THE SOCIAL DOCTRINE OF THE CHURCH IN THE DIGITAL AGE
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Introduction
For decades, after World War II, part of the world, and particularly Western Europe, lived through a period of time when economics, politics and society seemed to have found adequate mechanisms to attain lasting progress and well-being, which in turn would provide security and a feeling of certainty for its citizens. It is true that the Social Doctrine of the Church was never complacent with what was achieved and did not cease to express its critical reflections from the perspective of ethics. Social life appeared as something orderly, predictable, and controllable according to perfectly defined variables: a market economy, a social and democratic state based on the rule of Law, an intergenerational pact based on full employment... the responsibility of informing us was delegated to the Media; to technicians to say what was happening and to politicians to decide on the issues that affect us as a Society. In recent decades, we have witnessed very profound changes in all areas: economic and social globalization, growing inequality, convulsive multi-culturalism, demographic aging, environmental unsustainability, redefinition of work in a technological society, radical transformation of the foundations of social and cultural life, etc. All of these changes are disrupting the simple order of yesteryear and submerging us directly into a perplexed situation.

A great and risky ambivalence
We are a part of a technological civilization capable of producing unbelievable advances in artificial intelligence, for instance, to help doctors diagnose and cure diseases, or to make cars safe to ride without a driver, or to put a space station in orbit, or to achieve “synthetic life” in a laboratory, even to develop a “big red button” that can be used to interrupt artificial intelligence and to stop it from causing harm, but it seems that we are not capable to prevent thousands of children from dying each day from malnutrition or from curable diseases, or to prevent millions of refugees from living in sub-human conditions. We can achieve greatness, but we do not know—or do not wish to know—how to solve basic questions of human dignity. What is happening does not only refer to relative inequality, whereby the number of the opulent super-rich is increasing, but rather to inequality which reduces vital options and prevents access for many to basic social goods, as well as the minimum for active participation in society, essential for human development, which places the person at the center and the focus on increasing opportunities for developing human capacities. This puts us in the position of creatively combining the concern and attention to social justice, facing socio-economic conditions head-on, without abandoning the challenges of cultural and religious diversity, within the framework of a powerful digital culture.
The Digital Culture of “Real Virtuality”

Throughout history, as Manuel Castells explained in detail, cultures have been generated by peoples sharing space and time, under conditions determined by the relations of production, power and experience, fighting each other to impose their values and objectives on society. Thus, spatio-temporal configurations were decisive for the meaning and evolution of each culture. With the informational paradigm, a new culture of the substitution of places for the space of flows and the annihilation of time by timeless time has emerged: the “culture of real virtuality”¹. It is not just a technological revolution: it goes much deeper. This is a new world view, across frontiers, societies, generations and faiths².

Changes in the relations in production, power and experience converge towards the transformation of the material foundations of social life: space and time. The material base which explains – according to M. Castells – why “real virtuality seizes the imagination and the systems of representation of individuals is their existence in the space of flows and timeless time”. The “overcoming” of time by technology overrides the logic of clock time of the industrial age. Technology compresses time into a few random moments, which loses the sense of sequence and history, dissolving into the culture of the ephemeral; the network of society completely transforms social relations. Almost all economic and financial activities, as well political, cultural or communicative ones revolves around flows of exchanges between selected and distant localities, which escape from the experience embodied somewhere (simultaneity without contiguity), while fragmented experience remains confined to concrete places. The result is the mixture of all expressions, all spaces and all times in the same hypertext, constantly restructured and communicated at all times and places, depending on the interests of the emitters and the mood of the receptors.

The Catholic Social Teaching describes a number of striking features that Internet has, in a way that deserves to be remembered³: “It is instantaneous, immediate, worldwide, decentralized, interactive, endlessly expandable in contents and outreach, flexible and adaptable to a remarkable degree. It is egalitarian, in the sense that anyone with the necessary equipment and modest technical skill can be an active presence in cyberspace, declare his or her message to the world, and demand a hearing. It allows individuals to indulge in anonymity, role-playing, and fantasizing and also to enter into community with others and engage in sharing. According to users' tastes, it lends itself equally well to active participation and to passive absorption into “a narcissistic, self-referential world of stimuli with near-narcotic effects”⁴. It can be used to break down the isolation of individuals and groups or to deepen it”.

