

Chapter 3

Promoting a Decent Work Context and Access to Sustainable Careers in the Framework of the Fourth Industrial Revolution



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Abstract The fourth industrial revolution has transformed the world of work and the interactions between individuals and their social, political, and economic environment. This revolution exacerbated older problems and generated new ones. Over-stimulation at work, stress and burnout, and under-stimulation, boredom or loss of meaning due to increased abstraction of tasks, are examples of such problems. To analyze these changes and new challenges, this chapter describe the implications of this new revolution for the job market and for individuals. Thereafter, the chapter presents various career counseling theories and models that acknowledge this new reality. These models aim to strengthen individuals' ability to manage their career paths, to promote access to decent work and decent lives, and to promote wellbeing. Finally, the life design intervention will be presented as an example of an intervention that aims at promoting access to sustainable careers. The current goals of technological advance could threaten the access to decent work and contradict a vision of society that puts the free-will of individuals in the first place. For this reason, lifelong career counseling will be crucial in helping individuals manage their career path in this dynamic world of the fourth industrial revolution.

Keywords Digitization · Technology · Wellbeing · Sustainable career

3.1 Introduction

3.1.1 *Context and Definitions: The Fourth Industrial Revolution*

The world of work evolves constantly, demanding a constant redefinition of the dialectical adaptation processes between individuals and their work environments.

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Following the work of Frey and Osborne (2017), Hirschi (2018) explains that changes in the world of work can be linked to three historical milestones. The first was the industrial revolution of the 18th century, the second involved the massive production of goods in the 19th century, and the third characterized by the advent of Internet and the dominance of computers in the second half of the 20th century. Other literature highlights the emergence of a more recent and important transformation, the Second Machine Age (Brynjolfsson & McAfee, 2014), Industry 4.0 (Schwab, 2016), or a fourth industrial revolution (Schwab, 2016). This new transformation is characterized by a *digital revolution* and power spreading technology in a wide variety of areas at high speed and low costs. Schwab (2016) defines this phenomenon as being related to three characteristics. The *velocity* referring to the speed of a phenomenon which, by opposition to previous revolutions, develops not linearly but exponentially. This results from the diffusion and the constant evolution of technology, creating an interconnected and technologically efficient context. The *breadth and depth* refer to societal, economic and individual paradigms in the digital sphere, as Schwab (2016) states: “It is not only changing the “what” and the “how” of doing things but also “who” we are” (p. 3). Finally, the concept of *system’s impacts* defines the macroscopic and the mesoscopic impacts of the fourth industrial revolution on and between societies, industry and nations.

Beyond the three abstract dimensions—velocity, breadth and depth and system’s impacts—Schwab (2016) also describes the fourth industrial revolution as a concrete and tangible phenomenon, distinguishing three categories of products and innovations. The *physical* category includes self-driving cars, 3D printers, advanced robots in terms of *materials* that are and will be increasingly producible and available. The *digital* category includes the concept of the *internet of things* that could play the role of a bridge between the digital sphere and physical application(s). Finally, the *biological* category in which the author notes the incredible progress in fields such as neuroscience and the health sciences. For example, in the domain of genetics, the speed and efficiency of technology could now enable genetic sequencing to be done quickly at very low cost. To illustrate the scope of this phenomenon, Schwab cites survey results of the World Economic Forum’s predictions regarding the critical thresholds by 2025 for technological change and its diffusion. More than 80% of the respondents anticipate that we will have the first robotic pharmacist in the US, the first 3D-printed car in production, the first government to replace its census with big-data sources, and the first implantable mobile phone available commercially by 2025. More than 60% of respondents expect to see driverless cars replace 10% of all cars on US roads, the first collection of tax by a government via a blockchain, the first transplant of a 3D-printed liver and the first city with more than 50,000 people and no traffic light (World Economic Forum, 2015). From a capitalist perspective, where changes in the world of work are imposed on workers (Graeber, 2013), this analysis offers the ground for a simple but very important statement: the world of work is changing quickly, and societies and people are trying to face these changes.

