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***The era of the smart people. How techno capitalism is changing the lifestyles of the individuals of the smart society***

**Abstract**

A partire dall'introduzione di nuove tecnologie come Information and Communication Technologies (ICT), Genetics, Robotics, Artificial Intelligence, e Nanotechnology (GRAIN) e dagli sviluppi delle scienze cognitive, si sta assistendo ad una ridefinizione del ruolo dell'individuo all'interno della società. Ciò sta causando al contempo una profonda trasformazione dei sistemi culturali, fisiologici e biologici su cui poggia la società stessa. I principali attori e i principali destinatari di questi cambiamenti sono gli Smart People. Ma cosa indica questo termine? Chi sono gli Smart People? Cosa vogliono? Come agiscono? E soprattutto, quali sono le implicazioni sociali a monte e a valle di tale cambiamento sociale?

**The challenge of techno capitalism: from the factory of the future to society of the future**

With the introduction of new technologies such as Information and Communication Technologies (ICT), genetics, robotics, Artificial Intelligence and Nanotechnology (GRAIN) within the production systems, the industrial world is trying to find the best strategies to apply new knowledge and new technologies to the production processes of factories to make them "intelligent". The precursors of this new course of industrialization were Henning Kagermann, Wolf-Dieter Lukas and Wahlster Wolfgang; in 2011 they mentioned *Zukunftspojekt industries 4.0* for the first time. They were the first to focus on the change that would have occurred in the Factories since they realized that the recent technological advances had laid the foundations for the manufacture of a new industrial revolution based on automation, Big Data, Internet of Things, Cloud computing, robotics, productive network and the introduction of digital innovations within the system of industrial manufacturing.

The problem of Kagermann, Lukas and Wahlster was to make the traditional factory and the factory of the future coexist. The main objective therefore was to be able to use the interactions of the physical world with those of the virtual world in order to obtain interactive solutions that enable: to apply the idea of *social network* (social network) also to machines; to enable factories to be connected globally; to put the augmented reality at the disposal of the workers, in order to increase the spectrum of their possibilities for action; and to use intelligent products, able to autonomously acknowledge any problems in the production chain and autonomously remediate the problem<sup>1</sup>.

In industry 4.0 the "product [the technological tools] then controls the production process itself, monitors the environmental parameters detected through integrated sensors and activates the appropriate countermeasures in the event of interruptions: simultaneously becoming an observer and actor"<sup>2</sup>.

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<sup>1</sup> J. POSADA, C. TORO, I. BARANDIARAN, *Visual Computing as a key enabling technology for industries 4.0 and Industrial Internet*, in «IEEE Computer Graphics and Applications», vol. 35, n. 2, 2015, pp. 2-3.

<sup>2</sup> H. KAGERMANN, W. LUKAS, W. WAHLSTER, *Industries 4.0: mit dem Internet der Dinge auf dem Weg zur 4. Industriellen Revolution*. VDI Nachrichten - Ausgabe 13, 1 April 2011. Document available to link

This however does not represent the full spectrum of the industry 4.0, that far from lingering on the Internet of Things (IoT), expands its spectrum of action via the Internet of Services (IOS). Intelligent products require and offer intelligent services capable of exchanging information, of exercising restraint to each other, and influencing one another through the machine-to-machine communication (M2M).

These are products which in many cases are integrated with an Advanced Human Machine Interface, an interface capable of fostering man-machine communication capable (it depends on the interface) to employ, acquire or send visual notification sound, and/or tactile. For instance, the touchscreen devices, the wearable (smart watch, fitness tracker etc.), the motion sensors or to the lenses for the Augmented Reality (Microsoft Hololens, Vuzix AR3000 etc).

As stated in the more consolidated literature on the theme, the integration between the traditional factory and the new ICT technologies, IoT, IoS is turning faster and faster and in an ever more substantial way the relationship between individual and machine, not only in the working life, but also in the free time as a consumer and producer of goods and services. The factory of the future is determining the profound changes within the society of the future. Individualism and the propensity to gain typical of industrial capitalistic society are influencing every area of social life and are by atomising the lives of individuals, always less involved in the community goals, and always more closed in on themselves.