The whole picture speaks of strong ambivalence, and not only for the use that people can do but for the reality which technology creates. That goes beyond “virtual reality” to what Castells has called “real virtuality”. One might reasonable say that there are two sides of the same coin and that the Metaphysis of Virtual Reality⁵ has to be completed by The

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² Christmas Message from His Majesty the King of Spain, 24 December 2016.
Metaphysis of Real Virtuality. “Real virtuality” means that reality itself (that is, the symbolic material existence of people) is fully immersed in a scenario of virtual images, in a world of representation, in which symbols are not just metaphors, but constitute real experience. It is *virtual* because the materials received arrive via computer systems, through computer games, by means of television or cinema. It is real because it shapes the culture (ideas, values, behaviors) of those who access it. It is interesting to bear in mind that virtuality is not the consequence of electronic means, although these are the indispensable instruments for the expression of the new culture. This virtuality is part of our reality because it is within the structure of these symbolic systems, timeless and without place, where we construct the categories and evoke the images that determine behavior, shape character, induce politics (not only providing channels of participation, but also favoring the politics of *post-truth*), while at the same time expanding the forms of human experience.

The “digital divide”

The graphic expression “digital divide” names and denounces the increasing inequality and growing polarization that is occurring among individuals as well between groups and nations regarding the access and use of new technologies, with important consequences in terms of participation in the benefits of globalization and development. We remain unshaken by the deepening of inequality and discrimination in the “global village”. According to figures of UN in 2015, the “digital divide” is still huge: only 6,7% of households in the least development countries had Internet access compared with 46% of households worldwide and 81,3% households in development countries. The report also reveals that, globally, 46% of men and 41% of women are Internet users. 27 out of 37 African countries are in the bottom quartile of the overall distribution, including the 11 countries with the lowest overall Index rankings.

Neo-liberal logic has dictated that the solution would come from allowing the market to solve in itself the problems of inequality in the access to technologies. But with the passage of time, this perspective has been shown as a self-interested deception, which is already and will be increasingly intense and visibly a more important cause of global social injustice. In contraposition, for others, in order to fight against this supposedly unstoppable tendency, a policy of active intervention to correct the imbalances is imposed.

In addition to the huge gap between rich and poor countries, gaps are also being opened within these countries, not only those which are developing countries, but also in those with a high level of development. One of these gaps is that which is being created between the “interacting” and the “interacted”, that is, those capable of selecting multi-directional communication circuits and those that are provided with a limited number of pre-packaged options, which are very limited in their ability to take advantage of the functionality of new devices and digital media, not to mention the gap that is opening for those who are completely marginalized or excluded from this technology. This gap affects the closest personal relations, for example, the relationships within families affected by the irruption of these absorbing (and alienating?) electronic devices, but also

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affects, as well, the workplace, where we are only beginning to notice the initial effects of the transformations which the digital economy is bringing, which is possible thanks to the recent wave of globalization, itself reliant on advances in information and communication technologies.

**Participation in the society of digital communication: “the culture of encounter” (Pope Francis)**

There is no participation without possibilities of communication, and nowadays this occurs through channels and networks that have reached unprecedented levels of development which require our efforts in connection. Real difficulties and gray areas should not prevent us from recognizing the qualitative improvements brought about by digital innovations for both economic activities and the new possibilities for participative governance, culture and expression of diversity, or, in general, the mobility of goods or people, one of the signs of our times. Along with the immense possibilities for the creation of a dense fabric of relations, with enormous possibilities for relationships, there are huge intrapersonal and social distortions on many levels, and there is great ambivalence, not only in the use being made of these different means. Most certainly it is not enough to move on digital “streets”, that is to say, to be connected; it is necessary for the connection to be accompanied by a true encounter, and this is almost impossible without time and without the capacity for silence to listen. Being interconnected in itself does not solve the challenge of communication which continues to be “a more human than technological conquest”\(^7\). The “culture of encounter”\(^8\) requires practices for the good use of technological resources together with the cultivation of human relations. Here there is much to do, above all, in educational terms, as we will see later on.

**Digital economy and employment**

Digital innovations are remaking our industries, economy and society just as steam, electricity and internal combustion did before them\(^9\). It is difficult not to recognize that they increase efficiency and productivity. Progress with hardware, software and networks is improving our lives in countless ways and creating immense value. Digitalization reduces dramatically the cost of production of great part of economic activities which generate social wealth. Even more, in most of the digitalized activities machines will be imposed on the human beings. In many cases, marginal cost of these activities will be close to cero. And the effects of the digital economy are only in their beginnings. Moreover, experts say that we are on the verge of experiencing an acceleration of the impact of the technology in our lives. The computers start making things till now only possible for the human beings: they are capable of generating artificial intelligence with practical applications.

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\(^7\) FRANCISCO, *Mensaje para la 48º Jornada Mundial de las Comunicaciones Sociales* (23/1/2014).

\(^8\) FRANCISCO, *Angelus*, 9 de noviembre de 2014.

