involved Safety and Health at Work and Occupational Health and Safety or keep informed about the latest news or developments.

Its importance lies in the conviction that it is not enough to allocate, on paper, roles and responsibilities in an organization and appoint an interlocutor with the prevention service. To achieve excellence in integration is necessary to establish direct and effective channels of communication with the different parties involved.

The most used social networks currently are:

- a. LinkedIn: It is a social network with a professional profile that allows information sharing across groups⁴; seek help from the network on topics that generate doubts; contact other professionals with similar concerns; Networking do from anywhere in the world and at any time.
- b. OSHWiki: It is a collaborative encyclopaedia on exclusively Safety and Health at Work topics. Only the credited authors can collaborate in content to modify, translate or add content. The categories included are: safety and health at work, management and organization of health and safety in the workplace, prevention strategies and control, chemical and biological substances, physical agents,

⁴ Currently there are many groups specializing in occupational risk prevention. Some examples of those with more followers are: Technician in PRL, Occupational Health and Safety Spain, PRL Occupational Health and Safety, Environmental Legislation, safety precautions Industrial, Occupational Health and Safety and Quality, Prevention +, HSE Job Hunter, OSHA Discussion and Support, People HSE, HSE Europe.

ergonomics, safety, work organization, psychosocial risks, health, sectors and occupations, and groups at risk.

Its content has been prepared by the European Institutes of Health and Safety at Work, making it a good tool for daily consultation by experts on prevention.

- c. PRLaxis: It is the first social network on prevention of occupational risks. Designed for professional users in the field of prevention of occupational hazards. It allows you to share concerns, ideas, best practices, documents and links. It also offers its users various options by which you can search for and share information on prevention: blogging, networking, searching for documents, evaluation of documentation, publication on social networks, news gathering via feed and exchange files.

d. Twitter: Twitter is a service that allows sending text messages short length, called “tweets”. Unlike other social networks, the relationship is asymmetrical, so that a user can follow another without it in turn must follow the first, allowing each user to create a network of contacts by selecting the subject you want to show.

e. YouTube: Website that allows users to share videos. The platform provides the necessary tools to edit videos and managing channels, broadcast live, subscribe to channels, create playlists.

2.5. Equipment

New technologies lead to modern industry efficiency, resulting in a rapid increase in productivity, saving energy and materials and improving working conditions and safety.

As has been checked, new technologies can also improve the management of occupational risk prevention. Here are some examples:

- a. Protective equipment vending machines: although have spent several years on the market use is not very common. These machines allow the worker to have at any time when you need to replace their PPE, regardless of the time and availability of the person in charge of delivery. In the same way, avoid delivery time and records such equipment, improve tracking and inventory control.

- b. Drones: Drones and collaborative robots represent an important step, they are a reality in today's industrial environment and involve notable changes related to the prevention of occupational hazards.

This sophisticated equipment can revolutionize the Occupational Health and Safety in multiple situations and actions. For example, when performing an inspection of the workplace, their use would significantly reduce the risks and even operating costs. Also they are used as a courier and package delivery, reducing the risk of traffic accidents.

The drone's applications in prevention management are multiple and highly creative as you can see.

- c. Simulation: the use of simulators for operator's practical instruction using vehicles such as cranes, excavators, forklifts, etc., can improve their skills, reducing human error, which is the main cause of accidents associated with the use of such equipment.

- d. Remote control equipment: in certain areas such as construction and mining is common to use equipment and tools that cause diseases such as silicosis, hearing loss, arthritis, vascular disorders, musculoskeletal, neurological, etc. However, Technologies are now in for operating such equipment by remote control, which would avoid exposing the integrity of the worker to such risks

As seen, the new technologies offer many tools that can help prevent occupational risks, however, to be like this it should be noted that each job has a specific environment and characteristics.

However, the use of new technologies mean a considerable reduction in the number of industrial accidents and occupational diseases, while allowing and promote preventive culture at workplace.

Applications, specialized websites, games, training platforms, etc., are integrated into the system by providing prevention aspects such as communication, training or access to information and helping ultimately to conduct occupational risk management in a more efficient manner.

3. New technologies for prevention of occupational hazards. Good practices

3.1. The influence of new technologies in protecting safety and health at work

While society knows the benefits of Information Technology and Communication, not always aware of the negative effects that may result in misuse of them in particular circumstances.