Within the economic system, the individual is increasingly skipping from being mere *consumer* into becoming *prosumer* i.e. a consumer who, in a time of consumption, is in turn producer or contributes to the production of what consumes in goods and services. With the term *prosumer* intention is therefore to convergence in a single subject of producer and consumer<sup>3</sup>.

The prosumer no longer identifies with the classic passive consumer, but wants to engage in creative acts of affirmation of their own personalities, through active intervention in all stages of the production process<sup>4</sup>.

In light of the above, it is clear that this precise phase of advanced capitalism corresponds more than ever to an expansive phase of the capital which invests in a more and more important way the other spheres of social life. To paraphrase the words of Jameson we can say that we are in the “most pure form of capital that has ever emerged, a prodigious expansion of capital in areas hitherto not changed”, or better, in areas still not belonging to the economic life<sup>5</sup>.

This enlargement of the domain of economic life in advanced capitalism and the consequent technological revolution, often called “Fourth Industrial Revolution”, has aroused great interest in strategic consultancy company as McKinsley, BCG, PWC, Accenture, and within the academic world in universities as the Polytechnic University of Milan or the Fraunhofer-Gesellschaft.

Consulting companies are indeed trying to understand how to ride the situation by assessing the costs and benefits of a new approach to the design, production and industrial consumption. Each of them has therefore emphasized an aspect rather than another within their strategies: McKinsley<sup>6</sup> for example has emphasized the benefits of industry 4.0, BCG<sup>7</sup> has

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<https://www.vdi-nachrichten.com/Technik-Gesellschaft/Industrie-40-Mit-Internet-Dinge-Weg-4-industriellen-Revolution>, (28/06/2018).

<sup>3</sup> P. DEGLI ESPOSTI, *The contradiction of customizing mass inside the logic of prosumerismo*, in «Culture and Communication», vol. 2, 2011, pp. 26-33.

<sup>4</sup> P. DEGLI ESPOSTI, *Prosumer be in the digital society: production and consumption between atoms and bits*, FrancoAngeli, Milano 2015.

<sup>5</sup> F. JAMESON, *Postmodernism, or the logic of Late Capitalism*, Toward Press, London 1991, p. 36.

<sup>6</sup> A. BEHRENDT, N. MÜLLER, P. ODENWÄLDER, C. SCHMITZ, *Industry 4.0 demystified - lean's next level*. McKinsley, ca. 2017. Document available to link <https://www.mckinsey.com/business-functions/operations/our-insights/industry-4-0-demystified-leans-next-level>, (28/06/2018).

enclosed innovation in nine technology pillars, PWC emphasized the impact of industry 4.0 on processes, while Accenture<sup>89</sup> gives attention to “*people first*”, i.e. to the primacy of the individual in the Digital Age<sup>10</sup>.

The academic world - among which they stand out in Europe the German Fraunhofer-Gesellschaft and the Italian Politecnico di Milano – on the other hand is trying to systematize the knowledge acquired in order to provide a more adequate training for new business managers, to devise new training routes capable of forming professionals able to be absorbed within the emerging professions, and teaching skills and knowledge key to students who will be entering the world of work in the coming years. In the near future the work of the individual may be, either wholly or partially, replaced by new machines where man will only control some functions or the setting of the management systems. In addition to ever more advanced robots and industrial machines, the industrial systems of the future will use programs and software that, thanks to their functions, will enable more and more the replacement of the work of people. The risk therefore lies in the further complication of human work and in the almost total outflow of man from the production system that, thanks to scientific and technological progress, is progressively emancipating from the worker.

If therefore, for consulting companies, is central to understand the economic implications of work organization inherent to the scientific world the challenge presents itself far more difficult. This is in fact not only to focus on the points of continuity and change between the factory of the past and the present, but also and above all to understand the consequences of choices dictated by this new phase of the advanced capitalism will have on individuals, on society, technological advances and new systems of production.

