



Happiness Management in the age of Industry 4.0

Happiness Management en la época de la Industria 4.0

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Abstract

The era of Industry 4.0 is characterized, on the one hand, by the existence of governance systems that are gradually eroding the Welfare State, and on the other hand, by the implementation of business management models based on precarious work and the massive reduction of jobs. This is a result of the automation of production processes and the widespread use of robots and automation. All these factors negatively influence human happiness, especially in ecosystems that live far from the guiding principles of wellbeing and justice. Faced with this reality, the purpose of this article is to indicate that Happiness Management constitutes an important component in the creation of companies that cultivate a virtuous circle of happiness and the creation of a positive atmosphere inside organizations. These qualities stimulate innovation and creativity and help to build an inclusive capitalism in the midst of technological perturbation. They cushion companies that employ management models based on Happiness Management from social inequalities. It must be taken into account that the human capital of the industrial sector is not taking advantage of the benefits provided by robots in their daily work. This investigation will also require a brief reflection on models of environmental sustainability and social coexistence that guarantee a stable and happy future generation.

Resumen

La era de la industria 4.0 se está caracterizando, por un lado, en la existencia de sistemas de gobernanza que gradualmente está erosionando el estado de bienestar, y por otro, en la implementación de modelos de gestión empresariales basados en la precariedad laboral y la reducción masiva de puestos de trabajos derivados de la automatización de los procesos productivos y el uso extensivo de los robots. Todos estos factores influyen negativamente en la felicidad de los seres humanos, especialmente en ecosistemas que viven alejados de los principios rectores del bienestar y la justicia. Ante esta realidad, el objeto de este artículo es discutir, a partir de una revisión crítica de literatura académica, que el «Happiness Management» constituye una importante pieza axial en la generación de empresas que cultiven el círculo virtuoso de la felicidad y la creación de una atmósfera positiva en el interior de las organizaciones que estimulen la innovación y la creatividad. De esta forma se puede construir -en plena perturbación tecnológica-, un capitalismo inclusivo que amortigüe las desigualdades sociales a partir de empresas que lleven a cabo modelos de gestión sustentados en el «Happiness Management», teniendo presente que el capital humano del sector industrial no está aprovechando los frutos que originan los robots en su trabajo diario. Esto también precisa efectuar una breve reflexión sobre modelos de sostenibilidad medioambiental y convivencia social que garanticen un futuro generacional estable y feliz.

Keywords | palabras clave

Happiness, industry 4.0, sustainability, innovation, wellbeing, human resources, creativity, firm.

Felicidad, industria 4.0, sostenibilidad, innovación, bienestar, recursos humanos, creatividad, empresa.

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1. Introduction

Happiness and the attainment of well-being was an identifiable goal that historically moved individuals and social groups and which remain being *leitmotiv* of policies, economics and thinking. A cross-cutting concept that requires its definition and sequencing to better understand many of the keys that characterize the era of Industry 4.0, an era that will bring with it new models of production and management of human resources (Popkova, Ragulina & Bogoviz, 2019). From this side, companies must, on the one hand, have flexible and dynamic structures that allow to respond quickly to the demands of the market (Lasi, Fettke, Kemper, Feld & Hoffmann, 2014); and on the other hand, have a workforce not only with a high academic and professional background, but also with an open mind towards innovation, creative thinking, social skills, teamwork, problem solving, among others (Beneová and Tupa, 2017; Romero-Rodríguez and Castillo-Abdul, 2019). This will require a management model or a corporate culture where the happiness of human capital is directly linked to aspects such as production, efficiency and competitiveness. The cultivation of this construct, along with the comprehensive search for hyper-connected customer satisfaction, will significantly stimulate the economic and financial profitability of big multinationals, as well as small and medium-sized enterprises (Baker, Greenberg and Hemingway, 2006).

In the mid-2016, Smit, Kreutzer, Moeller and Carlber (2016) elaborated a study for the European Union¹ in which they demonstrated how Industry 4.0 will bring to the economy productive entities that will be forced to implement flexible models of business. In this way, these companies will be able to offer quality goods or services to their potential customers. This requires, on the one hand, that companies adapt quickly to technological changes, and on the other hand, that they enjoy an organizational culture that allows to improve the collective well-being of employees in the digital society. In our view, the latter could be achieved when senior management of companies internalize that happiness management or “Happiness Management” helps mitigate Milton Friedman’s economic thinking, basically inspired by the only goal of corporations to maximize the monetary benefit of their shareholders. In order to confront this idea, it is suggested in the next few pages and in a very short way that “Happiness Management” is a management model that provides the possibility of incentivizing collective happiness through the following vectors: flexibility, confidence, commitment, trust and learning (Vazquez, 2012).

