

## RECRUITMENT IN THE TIMES OF MACHINE LEARNING

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### Abstract:

How do socio-economic change and technological revolution change the way we manage people. How does the development of AI (Artificial Intelligence) affect the process of talent acquisition? The author will present the concepts of technological unemployment, creative class, millennials (generation Y), humanistic management, sustainable development, CSR and new managerial models in light of current social changes. Humanistic management as a broader concept, and humanistic talent attraction as its direct implication, will be presented as an answer to the current technological development. The author presents a narrower topic of human resources management but sees potential in the topic to develop a discussion on future of work in a broader sense.

**Key words:** *machine learning, humanistic management, humanistic recruitment, human resources management, corporate social responsibility, generation Y, millennials, creative class, agile management, holocracy, squads, technological unemployment, capitalism, post-capitalism, postmodernism*

### INTRODUCTION

The financial crisis of 2008 was a symbolic end of an era. Together with Lehman Brothers our illusion of modern, capitalistic era collapsed. Many authors, such as Piketty, Mason, Bregman, Ford has been starting to forge a path in a search for a new post capitalistic order.

The aim of this paper is to have a closer look in the socio-economic and most of all technological changes (revolution) and their implications on human resources in general, and talent attraction in particular. However, the author hopes that it will open a broader discussion on how we will work in a near future.

### SOCIO-ECONOMIC CHANGES

We live currently in the times of a rapid socio-economic change. Many observers claim that we are experiencing the end of the modern era.

Already in the seventies Daniel Bell was describing the emergence of a post-industrial society, in which the economy is based primarily on the services sector and the development of knowledge/information. Progress in the field of new technologies is the most important factor for Bell, shaping the post-industrial reality. Knowledge itself becomes a commodity, it is the main resource and thus plays the role of classically conceived capital. Economic changes have also remodeled the social structure, according to the author of "The End of the Age of Ideology"; the

most important role in the new society is to be played by technical (technocratic) elites [3].

Bell's concept is a vision of a knowledge-based society [3]. His thought seems to be continued by Alvin Toffler. In the pages of the "The Third Wave", he talks about the birth of a new civilization. The author of "The Shock of the Future" divides history into three great epochs – wave hits. The first wave is the result of an agricultural revolution that has shaped people's way of life for thousands of years. The sign of the time was a plow, and the land and its crops are the largest capital. The second wave introduced the agricultural society into the industrial era. The invention of a steam engine, the construction of large factories, all changed the existing social patterns. Mass employment in industry is also the migration of people from villages to cities, the emergence of huge urban centers, social classes, with a dominant division into the proletariat and the bourgeoisie. In the second half of the twentieth century, the third wave began to undermine the basics of industrial society. The place of the steam engine, as a symbol of an era, was taken by the computer. The basis for the functioning of the industry has ceased to be coal, oil, and was replaced by renewable, diversified sources of energy. Ford production is to go to the past, and new times offer different patterns. The market structure is changing; there are not big factory halls dominating, but innovative enterprises, often service ones, largely based on the latest technology. Classical, Marxist division into classes ceases

to be adequate; a new elite is created, whose personal capital is knowledge.

The guru of organization theory – Peter Drucker – in his Post-capitalistic society claimed that developed countries were shifting away from capitalism into post-capitalism – a socio-economic structure based on new resources and shaped by completely different to the old ones social classes. In this society it's knowledge, not the means of production, which is the most important resource [5].

Similarly, the American sociologist Richard Florida perceives social development. Like the previously quoted researchers, he sees the foundation of agricultural and industrial epochs in certain goods/material factors (land and human work/natural resources, physical work – factory). The latest revolution differs from the previous ones, according to the author of the Birth of the creative class, that instead of a new material factor, it is based on human creativity [6].