Over the years, the way we work has evolved, gaining prominence mental component to the detriment of the physical, which has increased the mental and emotional overload, beginning to emerge new illnesses associated with psychosocial risks. These risks include the addition to the work by the impact of ICT on the same (Forbes, 2011, p. 42).

Work-alcoholism can be defined as a “psychosocial damage typify by overwork mainly due to an irresistible need or urge to work constantly”⁵

The development of ICT, undoubtedly favours greater labour commitment required by the workaholic by the ease with which to maintain a virtual link with the working environment at any time and place (Miñarro Lopez, 2011, p. 35). The term Crackberry is increasingly extended to refer to people who obsessively use mobile devices that have wireless Internet and allow access to email accounts outside working hours. This situation closes the border line between work and personal life and favours the appearance of pathologies associated with the use of technologies such as techno-addiction, closely related to work alcoholism the facilities offered by them to be continuously in connection with work.

That is, the development of new technologies is a drive towards greater work-alcoholism (Moriano, 2014, p. 21) and this has negative consequences not only for workers but also for the company, since the worker rests less and therefore it has performance and less innovative and creative capacity.

⁵ NTP 759: La adicción al trabajo, Instituto Nacional de Seguridad e Higiene en el Trabajo, 2007.

Work-alcoholism should stop being perceived in society as positive and be taken measures to solve this psychosocial risk increasingly present. Companies must advocate for worker flexibility and to realize that 24 days in connection with work is counterproductive for themselves

This is beginning to be perceived in some companies which have recently adopted innovative and creative measures in which the technologies are used to prevent excess using them.

Heldergroen, Dutch advertising agency, has developed a pioneering strategy with the aim of their employees reconcile work and family life. So that no worker lengthen their workday beyond six p.m., when in most European countries the workday ends, they have implemented a system that raises the tables office to the ceiling, leaving space free for workers to use the workplace for-work activities such as meditation, yoga, etc. or freely choose to go home, aware of the importance of leisure and free time.

This is a mechanism created with steel cables specially designed to withstand heavy infrastructure, which automatically raises the wooden tables to the ceiling as a signal for all employees finish work.

This innovative idea shows that for this agency presentism is not an added value that is well seen, considering that the working day has a fixed term and that the rest of the time is for worker to used on what they want. It is certain that facilitate the reconciliation helps increase performance and thus productivity. In short, this system is intended to convey to employees that there is a time and a place for work, which prevents workers work overtime, fostering reconciliation, an work environment more relaxed and, at the same time, high levels of productivity.

With this pioneering measured a solution is given to a big problem in the workplace, working more hours, in most cases without compensation and without recognition, and psychosocial damage such as stress or work-alcoholism are prevented because workers perceive the values that this measure are intended to inform. Getting a balance in professional and personal life is still a goal to be met by most companies, they know not value or appreciate the positive results that can be achieved with these measures.

New technologies must be understood as a way to facilitate work and makes life more enjoyable, so that is convenient to take advantage and avoiding and preventing its use causes any harm. The goal is to be in the service of the user and not the other way (Miñarro López, 2011, p. 36).

Thus, it is shown that, by themselves, technological resources are neutral and depending on their they generate positive or negative effects.

Another example of good practice in the use of new technologies to prevent occupational risks and promote a culture of prevention in the workplace, is found in the pilot scheme recently launched by Iberdrola. A drone managed with remote control, in order to avoid an operator works at height and therefore to prevent in occupational safety.

The drone, has a flexible camera that records everything sighting and save on a hard drive, and provides a live view that reaches another point controlled by a camera operator. It lets see the possible faults and know the hot spots by thermography test to detect line loads. However, being an emerging technology, there are some issues that need improvement, such as battery life, not exceeding eight minutes needs a 45-charging time, or the difficulties of flying in adverse weather conditions⁶

This initiative could become a reality next if the experience ends successfully and the results are optimal.

3.2. New technologies and transmission of information and training

Working conditions not only encompass workplace in particular but also tools and work equipment, the environment, the physical and mental effort, the furniture that is used or the work environment, so that any of these factors can cause or trigger a disaster. Apart from the statements, another factor, because of its direct impact on workplace accidents is the lack of information.