2. Literature review and state-of-the-art

Monographs on the modern academic discipline of the economics of happiness have emerged throughout the 21st century in the scientific world (Frey & Stutzer, 2018; Sánchez-Vázquez, 2018; Crespo & Mesurado, 2015; Rodríguez-Muñoz & Sanz-Vergel, 2013; Nelson, 2010; Kahneman & Krueger, 2006). This cognitive phenomenon can be mainly caused by three factors: The first is that at the beginning of this century, specifically in 2003, Hills and Argyle draw up the Oxford Happiness Questionnaire

1 Available on: <https://bit.ly/1QRykFi> (Consultation date: 03/20/2019)

(OHQ)². This psychometric instrument showed that humans who enjoy a high rate of happiness in their daily lives is basically due to the development of the following variables: extroversion, kindness, sense of humor, sense of purpose, aesthetic appreciation, autonomy, self-efficiency, physical health, self-esteem (Arunachalam, 2018). Since then a significant volume of specialists of this academic topic has begun to widely use this questionnaire in their empirical studies on organizational commitment-work happiness and leadership- happiness in the age of the industry 4.0 (Salas-Vallina, López-Cabrales, Alegre & Fernández, 2017; Wang & Yang, 2016).

The second referred that in the recent decades most scientific-academic production of happiness has in common the use of the term “happiness” as a synonym for subjective well-being, job satisfaction or quality of life (Seligman, 2016; Mackerron, 2012; Oishi, 2012; Rojas, 2009; Zelenski, Murphy & Jenkins, 2008; Diener, 2000), fact related with academic debates. However, this scientific axiom attracted the attention of economists, sociologists and psychologists in analyzing whether human happiness has a significant correlation with independent variables: age, sex, religion, marital status, health or level of study (Graham & Pozuelo, 2017; Zweig, 2015; Cuñado & De Gracia, 2012; Frijters & Beatton, 2012; Andersson, 2008; Lu, 2000). In this sense, it is advisable to point out that many of the results of these works are often criticized academically since they measure happiness subjectively, and therefore not empirically-scientifically (Ahn & Mochón, 2010). This assertion is because they generally use as their primary source of information the answers provided by individuals as the primary source of information when asked in the surveys: To what extent do you consider yourself a happy or unhappy person? This item is found not only in the annual survey produced by the American consultancy Gallup on happiness, but also in the barometers carried out by the Centre for Sociological Research (CIS) in Spain since 2013. The same is not the case with the annual report designed by the United Nations (UN) on the world ranking of the happiest countries in the world, as it measures happiness from the study of the following ratios: Gross Domestic Product, Social Aid, Life expectancy, Freedom, Perception of Generosity, Corruption and Quality of Life of Immigrants. Given this methodological difference, it is not surprising that there are strong discrepancies in the happiness classification offered by Gallup and the UN for 2017³.

And the third factor cannot be understood but it is referred to that in mid-2011, the UN issues a resolution stating that “the pursuit of happiness is a fundamental human objective and embodies the spirit of the globally agreed objectives known to Millennium Development Goals” (UN, 2011). These words are pronounced in the midst of a wide and extensive scientific literature on the economy of happiness, as well as in the midst of the development of multiple scientific events on this topic in the institutions of higher education in Europe and America (Rojas, 2016). Such a fact encouraged researchers to explore the studies of the polysemia of happiness under

2 Available on: <https://bit.ly/2YsZrRI> (Consultation date: 03/21/2019)

Available online at: <https://bit.ly/2YsZrRI> (Consultation date: 03/21/2019)

3 In that year, the Fiji Islands was the happiest country in the world for Gallup, while for the UN it was Norway (La Vanguardia, 2018; World Happiness Report, 2017).

the prism of multidisciplinary and academic transversality. From this approach León Tolstói can be refuted when he wrote in *War and Peace* that happiness is monotonous and uniform (Vázquez and Hervás, 2009). Today, it is known that collective happiness is determined by multiple vectors, including the existence of territories that promote the social progress of citizens through the development of a circular, innovative and ecological economy (Villena-Manzanares and Galiano-Coronil, 2017). This facilitates the construction of a welfare state under the synergies of sustainability, social dialogue, competitiveness, entrepreneurship and public investment (Ravina-Ripoll, Tobar-Pesantez & Galiano-Coronil, 2018; Rothstein, 2010; Pacek & Radclif, 2008).