3.1.2 Chapter Objective

This primary objective of this chapter is to analyze the changes and new challenges of industry 4.0 and to describe the implications of this new revolution for the job market and for individuals. This chapter furthermore presents various career counseling theories and models that acknowledge this new reality.

3.2 Consequences and Effects of the Fourth Industrial Revolution

3.2.1 Implications for Work

With the intention to highlight the consequences of this fourth revolution, this section will analyze the implications for work, presenting the phenomenon of job polarization and its implications for the nature of work, both in form and content.

3.2.1.1 Job Polarization

In the framework of the diffusion of technology in the world of work, it is important to recall the “polarizing” effect generated by technological progress on the labor market, in which some sectors are more likely to be affected by automation and digitization (Autor, 2015; Goos, Manning, & Salomons, 2014). Recently, Hirschi (2018) defined two aspects of the phenomenon of job polarization. On the one hand, the author explains that middle-skilled jobs (e.g. management, administration and services) are the most likely to be impacted by technology because their tasks “follow precise, predictable procedures” (Hirschi, 2018, p. 3), and can therefore become automated. This type of job indeed decreased in Switzerland by 12% between 1996 and 2015 (Soceco et al., 2017). On the other hand, low-skilled jobs, where automation seems unprofitable, such as care, cleaning or security, are harder to automate and are relatively easy for humans to execute. High-skilled jobs, such as technicians, educators or managers, which involve tasks linked to complex problem-solving and reasoning as well as to advanced social skills, are still difficult to automate. Although some have announced the end of these occupations and the disappearance of up to 50% of all current jobs (Frey & Osborne, 2017), most observers do not yet anticipate massive job loss or significant and structural increase of unemployment (Arntz, Gregory, & Zierahn, 2016; Autor, 2015; Furman, 2016). To explain this contradiction, we can imagine that technology, while destroying some jobs, also creates new ones or plays a complementary role in jobs that already exist (Autor, 2015).

Automatization could also affect the distribution of wages. Hémons and Olsen (2016) explain that automation and innovation can exacerbate the salary gap: the will to invest in technology will diminish the labor share and the growth rate of low-skill incomes. In fact, these authors explain that “the growth rate of high-skill wages approaches 4%, while the growth rate of low-skill wages goes down to around 1%” (p. 26). Hong and Shell (2018) argue that automation could increase inequality “because it tends to displace the lowest-paid workers” (p. 2). These authors explain that the most probable scenario is that automation will affect low-skilled employees by a “20 percent pay cut on their original income” (p. 2), whereas the wages of high skilled work continue to rise. This phenomenon is also accompanied by the dualization of the workforce, where employment status and career trajectories seem to differ in terms of security, perspectives, and social integration between the primary and the secondary market (Häusermann & Schwander, 2012).

3.2.1.2 Changes in the Form and Content of Work

Since the 1990s, the world of work has undergone intense and profound changes. Examples include globalization—of capital and labor—and its effects on intensifying the competition for job security and increasing requirements for flexibility and adaptation. The intense technological progress brought by the third industrial revolution had, through the digitization and automation of work, already significantly transformed the modes of production and the relation to work. Ellul (1988) described how the technical progress leading to separation between individuals and work has become more and more pronounced. The workload has been increasingly divided into definite and interchangeable units and functions, which leaves aside the global *know-how* of the human worker doing a task from the beginning to the end. As the work is divided into a series of small tasks, workers will no longer complete “end-to-end” work, but rather perform a series of tasks synthesized into a final result (Ellul, 1988). This phenomenon is amplified by the fourth industrial revolution.

As mentioned, the fourth industrial revolution has led to an increase in mechanization and automation. In the current era, technology has become an integral part of the world of work, not only as a physical auxiliary to human work, but maybe more importantly in simulation and substitution of the human workforce (Brynjolfsson & McAfee, 2014). Lasi, Fettke, Kemper, Feld, and Hoffmann (2014) explain that the labor market will face subsequent changes, under the influence of what they call *technology-push*. These authors mention in particular the *short development periods*, *individualization on demand*, *flexibility* in development and production, and *decentralization*. They explain that because of the increase of the rhythm and changing demands, hierarchy and decision-making processes need to be shortened. For this reason, the work is changing in both form and content.