For these researchers, the post-industrial era means not only a change in the way of production, but also a social revolution. In accordance, they postulate the disappearance of the class struggle. Moreover, they argue that the classic division into the bourgeoisie and the proletariat does not reflect the actual social structure in which highly educated specialists or managers have a dominant role. One of the deeper analyzes of the social consequences of the post-industrial revolution is proposed by Antonio Negri and Michael Hardt, the authors of the famous Empire. In their famous book, they explain how the development of modern technologies allows one to free oneself from alienated work, which was based on exploitation [10].

Even stronger Negri's ideas are visible in the book entitled Goodbye, Mister Socialism. Negri claims that the work of a post-industrial day, where the most valuable commodity becomes knowledge, allows one to free itself from the Marxist shackles of exploitation and alienation. Currently, the dominant class is not the proletariat, but cognitariat – educated specialists who develop enterprises, create their added value through their creativity, free creations of their minds. Thanks to the key role of post-Fordism (intangible labor) today, capital, as the organizer of the means of production, becomes unnecessary. Post-industrial economy needs not so much material capital, which used and alienated employees, as it is closed in the free, innovative heads of specialists. Thus, the old Marxist model of alienated labor "goes to nothing." Post-modern production is free, because it releases creativity, innovation, independence, and socialized at the same time, because it implies cooperation and participation in work products. The development of technology/knowledge is equal to human freedom, and liberation from centuries of exploitation [16].

To sum up the above considerations, we can draw the following conclusions about the post-capitalistic society. First, it is based on knowledge. This means that knowledge becomes the main capital and a factor that guarantees development. So, the main driver of the post-industrial era is educated, creative people.

## TECHNOLOGICAL UNEMPLOYMENT

Ada Health, a Berlin-based health-tech company developed a mobile application, which is able to give a very accurate first diagnosis, and already over 8 million people check their symptoms with this AI-powered app instead of queuing to their GP's cabinet.

Bina48 is a humanoid robot, who last year cotaught two sessions of introduction to ethics philosophy at Westpoint. Automated journalism is used by such news providers as Associated Press, Forbes, ProPublica, and the Los Angeles Times. More and more professions, even those that require a high level of specialization and years of education, are being threatened by automatization. According to the "New Work Order", a report conducted by the Foundation for Young Australians around 60% of students nowadays are being prepared to professions that in 10-15 years will become obsolete due to automatization. This conclusion is yet nothing new, and the first reflections on "job famine" caused by technological development appeared in the times of Industrial Revolution.

Marx, Engels, and later Keynes are those associated with the term technological unemployment [20]. However, we should not forget that it was already David Ricardo in the beginning of 1800s, who as the first described this phenomenon in the context of Industrial Revolution [26].

In this article technological unemployment is understood as "the increase of technical efficiency has been taking place faster than we can deal with the problem of labor absorption" [20].

One of the first practical solution to the technological unemployment was guaranteed annual wage (GAW) proposed in the 1950s in Detroit by Walter Reuther [25].

After WWII, the unemployment rate in this one of the most industrialized cities of the United States raised to the level of our 8%, and it was automation that people blamed for that. GAW was a continued payment that laid-off workers were receiving (first, during half a year, then even for a year). The idea behind that was to create conditions, where manufacturers introduce new technologies only in the period of a high-growth. Otherwise, they will give time to the workers, who became obsolete, to be absorbed by other industries. The absorption, re-integration to the job market was done through upgrading skills, education, changing profession to a more "sophisticated" one. In the meantime, the GAW was to guarantee a source of income. Nowadays, in the times of the "Rise of the Robots", a fear of being replaced by an AI-driven machine is more than real. However, as mentioned before, not only blue-collar professions are threatened, but also those, which require years of training and education. The creative class, which is to guide current socio-economic development, may soon be massively unemployed. As a remedy, many observers of the current changes postulate Universal Basic Income (UBI). They claim we will be soon living in a reality, where job in a today's sense is a luxury of a small group. Others will be engaged in local communities, families, etc, and their source of income will be UBI.

### Machine learning in recruitment

What is machine learning? To put it simple, it is the learning process in which machine can learn by its own without being programmed to do it in a certain way. Artificial Intelligence (AI) enables machine to learn from its own experience and improve its mistakes. For example, AlphaGo, a Google machine learning program designed to play GO, before becoming a master and beating human players, lost several games, which helped it to learn and develop new winning strategies.