Once stated in the previous lines a diaphanous image about the bibliographic production of the happiness economy as a discipline that falls within the welfare economy (Esteve, 2004), it is advisable to notice the existence of a scarce number of scientific research to empirically study the term “Happiness Management” at the age of Industry 4.0 (Nogueira et al., 2017; Villegas, et al., 2015; Cera, 2012). Perhaps this fact is derived, on the one hand, because when someone reads this attractive expression, the person associates it directly with the expression corporate or work happiness (Pryce-Jones & Lindsay, 2014). In this sense, Salas-Vallina, Alegre and Guerrero (2018) reveal that the highest managers of organizations must bet on a management model that encourages work happiness through individual commitment, job satisfaction, transformational leadership and altruism; and on the other hand to the absence of a clear conceptualization of the word happiness in the academic area of company organization, taking into account the documentation consulted for the elaboration of this article. Therefore, it is necessary to promote research groups that address the study of “Happiness Management” as a branch of the science of happiness that emerges with the mission of teaching “happy-sophy” holistically. This is understood as the culture or organizational philosophy that allows leaders of public administrations and companies to drive comprehensive strategic policies where the pursuit of happiness - both individual and corporate - is above the interests of the great elites (Ravina-Ripoll, 2017). This will help to promote the construction of most innovative, entrepreneurial, sustainable, ecological and creative productive foundations and ecosystems in digital society (Ravina-Ripoll, Tobar-Pesantez & Núñez-Barriopedro, 2019; Dolan & Metcalfe, 2012).

The intellectual property of the term “Happy-sophy”⁴ emerges within the research group IGOMSOH (Iberoamerican Group of Multidisciplinary Studies on Happiness) of the Salesian Polytechnic University (Ecuador). Among its main research objectives is, on the one hand, to continue to deepen the analysis of “Happiness Management” as a valid and effective instrument for the design of innovative organizational management strategies in the age of the Industry 4.0 (Ravina-Ripoll, Villena-Manzanares & Gutiérrez-Montoya, 2017), and on the other hand, to

4 This concept originated with the aim of letting know those responsible for public administrations and companies that the sustainable development of the territories must come from the implementation of comprehensive strategic policies where the pursuit of holistic happiness of citizens is above the economy and the particular interests of the great elites. In this way there can be a more inclusive, healthy, tolerant, etc. environment. It is worth mentioning that the intellectual property of “Happy-sophy” is registered in the Ministry of Education, Culture and Sport of Spain under the number 14/2018/248.

intensify scientific production on the study of happiness from a transdisciplinary and transversal approach (Ravina-Ripoll *et al.*, 2019; Ravina-Ripoll, Tobar-Pesantez and Marchena-Domínguez, 2019). This information can be very interesting to explore how subjective well-being and corporate happiness influence the sustainable and environmental development of welfare states in today's digital society (Frey and Stutzer, 2010; Rego, Ribeiro and Cunha, 2010).

Despite the little space elapsed since the issuance of the Oxford Happiness Questionnaire (OHQ, *op. cit.*), just over three lusters have allowed creating a concept that begins to be applied from guidelines leadership, in order to compensate the mismatches from the age of Industry 4.0. A study of happiness that, whether subjectively or empirically, provides accurate information to address the most interesting parameters and to complete happiness as a fundamental human value, from the management of the organizations involved and from the specialist studies and projects that give it meaning (Ferrer & Carbonell, 2013; Blanchflower & Oswald, 2011; Pacek & Radcliff, 2008).

3. Materials and methods

The main objective of this work is to assist in understanding the modern concept of happiness management contextualized in the age of Industry 4.0. For this purpose, a generalist bibliometric and hermeneutic analysis has been carried out (Will, Bertrand & Fransoo, 2002; Wacker, 1998), which can contribute significantly to improving knowledge of this academic discipline and therefore the state-of-the-art about this attractive and novel topic, which can be very interesting for future multidisciplinary studies to emerge about this business area of the happiness economy.