In the digital era, economy grows and consumers are benefited because items are cheaper, but which impacts will technological change have on labor? The disturbing question that some are asking is whether the robots “eat” our jobs. We are facing a “productivity paradox”: Up to the present, more capital and more productivity meant normally more salary, but we are in a time when more capital it is starting using increasingly not only not to raise wages but to replace workers. In other words: “if progress in productivity is so rampant, we should see healthy productivity improvements; however across advanced economies, labor productivity growth has slowed from 4% in 1965-75 to about 2% from 1975-2005 and further lower to 1% from 2005-2014\(^{10}\). For example, the majority of U.S. households have seen little if any income growth for over 20 years and the American middle class is being hollowed out. (This fact seems to have played an important role in the victory of Donald Trump).

In an ever more digital and interlinked world where we are living, the technological changes are clearly ambivalent and have uneven implications. Regarding employment, those workers who know to work with machines and manage complex processes will have a strong demand. Those who have capital will be benefited in a special manner, because the nature of digitalization, due to the network effect, favors enormously concentration of property. But there will be severe difficulties for sustaining jobs and for wage growth. The big data revolution and improvements in machine learning, including tasks one thought quintessentially human such as navigating a car or deciphering handwriting, can do things unthinkable so far. The data from the World Bank shows that the risks of automation are on average 57% of jobs are susceptible to automation in the OECD, but 85% in Ethiopia, 77% in China, 69% in India, 67% in South Africa, 65% in Argentina, 47% in US. (With US gaining the biggest advantage from this development and China having the most to lose. A growing concern of “premature desindustrialisation” in emerging and developing countries could require new growth models and a need to upskill the workforce\(^{11}\). We can imagine big segments of population useless to produce and therefore outcast of the new economic system characterized by digitalization. However, these numbers must be relativized, it can be said that they are very bold projections. For instance, very respectable experts point out that if automation, software and services based on artificial intelligence do eliminate huge numbers of jobs someday, the same developments will probably give a tremendous boost to wealth creation and prosperity. In any case, we lack information to make reliable projections.

In addition, the study of Citi GPS at Oxford University points out that 76% of respondents were techno-optimists on the outlook for productivity and profits, with policy adapting to share increasing abundance, and only 21% were techno-pessimists on the outlook for growth, employment, inequality, and disruption of company profit pools.

All these things considered, it seems that the right strategy for the current situation is to prepare people for those new tasks and to start a conversation about the deeper changes that will be necessary over the long term in basic public policy changes in education, infrastructure, entrepreneurship, trade, immigration, research, taxes, transfer system... or even democratic participation. Do we need a multilateral and profound conversation that

\(^{10}\) Citi GPS, *Technology at Work v.2.0 The Future is Not What It Used to Be* (January 2016) (acceso 29 dec. 2016 [www.oxfordmartin.ox.ac.uk/downloads/reports/Citit_GPS_Technology_Work_2]).

\(^{11}\) Ibid., p. 8.
takes ethics seriously? And if so, does the Catholic Social Teaching have anything valuable to offer? I think it does have it. Let’s see.

**The question for Work refers ultimately to anthropology**

From the first social encyclical *Rerum novarum* (RN, 1891) until the latest *Laudato si´* (LS, 2015) passing through *Laborem exercens* (LE, 1981), the work issues have been a deep concern in Church Social Teaching. This document of Leo XIII usually referred to as the beginning of Catholic Social Teaching argues at length on behalf of factory workers’ rights. Rejecting the materialism and presumption of class conflict in Marxism, the Pope who founded the Pontifical University of Comillas (almost at the same time that wrote RN) did teach that workers could not be treated as commodities, as mere “labor power”, rather as persons contributing to the common good of all, and as such, they have rights related to their duties (RN, nn. 40-50).

As the report of the Oxford Martin School points out, today it is important to recognize that technological progress does not just affect the occupational structure in terms of numbers of different types of jobs, but can also change the nature of work within these occupations.

What we see is the explosion of the new social question in this time of technological post-Fordism. However this social question is nowadays essentially an anthropological question, as *Caritas in veritate* (CV, 2009) insisted that the social question today “has become a radically anthropological question” (CV, n. 75). Or *Laudato si´*: “there can be no ecology without an adequate anthropology” (LS, n. 118). Probably there is no matter clearer than human work (even more than ecology) to verify this fundamental affirmation.

In the theological perspective, such defense for work has high meaning and value, founding in the human dignity as the image of God. In work humans beings participate in God’s creativity. *Imago Dei* should be understood not only individually but socially and ecologically. Because social characteristics and human nature are part of the universe as God’s creation, human co-creativity should be performed with other people and with nature. In the interconnectedness of life, we find our entire meaning of life and work and express the deepest sense of our dignity in co-creativity with God’s own acts of creation.

Human dignity must be flourished and protected in community, because human beings are social. Love for other human beings has either individual or social dimensions for the sake of common welfare. The yardstick of economic life for Catholic teaching is whether it sets person as “the source, the focus and the aim of all economic and social life” (GS, n. 63) and it elevates or threatens the common life as a community. Every individual has the right to participate in communal economic life. Basic justice requires a guarantee for the

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12 Ibid., p. 10.