How is machine learning relevant to modern recruitment? Nowadays, most of HR/recruitment specialists use machine learning to some extent. An organization is currently able to automate a big part of the recruitment process. Let us have a closer look at the different stages of attracting a talent that can be done without a human touch:

- Job descriptions – there are programs that not only help to create and post job descriptions, but also use relevant language that is bias-free, gender neutral and directed to a concrete target group
- CVs screening – a good ATS (applicant tracking system) can prescreen applications, identifying key words and placing candidates in the right openings
- Scheduling interviews – there are plenty of tools, which can integrate with your online calendar and schedule all steps of the process automatically
- First screens – instead of having recruiters conducting a couple of repetitive phone/video screens per day, a company can introduce a chatbot that will easily replace a human interviewer
- Job offer – many companies nowadays use special programs to create offers and have them signed electronically
- Pre-onboarding – many activities connected to welcoming a newbie can be easily automated.

If fully implemented, most, if not all, administrative recruitment tasks, could be fully automated. The reality, however, differs from organization to organization. Only a few rely fully on automation. Most of the organizations still see recruiters or recruitment coordinators as responsible for the purely organizational/administrative tasks.

### Failed occupationality

According to the recent Gallup's study only 10% of adult fulltime employees are satisfied with their job. Also, the same number of working people are engaged in what they do. Most of them fulfill the orders with no mental nor emotional engagement in their tasks [Gallup.com, 12.09.2018]. Silicon Valley, or European cities like Berlin or Krakow have a flourishing startup scene, and most of these companies conduct a high-volume recruitment, thus, recruiters are in a high demand. In the other hand, recruitment is an industry with a high turnover. According to a research conducted by LinkedIn, HR/recruitment professionals are among 5 professions with the highest turnover rate [27].

What is the reason behind that? David Graeber in his famous essay "On the Phenomenon of Bullshit Jobs: A Work Rant" describes the existence and creation of meaningless jobs. Despite the John Keynes prediction on 15-hour work

week, which was to come thanks to the technological advancement, we work extensive long hours and at positions that could be easily replaced by machines or are in general completely obsolete [28]. In the case of recruiters, on the daily basis they are engaged in conducting plenty of repetitive conversations, screenings hundreds of resumes and scheduling interviews between various stakeholders. All these can lead very quickly to burn-out and a decision to leave the job. Recruiters in such circumstances can experience alienation, deprivation, or, what Bryceson called failed occupationality, which characterizes in seeing no sense in the professional activity [21].

### Humanistic management

Humanistic management can be described as a trend that places people at the center. Humanistic approach to management was expressed very accurately by Emilian Orzechowski: "If we assume that the basic motive (and sense) of activity in any sphere of social life is to act for the good of man and the human groups that create this structure, bringing the essence to an economic dimension is total nonsense" [17]. It must be remembered, however, that classical management does not stand, or at least should not, in contradiction with humanistic management. What we are talking here about is the restoration of the main role in the organization of an employee. Monika Kostera, one of the most important propagators of humanistic management in Poland emphasizes that thinking in economic terms is important not only from the point of view of the generated profit, but also for achieving goals of the general social dimension (such as providing jobs) [17]. This is an obvious reference to Adam Smith, who in the "Theory of moral feelings" postulates the use of reason not only for getting rich, but above all for respecting moral principles [17]. Quoting again Monika Kostera, "This trend [humanistic – K.K] has three fundamental aspects. First of all, the goal of humanistic management is man (...). Secondly, humanistic management uses the legacy of the broadly understood humanities, understood as knowledge, culture and sensitivity. (...) Thirdly, humanistic management deals with human experience [17]. Humanistic management is aligned with a broader philosophical concept of sustainable development, which briefly can be described as a search for a compromise between the economic growth and protection of social and natural environment. Practical application of sustainable development in the business field is implementation of CSR (corporate social responsibility) by organizations, which strive to find a balance on various fields: ecological, economic, and social. It introduces to their actions an ethical dimension, which, according to such authors as Aleksandra Kuzior, is the most important and the only relevant direction of human (economic) actions [13].