With regard to the choice of the time, it was chosen the time interval from the year 2000 to the present (2019), mainly due to the incipient novelty of this term in the scientific world as will be read later. After this, it was decided to use as a choice filter the word "Happiness Management" with the Boolean algorithm and selectivity by the metadata "theme" (which includes title, summary and keywords). The selected search engines were the Scopus platforms and the Web of Sciences (Wos). The query resulted in a representative sample of fewer than ten indexed articles. It is important to mention that the first text in the title of an article was written in 2017 by Nogueira Kamel, Martins, Pessanha and De Andrade in the Brazilian Journal of Science and Technology.

A second filter was then applied, which consisted of searching these two primary sources of information for the concept of 'Happiness Management' without quotation. This resulted in almost twenty articles, most of them belonging to the discipline of Business and Management. Among the many factors that explain this phenomenon, there is perhaps the interest that people have for the strategic direction of human resources to create a culture of happiness within their organizations (Blackman, O'Flynn & Mishra, 2010).

None of the work included in the Scopus and Wos databases provides a definition of the term 'Happiness Management', making it difficult to continue in the exponential development of the study. This can be very useful in building a more humanistic society open to the general interest of the public. Hence, the following section proposes an interpretation of this topic, as well as a definition of the term corporate happiness.

4. Happiness Management: A multicultural management model to discover in the digital society

The age of Industry 4.0 is characterized by the automation of the productive processes generated by cyberphysics, computing, robotics and engineering. There is little to argue that incorporating all these technological advances into the daily lives of companies will result in a significant reduction in their manufacturing costs, and therefore, a higher level of competitiveness and sustainability in the era of digital society (Saucedo-Martínez et al., 2018; Moreno et al., 2017; Prause & Weigand, 2016; Maynard, 2015; Sommer, 2015). This reality seems to forget the old saying that mentioned that one of the most important assets that companies possess is the creative talent of their human capital. Hence, perhaps the existence of many companies lacking a culture aimed at fostering an organizational climate under the guiding principles of motivation, collaborative work, loyalty, commitment, social responsibility and work welfare.

Although the vectors causing this phenomenon are not the subject of study of this investigation, if trying to explain the modern concept of 'Happiness Management'. As mentioned above, on searching for this quoted expression in the Scopus and WoS databases was observed that only five articles have been written since 2009. All of them have in common that they understand 'Happiness Management' as a valid and effective instrument for vitalizing the job satisfaction of their employees, while they do not offer a concept or definition of that term in relation to the age of Industry 4.0. This leads to delimit, from an axiological-conceptual approach, the construction of a first definition of "Happiness Management": Multicultural management model aimed at incentivizing the following resources in the performance of the job: creativity, commitment, technological innovation, internal entrepreneurship and social responsibility. In this way, the virtuous circle of corporate happiness can be promoted within organizations.

Figure 1. Existential factors of 'Happiness Management'

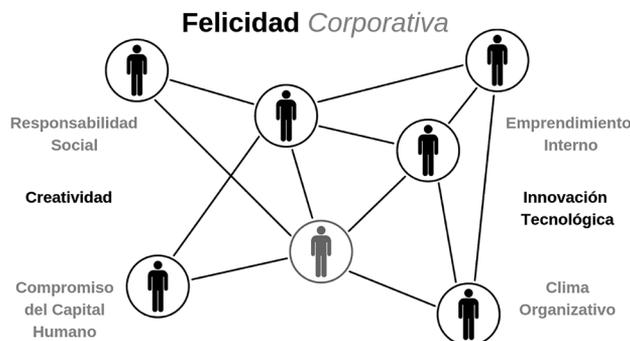


Figure 1 shows that the word "corporate happiness" appears without any conceptualization on this term, as is apparent from the consultation for the development of this research. Such a fact offers the possibility of describing corporate happiness

as the average rate of subjective well-being or of individual happiness that an organization's internal clients possess in the daily performance of their jobs during a given time interval (Ahumada-Tello *et al.*, 2018).

Because of the latter, it is convenient to note that corporate happiness cannot be interpreted as the mere aggregate sum of work and organizational happiness, since its implementation requires the active involvement of the leadership and the totality of internal customers. Therefore, organizational happiness must be understood as the commitment of senior management to increase corporate happiness by generating a working climate opened to technological innovation, constructive language, interaction, peer-to-peer communication, etc. In this way, an intangible asset can be built to stimulate positive emotions, creativity and interpersonal relationships, among others (Núñez-Barriopedro, Ravina-Ripoll & Tobar-Pesántez, 2019).