13 Among the Studies of Catholic Theology on work I want to mention: E. E. GASDA, *Fe cristiana y sentido del trabajo*, Madrid 2011. This book is the result of a doctoral thesis defended at the Universidad Pontificia Comillas.

14 The society as a whole acting through private and public institutions has a moral responsibility to defense human dignity and to favor human rights.
minimum level of people to participate in economic life\textsuperscript{15}. In this line, human rights are minimum conditions for participating in communal living, and they include not only civil and political rights but economic and cultural ones. It cannot be morally justified that an individual or a group be prohibited from participation or abandoned in unemployment. And from this perspective of social justice as the minimum level of participation in communal living, all community members have an ethical obligation towards the poor and the most vulnerable. The preferential option for the poor means that the rights of the poor to participate should receive priority above the rights of the rich to multiply their opportunities or wealth.

Thus, the condition of work is not only an individual issue but a structural one supported by social and cultural transformations as well as ideological concepts and group interest. John Paul II realized this in his encyclical on human work \textit{Laborem exercens} and called this group of structural factors “indirect employers”, under this name is included “both persons and institutions of various kinds” and also “collective labor contracts and the principles of conduct which are laid by these persons and institutions and which determine the whole socio-economic system or are its result” (LE, n. 17). He distinguished work in the objective and subjective senses. The objective sense refers to what is produced by human work, as revealed in culture and civilization throughout the centuries with the necessary tools and technology (LE, n. 5). The subjective sense means individuals who are the subjects of work and those who are called to it; the foundation and those who give dignity to work are human beings, not productivity or progress. Paraphrasing Jesus' evangelical saying on Saturday, work is for human beings and not human beings for work (LE, n. 6). This means that they cannot be treated as mere means nor seen as production tools. Economy which treats human beings as objects cannot be accepted. The primacy of persons over products and technology and the primacy of human labor over capital are underlined (LE, n. 13).

Therefore, only an adequate anthropology can set the ethical values we need for a more sound and fruitful development of individuals and society, and for a right understanding of the relationship between human beings and between human beings and technology, as well as human beings and the rest of creatures.

Let us read two texts of \textit{Laudato si'} in which is presented the anthropological meaning:

“If we reflect on the proper relationship between human beings and the world around us, we see the need for a correct understanding of work; if we talk about the relationship between human beings and things, the question arises as to the meaning and purpose of all human activity. This has to do not only with manual or agricultural labor but with any activity involving a modification of existing reality, from producing a social report to the design of a technological development. Underlying every form of work is a concept of the relationship which we can and must have with what is other than ourselves. Together with the awe-filled contemplation of creation which we find in Saint Francis of Assisi, the Christian spiritual tradition has also developed a rich and balanced understanding of the meaning of work...” (LS, n. 125).

\textsuperscript{15} Probably the Magisterial document that better develops this matter is: United State Conference of Catholic Bishops, \textit{Economic Justice for All} (1986) following the path of \textit{Justice in the World}, document of the Synod of Bishops, 1971. On these ideas and others it can be read: D. HOLLENBACH, \textit{The Common Good and Christian Ethics}, Cambridge 2002. I was lucky and honored to write my Thesis of Moral Theology under the direction of Fr. Hollenbach, SJ.
“... Once our human capacity for contemplation and reverence is impaired, it becomes easy for the meaning of work to be misunderstood. We need to remember that men and women have “the capacity to improve their lot, to further their moral growth and to develop their spiritual endowments”. Work should be the setting for this rich personal growth, where many aspects of life enter into play: creativity, planning for the future, developing our talents, living out our values, relating to others, giving glory to God. It follows that, in the reality of today’s global society, it is essential that “we continue to prioritize the goal of access to steady employment for everyone”, no matter the limited interests of business and dubious economic reasoning” (LS, n. 127).

The idea of addressing jobless with money: some ethical considerations

In the case of disruptive technological changes, the issues we are likely to encounter include the potential loss of jobs in many industries, the inadequacy of skills of some of the workforce to find equally good jobs, and the winner-take-all nature of much competition. Some of these issues may manifest themselves in high unemployment and are likely to be associated with even greater inequality of income and wealth than we see today. According to a survey undertaken by the European Parliament Eurobarometer, concerns about unemployment, social inequalities and access to jobs for young people are considered some of the main challenges facing the EU and its Member States.

In USA, the basic-income concept (i.e.: income that is sufficient to guarantee a minimum standard of living) is gaining renewed interest because a number of observers, including a number of leaders in the technology industry are talking it up, especially in Silicon Valley and San Francisco Bay Area. It is surprising that ‘basic income’, which was thought to support the people universally, want to become a subsidy for those who lose their job. The prime motivation is a concern that automation has been displacing jobs and that increasingly sophisticate artificial-intelligence applications could accelerate the trend. Another motivation would be that many people are struggling economically. In USA, the top 0.1 percent of Americans now account for more than 20 percent of the country’s wealth. As D. H. Freeman comments: “It is hard to live in Silicon Valley without sensing the growing of inequality”.