Humanistic management, as an human-centric approach, where values play a principal role, is very relevant to create a welcoming working environment for the so-called creative class in particular, and generation Y in general. Richard Florida, in his "The rise of the creative class", de-

scribes the emergences of a new social class, creative specialists, who, according to him, play the predominant role in the modern economy. In his study, he presents the set of values shared by the creatives, which highly influence not only their working style, but career choices they make. These values are as follows:

- Flexibility,
- Work-life balance,
- Continuous development,
- Working with interesting technological stack [6].

The way the American theorist pictures this new class is like what sociologists see in the Y generation. Millennials, how some authors also describe them, include people born between 1980 and 2000. According to several studies, this generation is focused on self-fulfillment and satisfaction. Other core values, especially visible in the working environment, include respect, recognition, continuous development, fairness, tolerance and equity. Regardless of the label, sociologists agree that this generation is not mainly money-driven and that above mentioned values play more significant role to them in a workplace than the height of their salary [6]. To better understand this phenomenon, let us recall here the famous world value survey of Ronald Inglehart. What we know from his study, is that generations raised in welfare are less willing to make trade-offs and sacrifice their individual autonomy for the sake of economic and physical security. They take this security for granted and focus on being self-fulfilled and living up to their values [11]. This generation, thanks to privileged circumstances, can use values and self-fulfillment as the main driver in their career choices. Some popular new management models are in their concept aligned with what the Y generation is looking for and what humanistic management is about. Let's have a look at three of them, which are the most widespread and have the biggest impact on current management practices:

- Agile management – agile management is a methodology, which has its source in software development. In 2001, seventeen developers published Agile Manifesto, with an aim to improve and ease software engineering processes. It is based on four core values, and twelve principles. The agile set of values is composed of the following:
  - a) Individuals and interactions over processes and tools.
  - b) Working software over comprehensive documentation.
  - c) Customer collaboration over contract negotiation.
  - d) Responding to change over following a plan [1].
 Jurgen Apello, in his Management 3.0, summarizes agile development in these words: "Agility is about staying successful in ever-changing environments" [1].
- Holacracy: is a method of decentralized management and organizational governance, in which authority and decision-making are distributed throughout a holarchy of self-organizing teams, as opposed to the traditional, hierarchical systems. It based on the principles of flat hierarchy and self-governance [1].

- Squad model (Spotify): when Spotify was launched, it operated in a typical scrum system. However, once the company started growing, scrum stopped being the most efficient way to organize the teams. They set up a new structure – squads, which are small, cross-functional teams. The emphasis in this model is put on freedom, autonomy, and flexibility, which is, however, always tightly aligned with the company mission [1].

To summarize, all these models are based on the ideas shared by such authors like Daniel H. Pink, Richard Florida or Alan Burton-Jones, who claim that employees are driven by self-directed processes, self-management, autonomy, and purpose, much more than by financial incentives.

### Humanistic recruitment

The author understands humanistic recruitment as a straight implication of humanistic management. Humanistic recruitment, as well as humanistic management, puts person in center. It means that both a recruiter (and other stakeholders) and a candidate are the most important elements of the puzzle. Paradoxically, technology and automation can help achieve this goal. For the candidate it will mean a faster, smoother, less biased (fairer) process. Given the fact that currently the job market is candidate-driven it is a huge economic factor as well. For the recruiter, in the other hand, it means less of the "failed occupationality" and more meaningful job, where one can focus purely on the candidate, using management and psychology knowledge, play a role of a career guide than just of a simple head-hunter. HR professionals should not be afraid of being replaced by robots, quite the opposite, they should use technology in their favor. And let not forget that a humanistic insight and understanding are important together with the capacity to adjust to the dynamic reality. A real agility, lean management, is a combination of these two factors. This cannot be done by even most sophisticated robots and efficient software.

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