It must be remembered that in order to comply with the duty of protection established in the Law on Prevention of Occupational Risks (art. 14), the employer is required to take appropriate measures so that workers receive all

⁶ More information at <http://www.aepsal.com/los-drones-tambien-ayudan-a-la-prl/>

necessary information regarding risk measures for the safety and health of workers at work, both those that affect the company as a whole and each type of job or function; to measures and protection and prevention activities applicable to such risks; and emergency measures (art. 18). Similarly, it has the duty to ensure that each worker receives adequate theoretical and practical training adequate in prevention, both at the time of recruitment, as when changes in the functions that perform or introduce new technologies or changes in work teams (art. 19).

To comply with that order, the employer has an appreciate tool, the new information and communications technology (ICT), which are constituted as a determining factor for promoting the safety of workers.

Likewise, social networks are perceived in the business world as an instrument that facilitates much of the exchange of information, as used on a personal level, so that not being against an unknown instrument is not necessary to learn to use it. At the same time, applications, platforms and specific games websites on health and safety, represent a valuable mechanism in the process of workers training.

Consequently, the use of new technologies to prevent occupational hazards, is getting that some jobs considered in high risk at workplace, reduced the number of accidents because their use contributes to the experts become more informed and, especially more trained. Therefore, we can say that new technologies are fighting the misinformation that is causing many of the accidents (Colvée, 2016).

Companies have many resources to make available to workers the information and training required. By internet the worker can access the tool that is most appropriate to acquire the training you need and get the desired information. As has been seen in the first part of this work, new technologies offer a broad and diversified catalogue of tools (applications, platforms, websites, games, teams) that can help prevention, however, they must be used correctly to successfully achieve the best results

On the other hand, more and more companies have their own profiles on social networks (Twitter, Facebook, blogs, etc.), making available to all employees the required information to provide self-learning at the same time it the employee gets more involved in the company to feel part of it.

Among the numerous companies that have made use of the new technologies as a training mechanism and informant in the field of prevention of occupational risks, we should highlight companies such as Anetcom or Idi Eikon, for which the Internet is fundamental in the development of telematics portals in the prevention of Occupational hazards by allowing all information related to different jobs to be accessible to everyone from their favored environment. In addition, they have the vision that social networks, having in society a great acceptance can become a channel of corporate information that helps all members of a company are better and more informed. So, they promoted, with the collaboration of other companies and the support of the Ministry of Economy, Finance and Employment, a project related to the creation and implementation of telematics portals directly related to the prevention of occupational risks, called “Prevention for all”.

This project allowed to make a digitized material platform that increases its access to preventive information in any format (videos, images, news, documents) and helps users to visualize in a comfortable and easy way all risks associated with Different jobs in the hotel trade (Colvée, 2016, p. 12).

Likewise, the experience of the hotel company F. Martínez R., S.A., stands out, where it is committed to the use of new technologies as a main tool for the optimal development of the preventive management system. It is vital for this company to be a direct and effective channel of communication between all the agents involved with the prevention service. For this reason, two parallel and convergent lines have recently been developed: the development of a computer application by this company and, therefore, adapted to its management system; And the use of a private web.

At the end of 2012 they began a project with two clear objectives, to speed up the identification of risks present in the work centres and the adoption of preventive measures and, on the other hand, to improve their management and control.

In order to achieve these objectives, we developed a computer application to:

- a. To control preventive measures from the Preventive Activity Planning about the risk assessments carried out by the prevention service. Each of the preventive measures generated is sent by data transmission to those who is in charge for its execution, marking, by the prevention department, a

maximum deadline for resolution. When the measure is implemented, it is closed. This ensures that no preventive measure is left unplanned and/or made.

- b. To control the preventive measures derived from the warnings of risks and suggestions for improvement, safety inspections and technical reports (hygienic, ergonomic reports...). The application makes it possible to plan preventive measures with origin in technical reports made by the External Prevention Service (lighting, noise, ergonomics, etc.), the preventive measures of the risk announcements and suggestions for improvement made by the workers themselves or even safety inspections carried out by the prevention technicians during plant visits.

Previously, the communication was deficient since measures were adopted that were not transmitted, complicating the monitoring of the detected risk and cost control by the company.

With the new application, the report is automatically sent through the program to those who are in charge of implementing measures, as well as a copy to the General master so that it knows the risks and provides the economic resources necessary to carry them out.