### **From capitalism to techno capitalism and the digital society**

With reference to the objectives of the scientific world, it is essential to rethink the entire process of development in a historical perspective, starting from its origins, in order to focus the main changes taking place within the system of capitalist production and the consequences that this will have in the future

As Pirenne teaches, the first stage of capitalism originated around the year 1000 A.D. and lasted until around 1500 A.D., when large international shipments led to the discovery of new worlds and gave impetus to the birth of international trade and to the leading role of the bourgeoisie in the facilitation of the importation and the exchange of products and raw materials<sup>11</sup>. The economic role of the bourgeoisie is translated in a short time even in the decisive impetus to the birth of the modern State and of the bureaucratisation of social life. It is the century of colonial shipments of mercantilism and monopolies. This is the era of not only the commercial

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<sup>7</sup> P. GERBERT, M. LORENZ, M. RÜBMAN ET AL, *Industry 4.0: The Future of Productivity and growth in Manufacturing Industries*, Boston Consulting Group, 2015. Document available to link [https://www.bcg.com/it-it/publications/2015/engineered\\_products\\_project\\_business\\_industry\\_4\\_future\\_productivity\\_growth\\_manufacturing\\_industries.aspx](https://www.bcg.com/it-it/publications/2015/engineered_products_project_business_industry_4_future_productivity_growth_manufacturing_industries.aspx), (28/06/2018).

<sup>8</sup> The pillars are: autonomous robotus, simulation, horizontal and vertical integration system, the industrial internet of things, cybersecurity, the cloud, additive manufacturing, augmented reality, big data and analytics.

<sup>9</sup> PWC, *Industry 4.0: Building the digital enterprise* 2016. Document available to link <https://www.pwc.com/gx/en/industries/industries-4.0/landing-page/industry-4.0-building-your-digital-enterprise-april-2016.pdf>, (28/06/2018).

<sup>10</sup> ACCENTURE, *People First: The Primacy of the people in a Digital Age*. 2016. Document available to link [https://www.accenture.com/t20160314T114937\\_\\_w\\_/us-en/\\_acnmedia/Accenture/Omobono/TechnologyVision/pdf/Technology-Trends-Technology-Vision-2016.PDF](https://www.accenture.com/t20160314T114937__w_/us-en/_acnmedia/Accenture/Omobono/TechnologyVision/pdf/Technology-Trends-Technology-Vision-2016.PDF), (28/06/2018).

<sup>11</sup> H. PIRENNE, *Economic and social history of the Middle Ages*, Garzanti, Milano 1967.

revolutions, but also of social revolutions and policies that see the crumbling of the social stratification of the *ancien régime* to leave place to commercial bourgeoisie. It is the historical period in which, as Sombart<sup>12</sup> had already noticed, the propensity to invest, to gain, to the rational organization of the work and to the market emerge for the first time in history.

This embryonic phase underwent a strong acceleration between 1700 and 1800, when capitalism entered a new phase. The “spirit of capitalism”, which consisted of propensity to gain and rational organization of the work, contributed to the birth – at first in Britain and then in Europe - of the Industrial Revolution. An almost sudden skip from agriculture and handicraftsmanship to modern mechanized industry, and in Britain to requests for less state interventionism.

The great depression at the end of 1800 had then important effects on subsequent social and industrial policies. With the affirmation of the United States as industrial power and with investments of Germany in the steel sector two great speculative bubbles are produced. They led to an excess of production and to the economic crisis. Faced with the problem of depression, entrepreneurs began for the first time to accept the regulatory action of the State in the economy. The States therefore began to adopt protectionist policies, increasing public spending, and undertaking new colonialist policies. This was the origin of a new phase of capitalism: the organized capitalism.

This new phase of capitalism manifested its effects not only in political life but also and especially in social life, with the introduction of lifestyles, with a new and radically different scanning of the times of life and work and with new ways of thinking. The times of the factory were changing the times of life, no longer scanned according to the rhythms of the farmer work, but by the clock. The new possibilities of gain induced the people to migrate more and more frequently from the countryside to the urban and industrial centres. This helped to change the face of the city and to create great popular neighbourhoods, poor, and unhealthy with hygienic conditions capable of feeding the spread of epidemics. The city, with their rich districts and their popular neighbourhoods became expression of the rich-poor, entrepreneurs-workers gap.

Social institutions that the man had known until that moment were destroyed due to a hasty industrial progress; “a progress on a huge scale which created an unprecedented disaster in the appropriation of the common people”<sup>13</sup> and became “a population of dignified peasants in a crowd of beggars and thieves”<sup>14</sup>.

This was a period in which the very substance of the society was subject to the rules of the market, a new social stratification was justified<sup>15</sup> on the basis of the logic of profit, of accumulation and free trade.