There also are worries about the social and cultural impact of taking so many people out of the workforce. It is always present the question for how to pay for it, particularly at a time when public purses feel rather stretched. One can say: if productivity growth is likely to be high, those who are benefited by this should pay, but things are never so easy. However, even more important than the question of how pay for this, the two main downsides of a basic income are: that it may blunt incentives to contribute productively to society and that it may be an inadequate substitute for gainful employment even for

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16 Technology at Work v.2.0..., 97.
19 The need for public spending may be even larger because such spending may need to be higher on structural basis, rather than only during downturns. The taxes could be through an increase in top marginal income tax rates, increasing capital income tax rates, raising corporate income taxes, some form of wealth taxes or taxing goods or services more heavily that are consumed primarily by the wealthy, vid. Citi GPS, o.c., 101-103.
the recipient. Job loss can mean much more than a missing paycheck, deeply depressing self-esteem and overall outlook. Job is fundamental part of the social basis for self-respect, and it can be reasonable thought that for the majority of people money cannot substitute job. “The idea of addressing joblessness with money instead of jobs is an ironic one for the tech crowd to embrace. They want this supposedly great solution for others, not themselves”\textsuperscript{20}.

Catholic teaching emphasizes the goodness and joy of creative labor: Humans are creative, and human dignity includes the power to do good work. Therefore a successful business not only makes a profit, creativity of its workers, allowing them to participate as persons rather than as mere “labor”. The aim of effectively producing goods (the objective aspect of work) should not override the aim of honoring and cultivating human activity (the subjective aspect of work). It is not a question of reducing effective production, but of reorganizing that any organization of work that reduces humans to mindless cogs or mere units of production is harming, rather than contributing to the common good. The pope Benedict XVI insists in \textit{Caritas in veritate} that economics cannot resolve social problems simply through the application of commercial logic, but “needs to be directed towards the pursuit of the common good, for which the political community in particular must also take responsibility” (CV, n. 36)\textsuperscript{21}. And the pope Francis assures that “business is a noble vocation, directed to producing wealth and improving our world. It can be a fruitful source of prosperity for the areas in which it operates, especially if it sees the creation of jobs as an essential part of its service to the common good (...) In order to continue providing employment, it is imperative to promote an economy which favors productive diversity and business creativity” (LS, n. 129).

And addressing directly the issues related to the impact of technological innovations, \textit{Laudato si’} affirms strongly the need to protect employment. “We were created with a vocation to work. The goal should not be that technological progress increasingly replaces human work, for this would be detrimental to humanity. Work is a necessity, part of the meaning of life on this earth, a path to growth, human development and personal fulfilment. Helping the poor financially must always be a provisional solution in the face of pressing needs. The broader objective should always be to allow them a dignified life through work. Yet the orientation of the economy has favored a kind of technological progress in which the costs of production are reduced by laying off workers and replacing them with machines. This is yet another way in which we can end up working against ourselves. The loss of jobs also has a negative impact on the economy “through the progressive erosion of social capital: the network of relationships of trust, dependability, and respect for rules, all of which are indispensable for any form of civil coexistence”. In other words, “human costs always include economic costs, and economic dysfunctions always involve human costs”. To stop investing in people, in order to gain greater short-term financial gain, is bad business for society” (LS, n. 128). It can be said in different words but not clearer.

\textbf{The technocratic paradigm}

\textsuperscript{20} Ibid. 52, quoting San Jose State’s Darrah.

\textsuperscript{21} The principle of gratuitousness and the logic of gift as an expression of fraternity can and must find their place within normal economic activity, as expressed in commercial relationships (CV, 36).
Pope Francis makes a resounding criticism in his Encyclical *Laudato si’*, from the paradigm of “integral ecology” to the technocracy that dominates the economy and politics (LS, n. 109). Besides that, to claim “economic freedom while real conditions bar many people from actual access to it, and while possibilities for employment continue to shrink, is to practice a doublespeak which brings politics into disrepute” (LS, n. 129).

The technocratic paradigm, hither and thither, does not refer to the application of technical methods to the solution of definite problems, nor does it criticize that some experts place their knowledge and experience at the service of society in political actions, but rather refers to an penetrating *ethos*, a vision of the world which puts techno-science at the service of interests (usually camouflaged as neutral) in which factors such as mere utility, efficiency and functionality are prioritized. Science and technology are “not neutral; from the beginning to the end of a process, various intentions and possibilities are in play and can take on distinct shapes” (LS, n. 114). This criticism of technocracy does not at all go against a sincere appreciation of the great benefits of scientific and technological progress.