Regarding the form—types of employment—we can observe, since the beginning of the 21st century, the creation of new forms of employment. The Eurofound research report (2015) identified nine new forms of employment. For example, *employee* or *job sharing*, in which workers combine more than one job, or in which employers hire more than one employee to fill a full-time position. Other forms are *interim management* in which an external high-skilled employee is hired *pro tempore* in order to work on a specific task, and *casual work*, in which the worker has to work *on demand*, in a framework of availability and flexibility according to the needs of the employer. Finally, *ICT-based mobile work* is a new form of employment in which, aided by technology, an employee is able to work anytime, anywhere.

Regarding content of work, as mentioned above, job polarization might lead to the disappearance of jobs characterized by automatable tasks, but might also lead to the creation of new or complementary ones. As a result, we wonder what kind of jobs technology creates and how it changes the *old* jobs which survive. Some authors hypothesize that technology will free human beings from boring and repetitive tasks, letting them benefit from an occupation allowing the expression of creativity (Autor, 2015). Other authors have a more luddite opinion about the role of technology, stating that “It’s as if someone were out there making up pointless jobs just for the sake of keeping us all working” (Graeber, 2013, p. 1). In fact, several phenomena have to be considered to understand the effect of technological progress on the content of modern work, which can in some cases be indirect and pernicious (Cassely, 2017; Brygo & Cyran, 2016; Graeber, 2013, 2018). Several authors focus their attention on the recent increase of roles with abstract titles and purposes in developed economies. These occupations consist of a set of redundant tasks whose social utility or personal interest are difficult to grasp for those who perform them (Guichard, 2016; Cassely, 2017). Coutinho, Dam, and Blustein (2018) explain that “[...] it is likely that there are not enough intrinsically motivating jobs and meaningful work options available to the majority of people given the demands of free market capitalism and the infusion of technology, which is reducing the need for many types of workers” (p. 14). The emblematic example of so-called *bullshit jobs* illustrates the idea of occupations with no obvious meaning and utility.

3.2.2 *Implications for Workers*

In this section, we will examine some of the implications of the fourth industrial revolution for workers, analyzing the relationship between humans and technology at work, and then focusing on how technological developments impact the work context (loss of meaning, alienation, and boredom at work). Finally, we illustrate this issue with the representative examples of *bullshit jobs* (Graeber, 2013), *nasty jobs*, and *detrimental jobs*.

3.2.2.1 Implications of Changing Forms of Work

The new forms of employment could lead to some advantages, for example flexibility, diversification, or personal enrichment (Eurofound, 2015) especially for high-skilled professions. Nonetheless, they hide more than one danger. These new forms of jobs can increase stress, tear down boundaries between professional and private life, remove the security for the employee to benefit from (and the employer's responsibility to give) work and social protections (Eurofound, 2015). Moreover, the ILO (2019) points out that "[...] many of our societies are becoming more unequal. Millions of workers remain disenfranchised, deprived of fundamental rights and unable to make their voices heard" (p. 21). In addition, this context contributes to remove the sensation of continuity and stability in opposition to flexibility (Eurofound, 2015). Additionally, technological advances increase the vulnerability of low-skilled workers as many industries employ less workers, leaving them without local alternatives (Coutinho, Dam, & Blustein, 2018). Coutinho and colleagues also notice that greater mobility of the labor force is expected, which means that workers must be ready to leave their country or travel great distances to work.

The ILO (2019) states that "A staggering 300 million workers live in extreme poverty. Millions of men, women and children are victims of modern slavery. Too many still work excessively long hours and millions still die of work-related accidents every year" (p. 18). This in particular concerns large number of workers of developing countries. These new forms of employment imply a new social contract that puts more responsibility on the individual and therefore seems more in favor of companies. The ILO (2019) explains that in fact, "wage growth has not kept pace with productivity growth and the share of national income going to workers has declined. The gap between the wealthy and everyone else is widening" (pp. 18–19).