The effervescence of financial investments and imperialism soon led to the outbreak of the First World War and subsequently to the crisis of 1929 with the collapse of the stock market of Wall Street. The recession which from there took off, had destructive effects on the economy of the main industrial countries, with a sudden drop in demand and supply of goods and raw materials and a consequent collapse of prices which provoked a chain reaction of reduction in profits, lower wages, exponential increase of unemployment, and distrust in the capitalist system of self-regulation of the market.

In an attempt to compensate for these imbalances, the states began, on the one hand, to resort to expansive economic policies, artificially increasing the demand by entrepreneurial investment of state (think of the New Deal of Roosevelt or IRI to Mussolini), and on the other

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<sup>12</sup> W. SOMBART, *Modern capitalism*, Ledizioni, Milano 2014.

<sup>13</sup> K. POLANYI, *The Great Transformation*, Einaudi, Torino 2010, p. 53.

<sup>14</sup> *Ivi*, p. 47.

<sup>15</sup> *Ivi*, p. 91.

hand, to adopt measures of social security and welfare in an attempt to protect the poorer sections of the population (which was also the most affected by the crisis).

In this precise phase, the classic capitalism was starting to leave the place to a new capitalism determined by the fact that “new forms of economic life [were] developed”. These new forms of economic life were characterized by organizations that did not exist before like associations of companies and public companies and in which the enterprises had become increasingly large and extended<sup>16</sup>.

Similarly to Sombart, in 1949, Giuseppe Berta, considered that even the capitalist social order was facing the same changes thanks to the spread of four fundamental factors: the bureaucratisation, arising from the political organization and enterprise; the rationalization, which was going to be a substitute for traditional values such as loyalty within the social system; a strong aversion by the World Intellectual and political support for large firms and the system that they promoted; and the search for welfare and centralized security which were in contradiction with the “spirit of capitalism” originating tending to *laissez-faire* and the free market<sup>17</sup>.

It is from these assumptions, - and because of the economic boom of the sixties, the relative consumerism and high levels wellness - that what we might consider the third stage of capitalism developed. It consisted in the incremental use of electronic, telecommunications and informatic systems within the industrial production chain. This marked the passage from the era of the mechanic and the analogue to the digital era.

“This passage from the Ford company to the post-Fordist economy is [...] seen in its ambivalence and in its ambiguity, because on the one hand the output of Fordism involves the beginning of the casualization of the conditions of life and work, but *at the same time* it is lived as a real possibility of exceeding the industrial society twentieth-century where the social state is seen more as a place of self-reproduction of the system of parties than as a device of redistribution of wealth, in which large companies are considered external powers to society and to the forms of social cooperation experienced in the years of struggle for workers and students”<sup>18</sup>.

The success of new technologies, telecommunications and informatics was possible thanks to this cultural change confirmed during the ‘70s. A change that has tried to change the industry and capitalism itself and the results of which are now under our eyes in the new phase of advanced capitalist we are facing.

A capitalism in which the great transformation mentioned by Polanyi is more than ever accomplished. The promise of a different capitalism, the final exit from Fordism and the introduction of new technologies in production processes as elements able to improve the life of the man have proved this illusion. The economy has definitively and inexorably invaded all the other spheres of social life, conditioning them and subjugating them and their needs. Faith in the liberating power of technology has proved to be a boomerang and new methods of work and production and consumption have not been able to determine a substantial change since the digital proletariat - which differs from the industrial proletariat because more connected and consequently even more informed - remains today in the fight with a digital *elite*.

Technology has become indispensable for the sealing of the capitalist system and is gradually by encouraging the adoption of cyber-physical systems (CPS) in industrial processes with the aim of reaching a smart manufacturing from a smart workforce in which final the products are to be obtained at lower prices, with shorter working times and with fewer margin of error.

The affirmation of the techno capitalism has led to two consequences:

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<sup>16</sup> R. IANNONE (curated by), W. SOMBART, *The future of capitalism*, Mimesis Editions, Sesto San Giovanni 2015, p. 29.

<sup>17</sup> G. BERTA, *Eclipse of social democracy*, il Mulino, Bologna 2010, p. 12.

<sup>18</sup> C. MARAZZI, *Il denaro che parla*, in «InOltre», vol. 6, 2003, p. 10.