When an elite uses scientific-technical rationality for its own purposes, it can end up converting reality, and also human beings, into an object of experimentation or business under criteria purely marked by efficiency or profitability. Many political decisions, both in the economic arena as well as in human dramas such as that of the refugees, are not alien to this technocratic way of proceeding. Safeguarding itself under apparent technical reasons, some aspects in which human lives are being played with are deprived of a moral dimension. Thus it seems that injustice and alienation would be hidden behind the mask of purely technical decisions which would escape from being thought or discerned.

The underlying latent conviction is that not everything we can do by means of our capacity or physical, psychological, or scientific-technological capacity or power can be done “morally”. To illustrate it, see the following reasoning: “It has never occurred that an efficient and useful technology capable of bringing about disruptive change is no longer used by social consideration. And the advantages of automation are so obvious that it would be absurd to try to combat it with attitudes of resistance”. Those who think so, they are not soulless beings or people devoid of ethical sense. They are representatives of a fairly common sense, and are concerned about the subsistence of those left without jobs. Such concern is clear in this case: “If there is no work for everyone, how can we guarantee a minimum of income for a decent subsistence?”. The answer follows in terms that I summarize here: It is expected that the technological leap will involve an increase in productivity and wealth, but will not be distributed through labor, as has been happening in the other industrial revolutions. In order to promote the distribution, two ways are being put on the table at the moment: reducing the working day (Sweden is testing the 6 hours) and a basic income in charge of taxes on the wealth generated (Finland will test in 2000 people).

I would like to point out that, in an ethical perspective, power (capacity or ability) to do something is not necessarily a duty to do it. In other words, not all that can be done

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22 “Tecnócratas con corazón” (“Technocrats with heart”) is the title of an interesting article written by University Professor Salomé Adroher in ABC 5/5/2016, who has been General Director of Family and Minors in the Government of Spain.

should be done. The Falling into what has been termed “the technological imperative”, which rests on an instrumental conception that supports the neutrality of techno-scientific, and at the same time, its unquestionable power of progress, when impediments are put in its path to advancement. Proceeding by following such an imperative is still a flight forward (usually due to very powerful interests), whose consequences can be irreversibly disastrous to the whole of Humankind. There is “a growing awareness that scientific and technological progress cannot be equated with the progress of humanity and history, a growing sense that the way to a better future lies elsewhere. This is not to reject the possibilities which technology continues to offer us. But humanity has changed profoundly, and the accumulation of constant novelties exalts a superficiality which pulls us in one direction. It becomes difficult to pause and recover depth in life” (LS, n. 113).

I see that this kind of technological imperative logic has a lot to do with the technocracy. Both logics are very closely connected.

I share the reflection by M. Castells, one of the most lucid interpreters of globalization, when he wrote, “genetic Engineering shows the error that would imply giving value to any extraordinary technological revolution without taking into account its social context, its social use, and its social result. I cannot imagine a more fundamental technological revolution than having the capacity to manipulate the codes of living organisms. Nor can I think of a more dangerous and potentially destructive technology if it is dissociated from our collective ability to control technological development in cultural, ethical and institutional terms”24.

And I also like a reflection of the philosopher of Harvard, Michael J. Sandel, when he writes on the dignity of work and the necessity to open a serious political debate: “New technologies can erode even more the dignity of work. If it is necessary to receive or resist the arrival of such a new world is a question which will be fundamental for politics in the coming years. To be able to think on this situation, political parties have to fight with the meaning of the work and the place that the work has in a good life”25.

I fundamentally agree with him, because we should reflect upon the future, not to stop scientific and technological progress but to discern how to be human in the new and unknown scenarios. For the goal of inclusive prosperity or prosperity that does not “rule out anyone”26 is needed a deep conversation among business leaders, politicians, representatives of workers and of diverse groups of civil society, educators, researchers and thinkers in order to develop new organizational models and approaches that not only enhance productivity and generate wealth but also create broad-based opportunity and think upon the excluded. It has to be an interdisciplinary conversation, because to seek only a technical remedy to each social problem27 “which comes up is to separate what is in reality interconnected and to mask the true and deepest problems of the global system (LS, n. 111). Instead of waiting passively that this new reality to force on us, let us to have

24 Cf. CASTELLS, M., “Epílogo” a HIMANEN, P., La ética del hacker y el espíritu de la era de la información, Barcelona 2002, 179.
26 Ours is “a throwaway culture which affects the excluded just as it quickly reduces things to rubbish”, LS, n. 22.
27 Here I take the license to change “environmental” for “social” from the original text of Laudato si’.
enough strength and initiative to look ahead and assume an active and determined leadership.