3.2.2.2 Technology as an Obligation Rather Than a Choice

Historically, literature has focused on technology as a tool that human could choose to use or not, with this choice depending on various factors. This approach led to numerous studies about the ergonomics of the workplace or about worker-machine relationships. For example, Davis (1989) and DeLone and McLean (1992) studied under which conditions an individual will choose to use specific technology or not. In the actual work context, many people do not have the freedom anymore to choose to use technology or not. The current context seems to follow an implicit logic that favors technological progress rather than human action at work (Ellul, 1977, 1988). The human being is sometimes conceived as the auxiliary of this valued technical progress. Sometimes, the technology become so pervasive that individuals have no choice but to adapt, which can lead to job dissatisfaction for

some people. Several authors instead consider the human-technology relationship from a symbiotic point of view (Brangier & Hammes, 2007; Ellul, 1977, 1988). Brangier and Hammes (2007) explain that this perspective considers technology as an extension of the human being, in a relationship of mutual influence. As an illustration, they use the metaphor of a symbiote of humans, in a logic of common life, as for example the warthog and the mongoose, or the remora and the shark, with one major difference: it is the human who develops the technology. Technology exists in an *ambivalent way* (Ellul, 1988) being able to pass from a state of symbiote to a parasite: in other words, technology would participate in facilitating human life as well as in alienating the human condition (Brangier & Hammes, 2007). Hence, in a systemic perspective, it is crucial to consider that the equilibrium of the technology-human symbiosis is delicate, and must not be considered a stable state.

3.2.2.3 Evolution of the Content of Work, Both on Quantity and Quality

The technological evolution has impacted the content of work, in terms of both quality and quantity. Concerning quality two aspects have to be considered: the effects of technology on the nature of work, and the increasing need for workers to actualize competence in order to adapt to this constant technological change. As mentioned above, the technological evolution has significantly changed the production systems with no choice for workers about adapting to this new context. As we mentioned above, the new systems of production, splitting the workload into tasks, can diminish feelings of gratification and achievement (Mann, 2007) instead increasing a sense of incoherence. The loss of autonomy and freedom to choose how to perform tasks, and non-stop connections with the digital world, can diminish variety, which can lead to a feeling of alienation and disconnection. This phenomenon seems especially true for high-skilled individuals who have the opportunity to think about reconversion. The need for concrete achievements is illustrated by Cassely (2017) when he presents the case of a former banker who became a grocer, or the case of an engineer with a master's degree in management who became a dairy woman. In fact, when individuals who have experienced such changes explain their choice, we can observe a common denominator related to technology (Cassely, 2017). Technology seems sometimes to cause feelings of abstraction, a gap between the "concrete" and a lack of variety in the activities (Brygo & Cyran, 2016; Cassely, 2017). This illustrates that abstraction of tasks can become problematic for some workers and that being able to see the concrete results of work can counteract the feeling of alienation. However, as mentioned above, these careers changes are not the norm.

Another challenge regarding content of work is the need for constant actualization in terms of competences linked with technology. The ubiquity of technology in the professional system can become problematic in terms of adaptation. On one side, as the ILO (2019) points out, "Today's skills will not match the jobs of

tomorrow and newly acquired skills may quickly become obsolete” (p. 10). On the other, individuals who have lost their job because it has been replaced by technical progress, are the same individuals that are at risk of not being “equipped to seize the new opportunities” (p. 10).

Concerning quantity, we need to consider over- and under-stimulation at work. Technical and technological progress contribute to a rising work rhythm, pressure and strain and the deleterious effects of occupational pressure on workers’ health have been widely documented. The concept of *burnout* (Maslach & Jackson, 1986; Maslach, Schaufeli, & Leiter, 2001) might represent the effects of work overload characterizing modern societies (Weber & Jaekel-Reinhard, 2000). In terms of quantity, the fourth industrial revolution and the rise and expansion of technology also brought another phenomenon, more neglected in the scientific literature in comparison to the abundant reviews on overload and its effects (Reijseger et al., 2013): the suffering from under-stimulation. Various studies report that large proportions of the workforce are affected by chronic boredom, from 15% in a general population (Rothlin & Werder, 2008) to more than 30% of employees in France (Bourion & Trebucq, 2011) or in England (DDI, 2004, cited by Mann, 2007), this proportion rises to 50% in some sectors of activity such as financial services (Loukidou, Loan-Clarke, & Daniels, 2009).