In this sense, it is not surprising that the large multinationals of the globalized world act aimed at exponentially increasing the work motivation and psychosocial well-being of their human resources, such as Google, Toyota, KPMG, IKEA, Facebook or LinkedIn (Equipo & Talento, 2018).

According to the above, and bearing in mind that each individual has his/her own perception of subjective happiness, the term "work happiness" could already be defined in the digital society. This concept is creating a great debate in the academia, as many scholars understand that work happiness is determined solely by the satisfaction or positive pleasure that short-term employees get in the mere fulfillment of their functional tasks (Bandura and Lions, 2014). Other researchers believe that work happiness of organizations is explained by job satisfaction and multiple other variables, serve as an example, engagement, labor involvement, leadership style, trust, commitment, workplace, team-oriented culture, organizational development, knowledge management or human resources policy (Oswald, Proto & Sgroi, 2015; Yuan, 2015; Fisher, 2010).

Therefore, one might wonder how to achieve a happy organization in the age of Industry 4.0? Perhaps the answer is in "Happiness Management", a management model that is able to generate an innovative culture based on the construction of the virtuous circle of corporate happiness, where internal clients are increasingly excited to go to work and be more productive, bearing in mind that small increases in the collective happiness of organizations will lead to increases in a much higher proportion of economic or social returns.

In this line, two things should be made clear: on the one hand, the significant absence of "Happiness Management" in the strategic direction of organizations, and on the other, the scarcity of publications aimed at investigating "Happiness Management" as a very interesting tool to achieve an ocean full of innovative companies that move around the happiness of their human capital and not the maximization of economic and financial profits (Nogueira *et al.*, 2017)

4. Discussion and conclusions

Happiness is a concept of general identification and that every individual probably wants but it is a term that involves difficulties in defining its profiles, valuing its keys

and listing its recipes to achieve it. Happiness has always been a discernible fact. However, from the theorization of its knowledge, it seems obvious to regard it as a tangible good and an indispensable challenge in ensuring the future and prosperity of human beings. Based on this latter idea, it seems clear the need to build and relate studies that dissect, break down, and extract the main parts of its keys. Then, identify them and know them and, finally, establish models and tools that make it possible to diagnose and guarantee such indispensable social and collective value.

There are studies that build various lines of happiness, but they are not yet enough. It is necessary to see an overview and to identify happiness – as most of these works coincide – as a cross-cutting model of political, economic and cultural aspects. A reality determined by physical, psychic and potential variables; empirical values, but also subjective; by design strategies and plans. The modernized societies sponsored by welfare state tried to meet the primary needs, headed primarily for the achievement of happiness. Similarly, the economy needed to be an effective and intense model capable of overcoming ups and downs and undesirable consequences.

In this sense, microeconomic alternatives or Happiness Management are pointed to as an attractive management model that curbs excessive technology in the age of Industry 4.0, since the taking over responsibilities by the policymakers that take care of talent and human capital. To do this, organizations must basically consider two aspects: The first is to incentivize a business culture that considers its employees as a driving force for innovation, creativity or teamwork; and the second, to implement the “Happiness Management” model as an axial piece that plays a very relevant role for the top managers of the companies to contemplate their workers beyond the old role of *homo economicus*.

From these two vectors, companies that contemplate the pursuit of corporate happiness can be built as the means to maximize financial performance and achieve competitive advantages of a sustainable and lasting nature over time. Hence, the need for further research into the development of the term ‘Happiness Management’, in order to demonstrate that the economic viability of organizations is holistically promoting the collective happiness of their internal clients, and possessing a significant volume of more empathetic, social and altruistic leaders and middle managers with their job.

To conclude, on the one hand, it has been generally expressed throughout this text how relevant the application of “Happiness Management” is in the age of Industry 4.0. However, there are a number of limitations that will have to be overcome with the development of future scientific productions. These include the absence of an academic definition of this topic, which would help to develop empirical and methodological studies in order to explore the implication of “Happiness Management” on variables such as innovation, efficiency, human resources and the result of companies. On the other hand, an approach to this term will undoubtedly enrich the limited literature.

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