We need also an interdisciplinary conversation within the Social Doctrine of the Church to rethink the anthropologic meaning of the work in the new parameters of the digital and global culture. This way we will be able to do a contribution more adapted to relations, needs and liberties in which the dignity of the work is played, taking into account “the new things” (rerum novarum) of the today human experience to the light of the Gospel and the Church’s Tradition. I truly believe that all the texts of the social doctrine considered in this paper are valid and valuable to make suggestive contributions to the debate on the meaning of work, but it does not mean that we must not open and look for new ways from them. Precisely in that is the true respect to the Tradition, which is non-static but dynamic growth in the Spirit.

A brief note on the Logic of the Common Good: Ethics, Politics and Economics

Regarding the phrase quoted before: “It has never occurred that an efficient and useful technology capable of bringing about disruptive change is no longer used by social consideration”, I believe that some point about the meaning of common good according to the Catholic view point are worthy. In some way an identity is established between efficiency and good or between utility and good that is, at least, problematic. Questions like who and how efficiency is determined and what is its scope and who benefits cannot be avoided, otherwise we fall into the gross technocracy. When these questions are not taken into account, any talk about ethics is nothing more than an ornament.

The interest for the common good does not conform to the utilitarian principle of “the greatest good (or welfare) for the greatest number”, but rather, it goes beyond this: it requires that no one be forgotten (the centrality and value of each person), that we recognize and take care of minorities and the assets of the community, as a valuable part of the diversity of the society of all. And, in a world in which “there are so many inequities and more and more people are disposable, deprived of their basic human rights”, striving for the common good means taking decisions based on solidarity as “a preferential option for the poorest” (LS, n. 158) within in confines of justice/solidarity, both intra-generational as well as inter-generational, and also, of course, global. The paradigm of an integral ecology, which by definition does not exclude human beings, needs to take account of the value of labor” (LS, n. 124), and not only for human dignity in a deontological sense, but even because “to stop investing in people, in order to gain greater short-term financial gain, is bad business for society” (LS, n. 128).

When we demand that politics not be subordinated to the economy, and that it seek the common good by placing people at the center, we call for a humanism that cultivates an ethical (not “cosmetic”) dimension of life and profession, a sapiential horizon where analyses and decisions, as well as scientific and technological achievements, go hand in hand with philosophical and ethical values. This distances itself from any type of narrow and counter-productive specialism, which goes well with technocracy, but not with the pursuit of wisdom and the common good.
Politics, the art of living together and thinking about common life together, should make us more human\textsuperscript{28}. Its center must be the human being, and its purpose must be the integral development of everyone and the social conditions for that everyone can respect him or herself\textsuperscript{29}. To support this development, we must start from an authentic vision of the human, of a new humanism. Thus, in a plural society of free people, politics should not attempt to organize the lives of all, but rather to create the conditions so that each person can fulfill his or her legitimate aspirations in freedom. This set of conditions for the coexistence of all in freedom is what constitutes the common good, which is the responsibility of all, but more directly of those who legitimately exercise political power.

Several actors on the world stage, including the Catholic Church, have expressed the need for politics to regain space over the economy. This statement, which becomes more urgent in the context of a crisis where markets seem to impose their law on governments and on people, does not imply rejection of the economy or its actors. Economic activity - with companies, businesspeople and entrepreneurs as a key social asset - is the source of the creation of wealth and the channel for the production of goods and services for all; in it, each person is guided according to his or her legitimate aspirations. If politics is to be above the economy, it is only to frame these particular activities within the common good, in the general interests of society: and it does so by channeling the economic activity of many, correcting the dysfunctions that the game of freedom inevitably generates, paying special attention to the most vulnerable. In these matters the Pope Francis is being very forceful.

**Some educational implications**

With careers likely to be more disrupted than at any other point in the past, individuals should anticipate the need to retrain in the future. A talent mismatch already exists in many countries, with many well-educated workers finding employment in lower-skilled jobs. To combat this, greater coordination will be needed between educational, training and employment sectors.

in this context, the smart is —as King Philip VI wisely said in his last Christmas Message—“to adapt to this new and unstoppable reality, and develop our skills to the limit so that we can seek success in the sciences, economy, culture, industry and security; but always preserving the human values that identify and define us”. We need either to adapt or to maintain values, and these have to do always with the good of people and the common good of societies without renouncing humanly oriented scientific and technological innovation.

And in this task, as the same message follows, “education is the key factor, and undoubtedly will continue to be. An education which strengthens our knowledge and keeps it constantly updated, but which also teaches us languages and culture, citizenship and values; which prepares our young people to be citizens in this new world, with more freedom and more skills, and able to use and learn from the experience of older

\textsuperscript{28} This is the understanding of the common good which the Jesuits Universities in Spain have, vid: UNIJES, *Por la regeneración democrática de la vida pública* (11 de julio de 2013), in which writing I took part.