In addition, it allows sending an e-mail to the prevention service with the report of the accident, as well as, once the investigation has been carried out, whether the risk is evaluated, whether the preventive measure was proposed in the risk assessment and whether it would be needed a review of the evaluation.

The other work line, the use of the private web allows to communicate, via web and in real time, all the changes produced in the company (new machines, chemicals, jobs, etc.). In addition, it allows the download of all documents generated by the prevention service at the time they are carried out (training certificates, certificates of medical fitness of workers, risk assessments, etc.), search by worker, And the online citation of both medical examinations and training courses.

With these changes, this company has in a short time not only improved the include of prevention but also favoured the merger with the external prevention service, being considered of vital importance for effective and real prevention. This main advance is a true reflection of the commitment that the Management has with the Occupational Health of the workers who are part of this company.

4. Conclusions

Companies, administrations, organizations, etc. must be firmly committed to their workers, guaranteeing continuous improvement in everything related to safety at work. Currently, all companies have available many resources to fulfil it. In this sense, new technologies are a determining factor to boost the safety of workers.

However, it is already known that what moves companies to make big investments in technology is to improve the quality of the product or service rendered and to increase productivity, these being their clear interests (Alfaro de Prado Sagrega, 2008, p. 15), a fact that contrasts radically with the almost marginal weight given to safety and health as a rule.

In the business environment, it is not always aware that new technologies are a clear bet that the labour claims continue to fall. However, the technological revolution that we are witnessing along with the high rates of occupational accidents requires betting on the use of new technologies as a vital tool for the optimal development of preventive management systems.

As it has been verified in the present work, the scientific and technological advances are available to the fight against accidents in the work, being able to be a formative and informant mechanism, a useful tool to instituting the preventive culture in the labour field, a key tool to avoid exposure to certain occupational risks and a good formula to educate companies and their workers. In short, it is useful for the purpose of reducing labour risks and improving working conditions, which are the fundamental pillars of any business policy in achieving its viability and sustainability

It is hoped that the contents collected and exposed will be known by prevention leaders of companies, prevention technicians and entrepreneurs in order to improve the efficiency of the productive activity of the company through solutions based on the new resources that technological advances They offer us. All this will facilitate the approach to the true preventive culture in companies and workers having as a horizon “Objective 0” to reduce occupational accidents and diseases.

In short, it can be concluded that the new technologies are a clear bet for the loss of work continue to decline and are, without a doubt, a good formula to educate companies and their workers. Thus, everyone can know, without exception, what risks each workplace entails and the instruments to eliminate or avoid them.

BIBLIOGRAPHY

Alfaro De Prado Sagrega, A.: “Nuevas tecnologías y nuevos riesgos laborales: stress y tecnoestrés”, *Revista digital de Salud y Seguridad en el trabajo*, nº 1, 2008, pág. 15.

Briceño, A.: “Redes Sociales: Canales para innovar en la Prevención de Riesgos Laborales”, en Buenas Prácticas, Venezuela, 2011. (<https://seguridadsalud.org/2011/11/19/redes-sociales-canales-para-innovar-en-la-sst-prl/>).

Colvée, J. L.: “Las nuevas tecnologías, claves para el descenso de la siniestralidad laboral”, 2016. (Puede consultarse en <http://www.seguridad-laboral.es/prevencion/otros/las-nuevas-tecnologias-claves-para-el-descenso-de-la-siniestralidad-laboral>).

Croem: “Nuevas tecnologías aplicadas a la prevención de riesgos laborales”, *Confederación Regional de Organizaciones Empresariales de Murcia*, 2013.

Forbes Álvarez, R.: “Adicción al trabajo como Riesgo Psicosocial”, *Éxito empresarial*, nº. 162, 2011.

Miñarro López, A.: “Influencia de las TIC en los Riesgos Laborales”, *Antena de Telecomunicación*, 2011.

Moriano, J.A.: , *Journal of Managerial Psychology*, 2014.

Salinas García, C. M.: “La salud laboral y las nuevas tecnologías. Principales riesgos que se derivan de las mismas”, *Revista de Innovación y Experiencias educativas*, nº. 28, 2010. (Puede consultarse en http://www.csi-csif.es/andalucia/modules/mod_ense/revista/pdf/Numero_28/CARMEN_M_SALINAS_1.pdf)