3.2.2.4 Changes in the Workplace Threatening the Meaning of Work

According to Rosso, Dekas, and Wrzesniewski (2010), the meaning of work can be considered from two different and complementary points of view. “Meaning” suggests the purpose or the role of work in the life of an individual. This conception questions socially constructed representations and their relation to culturally conditioned work, also called Ethos of Work (Mercure & Vultur, 2010) or Ethics of Duty (Méda & Vendramin, 2013). The term “meaningfulness” refers to the perception of the individual of the significance of his or her work; this approach therefore aims to capture the subjective feeling of wellbeing or dissatisfaction arising from the coherence between what the subject looks for in his or her work and in what work environment. We find it particularly interesting to consider this second definition. In this perspective, Méda (2016) further explains that beyond the instrumental dimension of work—earning a salary—expectations about work as a means of self-realization have increased. Indeed, people expect their work to be useful and to allow them to realize themselves. To define the meaningfulness of work, Morin (2008) considers six aspects: the usefulness of work defined around social utility, its moral rectitude, the possibility of learning and development within the framework of professional activity, autonomy defined as the ability to assert these skills and one’s free will over the work done, the quality of the relationships and the recognition of the work done.

In conclusion, the combination of three contextual factors may underlie a loss of meaning and the prevalence of boredom at work. The rising level of required skills and the automation of work procedures, added to an increasingly insecure market

and globalized competition, are pushing individuals to accept positions outside their skills and aspirations (Loukidou et al., 2009; Van der Heijden, Schepers, & Nijssen, 2012). Technology has a role here. In fact, as the ILO (2019) states, when technology is used in an economical profitable way, it can “render labor superfluous, ultimately alienating workers and stunting their development. Automation can reduce worker control and autonomy, as well as the richness of work content, resulting in a potential deskilling and decline in worker satisfaction” (p. 43).

3.2.2.5 Bullshit Jobs, Nasty Jobs, and Detrimental Jobs

The term bullshit job appeared for the first time in a 2013 article by David Graeber (2013) and published in *Strike!*, an online journal of the radical left. Such jobs are characterized by their lack of social utility and meaning, and are assumed to be created by the capitalist economic system in order to keep people working. Bullshit jobs are defined as “a form of paid employment that is so completely pointless, unnecessary, or pernicious that even the employee cannot justify its existence even though, as part of the conditions of employment, the employee feels obliged to pretend that this is not the case” (p. 10). Automation of work seems to have been sold to the individuals with the idea that it would decrease work hours, but, instead, in a society that is not ready to free humans from work hours, technological advancements have contributed to increase meaninglessness at both societal and individual levels. Cassely (2017) highlights that boredom has become an important issue in the expanding managerial, marketing, and administrative sectors in which—thanks to technology that has accelerated and automated the execution of a large number of tasks—people may work only 15 h a week, spending the rest of the week performing non-work related tasks (Glaser, 2014). In this context, employees can have the feeling of having a bullshit job (Bourion & Trebucq, 2011) and carrying out activities they consider to be useless (Graeber, 2013). Graeber (2013) and other authors (Brygo & Cyran, 2016; Cassely, 2017) highlight the psychological and societal violence of this issue: “How can one even begin to speak of dignity in labor when one secretly feels one’s job should not exist?” (Graeber, 2013, p. 1). The author seems to have brought to light an issue. Indeed, his article achieved an unexpected success being approximately read 150,000 times during the first week, and was, the month after, translated into many different languages.