- 1) *The enlargement of the space*. David Harvey defined a “space-time compression”, i.e. an acceleration of the movement of capital and an acceleration of social life which leads to reduction of the meaning of the place. “Space seems to zoom out until becoming a global village [...] while time horizons shorten the point that the present is everything you have”. This loss of meaning and this acceleration of the times of life has a profound impact on the psychology and the values of individuals increasingly projected to instantaneity of the consumptions and of the experiences<sup>19</sup>.
- 2) *The inclusion of the biological dimension*. “The human body is not only designated simply as “labor” to use in the factories but - through consumption, media and biotechnology - is injected into the “bio-politics” as Foucault<sup>20</sup> says, i.e. a power system that acts directly on the biological, mental, emotional and relational level”<sup>21</sup>.

Invading not only the company but also the body and the psyche of the individual, the technique has produced an almost unexpected result: society and capitalism themselves begin to be considered in relation to technique and not vice versa. It might be said that there is an overtaking of the technological dimension with respect to the economic, political, social and cultural dimensions.

### **The Smart People and their new lifestyles**

To understand the methods through which this phenomenon is taking place and how it is taking on a concrete form, it is essential to take into account those who are the main actors and the main recipients of this social transformation: the Millennials.

They represent the generation that more than any other is experiencing and will experience the effects of these systemic changes in the future. This is in fact a generation made up of individuals aged between 18 and 40 years, which notoriously represents the moment more prosperous and more productive in the life of a human being.

From a methodological point of view, the researchers tried to enter this generation in a precise temporal arc that extends from the mid-eighties to the early 2000, however there is no convergence between scholars on the precise temporal collocation which stands around 1980 - 1995 for Foot and Stoffman<sup>22</sup> ; between 1982 and 1999 for Howe and Strauss<sup>23</sup> and after 1982 for Twenge<sup>24</sup>.

Echoing the thought of Mannheim<sup>25</sup> on the sociology of generations, what is undoubted is that it is not so important to establish a precise date of “start” and “end” of a generation but how to understand what the experiences and the social, economic and political environment in which these individuals are growing and forming are. The context in which they have developed their values, their behaviour and their personality is in fact central to ensure that a value is perceived as more important than another and vice versa.

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<sup>19</sup> D. HARVEY, *The conditions of Postmodernity*, Blackwell, Oxford 1990, p. 22.

<sup>20</sup> M. FOUCAULT, *Dits et écrits. I-IV*, Gallimard, Paris 1994.

<sup>21</sup> M. MAGATTI, *Contemporary sociological theory and Techno-Nihilist capitalism*, in «World Futures», vol. 68, n. 4-5, 2012, p. 297.

<sup>22</sup> D.K. FOOT, D. STOFFMAN, *Boom Bust and Echo 2000: Profiting from the Democratic shift in the New Millennium*, Macfarlane, Walter & Ross, Toronto 1998.

<sup>23</sup> N. HOWE, W. STRAUSS, *Millennials Rising: The Next Great Generation*, Vintage, New York 2000.

<sup>24</sup> J.M. TWENGE, *A review of the empirical evidence on generational differences in work attitudes*, in «Journal of Business Psychology», vol. 25, N. 2, 2010, pp. 201-210.

<sup>25</sup> K. MANNHEIM, *The Problem of Generation*, in K. MANNHEIM (curated by), *Essays on the sociology of knowledge*, Routledge & Kegan Paul, London 1952, pp. 276-320.

“As a generation, The Millennials are strongly influenced by the trends that have affected them and their parents, as baby boom, the increase in the rates of divorce, a greater number of women participating in the labour force and a rapid technological change<sup>26</sup>. From the socio-economic point of view, the Millennials have grown up in a relatively bourgeois environment, because the baby boomers were more prosperous than during the time their parents lived in<sup>27</sup>. This has led many commentators to characterize the Millennials as spoiled and masters<sup>28</sup>. The Millennials also have higher levels of post-secondary education compared to previous generations, with young women who earn a growing share of academic titles and full-time employment compared to men and women in previous generations<sup>29</sup>. Then, they are more likely to put into question everything and have higher expectations on themselves [...]”<sup>30</sup>.