\textsuperscript{29} The social basis of Self-respect is the main social primary good according to John Rawls in *A Theory of Justice* (1971) and other works.
generations. An education which encourages research, fosters innovation, promotes creativity and the spirit of enterprise, as demanded by the society of the future, which is the society we are already living in”. I subscribe one by one all the words. The Oxford Martin Group deals with the question on how should the education and training system respond to some of these potential transformations? It is clear that more information & communication technology (ICT) skills will be needed, but also an increase on Science, Technology, Engineering and Mathematics skills (STEM skills), increase in soft skills, a move away from rote to active learning, increase in apprenticeships and corporate based training and increase in investment in teachers.

This is why it is said that just as important as cognitive skills are non-cognitive skills, that is, the behavioral traits and characteristics that young people possess, such as motivation, perseverance, resilience, self-control, effort capacity, ability for team work or socially interact, leadership,..., as well moral integrity and the rest of ethical values. The question here is on the malleability of these skills: some are clearly got by education, others are not so clear, rather there are doubts that can be taught in academic institutions. The university institutions always have something valuable to contribute in that respect but it is certainly not only matter of them. Moreover, the effect of technology not only changes what the education sector needs to do in order to supply the labor market with necessary skills, it has the potential to also change the way this education and training is delivered. At this stage, the biggest unanswered issue is whether the use of new technology offers a genuine like-for-like substitute in terms of educational quality, or whether the development of certain skills or aspects of knowledge require face-to-face interaction, demonstration and feedback. In this respect my opinion as a professor currently leading a university institution is that technology is already helping a lot and will have to help even more teaching and learning, but education will never cease to be an act of human relationship which will always require face-to-face interaction at some level and in, at least, some phases of the processes. And educators must be more and more process activators than space controllers, as pope Francis likes to say.

**Depth and universality in ethical thinking**

We have never had so much knowledge, but so useless, if we think of how badly we have solved fundamental problems. We need to go beyond the surface of what we do and see, thanks to and through new technologies, because these are not, by any means, purely neutral instruments with respect to human life. On the contrary, they involve a definite ordering of space and time, of social relations, and shape new ways of thinking, living and being. Of course, they affect politics and implications for building a better world. Pope Francis is very concerned about this: “We cannot think about the future without offering them real participation as agents of change and transformation (...) But how can we make them participants in this construction if we deprive them of work, of decent employment

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30 I follow in this point to Citi GPS, *Technology at Work v.2.0...*, 121-124.
31 It is interesting to know how Intermediate level skills in STEM seems to be riskier educational investment.
32 Various models exist, form incorporating technologies into a traditional education setting to moving entirely out of the classroom through massive open online courses (MOOCs) and similar, in *Technology at Work v.2.0...*, 124.
that allows them to develop themselves with their hands, their intelligence and their energies?\textsuperscript{33}

The result of the British referendum on whether or not to remain in the European Union demonstrates perfectly the passivity of young people in matters that now concern them, but whose consequences they will suffer in the future. Only some 40% of those aged thirty years or less voted, and 77% of them voted in favor of remaining in the European Union, but we know that the result was that of Brexit, that is to say, leaving the Union, and consequently, the solution goes against the majority opinion of young people who did not feel motivated to vote, but who subsequently protested the result which will have an effect on them.

In a world where the digital culture in relationships and in everything is so alive, it is becoming more urgent to recover spaces of vital experience, encounter and interpersonal service. Pedagogical action must be able to guide individuals to know themselves internally (depth) and to understand the world (universality) in which we live and in which we are called to situate ourselves and learn. This is why it is rightly said that so important as the cognitive skills are non-cognitive ones.

We need a realistic education, which opens and confronts people to reality, and which puts people in touch with their own inner-self, not for them to stare at their own navel, but rather to become conscious, competent, compassionate and committed people. We need an entire program of comprehensive training that calls out to educators, willing to give the best of themselves with intelligence and mercy. So expressive was Pope Benedict XVI in saying that “There is no intelligence and then love: there exists a love rich in intelligence and intelligence full of love” (CV 30).

On internet, there are many good things and many harmful contents at the reach of any user, but the most serious thing is that the continuous non-digestion or assimilation of materials that are collected or received, together with the endless and virtually instantaneous nature of this process, causes dispersion, extraversion of consciousness and a concept of experience as continuous acquisition, which punctures the user from within.

Although today we may lack effective social practices to manage ourselves in the cultural scene of our times, it must be possible to imagine and implement good practices to change and improve people. And this in the cultivation of spaces to contemplate the unstoppable flow of the culture of “real virtuality”, to control and not to be controlled by instruments, to cultivate in a practical manner the freedom to value and actively choose what we want to do with new technologies and their incalculable and ambivalent possibilities. It is certainly difficult but it has to be possible.

\textit{Disclaimer}

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\textsuperscript{33} FRANCISCO, Discorso en la recepción del Premio Carlomagno (6/5/2016).