Authors like Guichard (2016) and Cassely (2017) refer to the concept of bullshit jobs to highlight the increase of new jobs with obscure titles and abstract aims in developed economies. Two others type of jobs have also been associated with a lack of meaning, nasty and detrimental jobs. A nasty job is a professional occupation characterized by dangerous working conditions implying important physical effort, accident, risks, or occupational diseases (e.g., mining, slaughter-house work, harvesting labor etc.). Detrimental jobs are those “which, far from aiming to meet human needs, are explicitly intended to exploit and/or harm human beings, a characteristic that can hardly be ignored by those who perform them” (Guichard, 2016, p. 185). The author gives examples such as credit organizations which

encourage employees to offer mortgages or loans to individuals who cannot afford them, or weapons industries. The reason behind the fact that people do these tasks, and find themselves in the situation of occupying a nasty workplace, is that workers in these contexts are usually individuals who have not the choice to have another occupation to earn their livelihoods.

Moreover, changes in the nature of work arising from the fourth industrial revolution threatens access to decent work. Several authors bring attention to the possible impact of technology (Masdonati, Schreiber, Marcionetti, & Rossier, 2019; Blustein, Kenny, Di Fabio, & Guichard, 2018) and argue that individuals without specialized skills and training may lack access to low- or middle-skilled jobs because they were replaced by machines. Decent work is considered a fundamental human right by the United Nations and the International Labour Organization, which conditions are “access to full and productive employment, benefitting from rights at work, having guarantees of social protection, and promoting social dialogue [... and its access represents] one of the main challenges the world is facing” (ILO, 2013, p. 12). Blustein et al. (2018), citing a report of the National Academy of Sciences published in 2017, call for caution regarding changes that might lead to inequality and difficulties to find a stable job and remind us that consequences are not irrevocable. Moreover, there is still time to decide which impact technology should have on our societies.

3.3 Implications for Practice

3.3.1 *New Concepts for New Career Trajectories*

Traditionally, careers have been conceived as linear. The employee sought to gradually climb the ranks within the same organization (Sullivan & Baruch, 2009). The fourth industrial revolution has various implications both on work and humans. Given the extent of those impacts and how fast they have taken place in our daily lives along with the increase of various problematics, the question of the implications for our field is crucial. The protean (Hall, 1996, 2004) and the boundaryless (Arthur, 2014; Arthur & Rousseau, 1996; DeFillippi & Arthur, 1994) career models are illustrations of this need to describe new forms of careers. The protean career refers to “a career that is self-determined, driven by personal values rather than organizational rewards, and serving the whole person, family, and ‘life purpose’” (Hall, 2004, p. 2). The term of “protean” refers to the Greek god Proteus whose characteristic was to change his shape as it pleased him (Sullivan & Baruch, 2009). In this vision, in addition to wages, satisfaction at work is achieved when internal expectations of psychological success are satisfied (Hall & Moss, 1998; Hall, 1996, 2004). The boundaryless career (DeFillippi & Arthur, 1994; Arthur & Rousseau, 1996) adds the notion of independence between the employee and its organization,

by conceiving of careers as a “sequence of job opportunities that go beyond the boundaries of single employment settings” (1994, p. 307).

The two models highlight a new type of career in which the organization takes a secondary role and individuals are expected to take control and responsibility of their own career path. While different on several points, the boundaryless and protean models were constructed in opposition to traditional development career models, as a new perspective to understand how people can deal with changes generated by modernity. Unfortunately, the current labor market does not always allow individuals to choose the direction of their blossoming trajectory. Moreover, constant individual responsibility in terms of competence can create stress, not to mention phenomena such as nasty jobs, exclusion, marginalization, and precarity. The labor market is further and rapidly evolving, and “whereas the basic notions of protean and boundaryless careers seem increasingly relevant in the future, the expected changes in the world of work might mean that the specific components of what constitutes a protean and boundaryless career might need to be somewhat adjusted to new realities” (Hirschi, 2018, p. 5).