The generation of the Millennials is also considered as an interrogative generation with respect to culture, society and sustainability - from here the epithet of *Gen why* - and which is born with technology. Since they are digital natives, they were born and grew up in the moment of greatest development of telecommunications, internet and IT. This has meant that they spontaneously acquired the rules of digital communication<sup>31</sup> and that they are able to use them more effectively than their parents.

The Millennial is a generation living in an ultra-connected world, where time and space are perceived in a very different way than in the past. On the one hand the life time and the time of work are no longer defined by the working time of factories, and on the other, new types of employment flexibility as the *smart working*<sup>32</sup> contribute to make the hours of the day promiscuous. Space and time are also being reconsidered not based on the physical distance, but on the basis of the difficulties in reaching a place through the media and the social network. With the development of the internet and of social networks everything is virtually at the click of a mouse. The world becomes a click away and digitality becomes the social reality, the environment in which to interact spontaneously, like a square or a bar. These characteristics mean that we often refer to millennials as *smart people*, i.e. people who face in an intelligent manner to the global challenges of contemporary society.

These global challenges are determined by the context in which the Millennials live and that is the fact of uncertainty and geopolitical instability - think of the 11 September, the war in Afghanistan, the Arab Spring, the Korean crisis, the economic crisis of 2008, with the rise in unemployment, greater job insecurity and the dissemination of the New Economy. This is also the period of climate change, the dissolution of the perennial glaciers in the poles of the desertification of certain geographical areas, of climatic migrations and the extinction of certain animal species.

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<sup>26</sup> L.C. LANCASTER, D. STILLMAN, *When Generations collides*, HarperCollins, New York 2009.

<sup>27</sup> L. OSBERG, *Long run trends in income inequality in the United States, UK, Sweden, Germany and Canada: birth cohort view*, in «Eastern Economic Journal», vol. 29, n. 1, 2003, pp. 121-141.

<sup>28</sup> For example N. HOWE, W. STRAUSS, *quoted*; J.M. TWENGE, *Generation Me: Why Today's young Americans are more confident, assertive, entitled - and more miserable than ever before*, Simon & Schuster, New York 2006.

<sup>29</sup> See L. LEETE, *Work in the nonprofit sector*, in W.W. POWELL, R. STEINBERG (curated by), *The non-profit sector: Research Handbook*, Yale University Press, New Haven 2006; THE U.S. CENSUS BUREAU, *educational attainment in the United States: 2012*, document available at the link <https://www.census.gov/data/tables/2012/demo/educational-attainment/cps-detailed-tables.html>, (28/06/2018).

<sup>30</sup> E.S.W. NG, J. MCGINNIS JONHSON, *Millennials: Who are they and how are they different, and why should we care?*, in R.J. BURKE, C. COOPER, A.S. ANTONIOU (curated by), *The multi-generational and Aging Workforce*, Edward Elgar Publishing Ltd, Cheltenham, Northampton 2015, p. 123.

<sup>31</sup> E. KAMENSKY, *Society. Personality. Technologies: Social paradoxes of Industry 4.0*, in «Economic Annals XXI», vol. 164, n. 3-4, 2017, pp. 9-13.

<sup>32</sup> T. BOTTERI, G. CREMONESI, *Smart Working and Smart workers. Guide to manage and enhance the new nomads*, FrancoAngeli, Milano 2017.

These are phenomena which, thanks to technology and the media become almost tangible because visual<sup>33</sup> and which determine a more attentive attitude towards consumption and sustainability.

Therefore, we can say that as actors and recipients of these social transformations, The Millennials are helping to redefine the basic aspects of the capitalist system as we have known throughout its history. This generation is radically changing the concept of “properties”, “market”, “application” and “offer”.

Through their contribution to the spread of *sharing economy*, The Millennials are gradually changing the concept of ownership giving more value to the sharing and experiences that the possession of goods; they are revolutionizing the demand and supply of goods and consumption by critically choosing products more in line with their sustainable attitude<sup>34</sup> and are revolutionizing the market by choosing for example more often local and bio products in the food sector<sup>35</sup> or by encouraging online trade and economic telematic transactions.

The Millennials are progressively placing the technology at the heart of the economic and social system and are encouraging a productive capitalism system which they perceive as more sustainable in terms of consumption; more local, sustainable and fair; with less regulated and more innovative markets<sup>36</sup>.