This new social and economic context has two implications for our field. First, we must question the relevance of existing models in the current and future work context. For example, Hirschi (2018) pointed that the future might contain new platforms of digital matchmakers (Evans & Schmalensee, 2016) to match job seekers with potential employers or redirect employees to new opportunities within the same organization. He argues that this could introduce a situation where neither the person nor the organization leads career development, unlike in traditional or the protean/boundaryless career models. Career development models must thus consider the dynamic nature of social and economic structures. For this reason, it is important to ensure that our models and interventions are appropriately adapted to all population and especially to vulnerable and underserved ones across their entire career paths. So that the role of career counselors may also change to adapt to these new situations. Having a clear idea about the consequences of technological and economic developments in our societies and their implications should be a primary goal in terms of public policies, and should help us to “reinvigorate the social contract that gives working people a just share of economic progress, respect for their rights and protection against risk in return for their continuing contribution to the economy” (ILO, 2019, p. 10). All these actions should contribute to help people access decent work.

However, individual actions are not sufficient, and collective ones—at the state level or involving international organizations—are necessary in order to valorize the social function of work. In terms of shaping policies and practices, the ILO point out that first, organizations should guarantee an “adequate living wage” (ILO, 2019, p. 12), as well as protection and safety at work. Furthermore, policies should respond to issue of life/work balance by increasing autonomy, in order to provide “time sovereignty” (p. 12) for workers. Also, organizations should adopt a “human-in-command approach to artificial intelligence” in order to ensure “that the final decisions affecting work are taken by human beings” (p. 13). Last but not least, the ILO points out the urgent need to implement precise policies “to address gender equality in the technology-enabled jobs of tomorrow” (p. 11).

3.3.2 Access to Decent Work for All

The modern work market can offer many opportunities for professional development. However, even if some perspectives consider the human in a protean optic, seizing new opportunities and adapting himself to a rapidly changing context, the work market can also constitute a thorny context to live, in which a healthy work life is moreover difficult to reach, and where the access to *decent work* still remains a challenge. Decent work is defined by the International Labour Organization as a professional occupation that “sums up the aspirations of people in their working lives. It involves opportunities for work that is productive and delivers a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organize and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men” (ILO, 2019). The access of decent work in the context of the fourth industrial revolution is a challenging issue. In fact, technology should benefit most people and not only the economy, that often means to benefit a restrained number of people. Technological evolution could help eliminating occupations that are harmfulness or participate in freeing human work from “from dirt, drudgery, danger and deprivation” (ILO, 2019, p. 43).

The Psychology of Working Framework (PWF, Blustein, 2013) offers a critique of Western conceptions of vocational choices, where we assume that individuals have the possibility to be “spoilt for choice” concerning their professional orientation. This framework focuses not only on contextual factors, but also on personal ones such as proactive personality, work volition, or career adaptability (Blustein, 2013; Duffy, Blustein, Diemer, & Autin, 2016). This implies that individuals can mobilize resources in order to “enhance individual control in navigating an uncertain and precarious work environment” (Blustein et al., 2018, p. 19). The PWF also integrates the concept of critical consciousness (Freire, 1973) as an “attribute that can help individuals shape their lives and deflect some of the negative effects of harsh economic conditions and marginalization” (Blustein et al., 2018, p. 19). This involves the possibility for individuals to question their work conditions and have an influence in shaping their work environment. In this sense, individuals can interact with their work environment and exert control on it. This framework might offer a relevant perspective for counseling individuals in the context of the fourth industrial revolution.

3.3.3 Promoting an Ethical and Human World of Work

Technological progress has brought positives consequences, for example in terms of working conditions, as well as negative ones, as for example, the disappearance of some occupations, the obsolescence of some knowledge, and also in some cases

negative impact on social structures and the environmental. Helping people adapt to these developments is not sufficient: the issues characterizing the job market can add obstacles to attain a healthy job and a decent work context, a context where wellbeing and self-realization are possible in addition to building a world that is fair and sustainable both for people and the planet. Guichard (2016) mentions that some organizations have very strong negative impact on humans and their environment. He strongly expresses the need for counseling practices to take these potential threats into consideration and to work actively for “the development of a good life, with and for others, in fair institutions, to ensure the sustainability of a genuine human life on earth” (p. 187). Bimrose, Kettunen and Goddard (2015) summarize Hughes view that career services seem to live under pressure to assume their role of “boosting economic productivity and competitiveness in the labor market and increasing employment, career progression and educational attainment” (p. 9).

As the profession of counseling is at the crossroads between an individual-based and a politically-driven work, the reflection on this dilemma is ongoing. Many authors (Blustein et al., 2018; Massoudi et al., 2018; Blustein, Olle, Connors-Kellgren, & Diamonti, 2016; Pouyau, 2016) highlight the need for a psychological approach to decent work. Indeed, counseling practices should also promote people wellbeing, access to decent work, and social justice. Technological development, economical growths, and people’s wellbeing development or happiness should thus be reconnected.

Hirschi (2018) explains that “personal growth might be increasingly pursued in nonwork roles because more people might no longer be able to obtain work that promotes personal development in a meaningful way” (p. 5). Even if meaning of work still remains a personal issue, it is an issue of dignity to build a society in which professional occupations are decent, and technology should help us to achieve this goal. Guichard (2016) explains that if “working is central to most people’s lives” it also “plays a core role in transformations of the world, in changes of humankind in general, and in the construction of an individual subjectivities” (p. 180). In the actual labor market, it can be seen as a paradox that wages are not associated with occupations’ social utility. Some authors do not hesitate to say that “in our society, there seems a general rule that, the more obviously one’s work benefits other people, the less one is likely to be paid for it” (Graeber, 2013, p. 1). Lawlor, Beitler, Kersley, Steed, and Cottingham (2009) assessed the social utility and nuisance of various jobs and observed that the social and financial value of occupation are not always closely linked. Over time this can lead some less useful job to become more desirable, discouraging people to do jobs that are in fact more socially useful (Graeber, 2013; Lawlor et al., 2009). Guichard (2016) favors the notion of “life design interventions”—rather than the term career counseling—to point out the evolution and changes of work and societies and underline the importance of work in the construction of identity. The contextual factors—political, social, and economic—cannot be ignored in the intervention process, which seek to help counselees to deal with those current changes. Guichard (2016) explains that “Such life design interventions would concentrate on counselees’ reflections concerning not their inclusion into the world of work as it is, but rather

their contribution to transforming it by their decent human(e) work” (p. 189). In this context, it is really important for practitioners to be in the front line by rethinking the content of interventions in order to support individuals not only in the construction of themselves but also of our world in a sustainable way, as work is a way to build on our society (Guichard, 2016). The point is that the society we create through work or new forms of social implications, only make sense if it serves humans and the world in which we live: If it is not the case, we have the right and the responsibility to rethink it.

3.4 Conclusion

Technological progress has brought positive as well as negative aspects in individual’s work life. The reaction of individuals to the technical and technological progress is far from new, citing for instance the revolt against “the machine” as symbol of the industrial revolution of English textile workers in the early 19th century, or the Manifesto of the Unabomber-Theodore Kaczynski (1998) against industrial society. However, the current implications in terms of human dignity, the right to decent work and ecological issues impose criticism on the advancement of technology in the world of work. The current logic seems to rely on the valorization of the technical progress, and consequently on the human adaptation to the latter, focal point of the progress. It is therefore not surprising that it is indeed the human who pays the consequences, because “le progrès technique ne sait pas où il va. [...] du fait de sa croissance causale et non finaliste. Et c’est pourquoi il est imprévisible, et provoque dans la société une imprévisibilité générale” [the technical progress does not know where it goes [...] because its growth is causal and not finalist. And that is why it is unpredictable, and provokes in society a general unpredictability] (Ellul, 1988, p. 97). This is the reason why societies need to critically manage the impact of technical progress so that progress can serve people first, beyond the economic profit. Guichard (2016) draws attention to the importance for people “to develop a reflection on work and its individual and collective consequences in order to prevent the “invisible hand” (Smith, 1776)” (p. 186). The ambivalent nature of technical progress and the potential irreversibility of its consequences implies that these developments need our full attention and have to be regulated. It is an important issue to use the potential of this new era for, and not against, people (ILO, 2019). Technological progress should not marginalize the contribution of humans, who should remain the center of our collective actions. Career interventions may have to be rethought to promote sustainable careers, sustainable societies, and a sustainable world.

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