### **The paradoxes of the new styles of life**

However, some paradoxes are clearly visible on the horizon. First among all the discrepancy between the desire to encourage a capitalism more sustainable and equitable local and the result that it is getting in terms of strengthening the techno capitalism, of neoliberalism, and encouragement of markets that are increasingly deregulated and global. The predominance of the economic sphere on other social spheres and the technologization of social life is leading to a new phase of capitalism that was supposed to ensure a flexible organization of work that had allowed men to reconcile private and professional life in a more efficient manner<sup>37</sup> is proving to be a phenomenon difficult to dominate, which is bringing the worker not only to control more easily the machines, but also to be more controlled through video surveillance cameras of very high definition video analytics for facial recognition, the use of his own personal technology for business purposes etc.

Another paradox well evident is the inverse relationship between the desire to put the individual at the centre of the system and the effect of having effectively put technology at the centre of the social system, being today unthinkable a future without social network or digital media. Moreover, in the world of business technology is leading to a new normativization of social life is increasingly linked to regulatory requirements socio-economic technological development. “In this case, the expansion of Industry 4.0 is implemented thanks to the integration of formalized standards that are new orders of operation unlike the natural process

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<sup>33</sup> J. MOSTLER, *The Influence of visual information on environmentally significant Behavior*, in L.R. KAHLE, E. GUREL-ATAY (curated by), *Communicating sustainability for the Green Economy*, M.E. Sharpe, Armonk, London 2013, pp. 122-137.

<sup>34</sup> See J. RIFKIN, *The era of the access. The revolution of the New Economy*, Mondadori, Milano 2001; A. SHIPMAN, *Capitalism without capital. Accounting for the crash*, Palgrave Macmillan, London 2015.

<sup>35</sup> H. TORRY, *Food for Thought: A Study of ethical consumption in the Millennials Generation*, Coe College, Cedar Rapids 2016.

<sup>36</sup> C.J. MARTIN, *The sharing economy: a pathway to sustainability or a nightmare of neoliberal capitalism?*, in «Ecological Economics», vol. 121, 2015, pp. 149-159.

<sup>37</sup> E. CARDOSO MORALES, H.A. LEPIKSON, *Industry 4.0 and its impact on society*, “Proceedings of the International Conference on Industrial Engineering and Operations Management”, Bogota, 25-26 October 2017, pp. 734.

of ordering of social and economic life, where social values born at local level constitute rules that act as a protective mechanism and are made inner by the actor in the process of socialization". The spiritual and social life then makes it easy to respond to the needs of the simplification of technology which, being made of machines is free from values and moral attributes<sup>38</sup>.

The simplification of the spiritual life marks the complete defeat of the individual in the round who abandons himself to the utilitarian satisfaction of desires and appetites materials renouncing the highest values<sup>39</sup> that have always marked the life of the Community. The crisis of the spiritual life can be seen as a moral crisis where there is no other value outside of profit, consumption and greed. A crisis that fully invades - emptying it - the cultural dimension<sup>40</sup>.

A last paradox is more than ever evident and obvious when it comes to millennials: the desire to be the builders of sustainable development and the strengthening of dynamics is not sustainable. Putting the technology in the first place in dynamic and interactive social and thanks to the typical individualism of advanced capitalism, The Millennials are helping to strengthen dynamic hyper-capitalist of unregulated quest for profit by encouraging the growth of the financial market to the detriment of the real market and favouring the globalisation of the economy through the rise of online economy. Moreover, while making choices of sustainable consumption for example in the field of energy and therefore investing in technology capable of reducing consumption, often end up for use life styles are not tolerable that make the investment useless and unproductive, demonstrating the need increasingly urgent a culturalization of ways, processes and purposes of environmental sustainability.

It is therefore more than ever urgent to proceed in a reasonable time for a thorough analysis of the dynamics involved in this new phase of capitalism and the impact it is having on its main actors, on industrial dynamics and the development of new to be able to temper the paradoxes between potential and real. Between aspirations and results.

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<sup>38</sup> E. KAMENSKY, *quote*.

<sup>39</sup> W. OPHULS, *Ecology and the Politics of scarcity Revisited*, W. H. Freeman and Company, New York 1992, p. 298.

<sup>40</sup> *Ivi*, p. 292.

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