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## The Relationship Between Vitality and Flourishing in the workplace in the Industry 4.0

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### Abstract

The Industry 4.0 has shown radical changes that impact workers, organizations, and societies in general. Unexpected challenges accompany these changes in cognition, emotion, and behavioral levels. These new challenges put it upon the organizations to address employees' perceptions and deal with rapid technological innovations and concepts of work and new employment. Therefore, this study aims to test the relationship between vitality and Flourishing in the workplace in light of the Industry 4.0. The paper adopts a descriptive-analytical approach to achieve this goal. Business organizations have created a favorable climate in which entrepreneurs and businessmen can develop their businesses to enable organizations to create new jobs. Assisting industrial and commercial institutions, the labor market, businessmen, and workers to achieve the highest possible development levels and adapt to this progress in the workplace, rather than slowing and disrupting the pace of technological advancement.

**Keywords:** Vitality in the workplace, Flourishing in the workplace, Industry 4.0, the Iraqi Journalists Syndicate, IR3.

### 1. Introduction

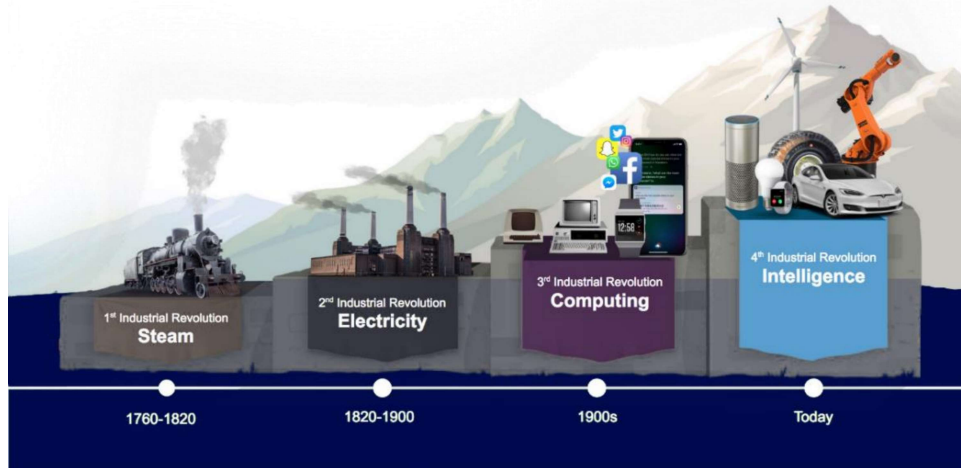
The Industry 4.0 is based on overlapping scientific and technological developments based on the digital world, biology, and the natural world with the growing use of artificial intelligence, nanotechnology, robotics, 3D printing, and the Internet of Things. These transformations usher in a new dawn for humanity, full of economic and social changes of unknown consequences at the global and organizational levels, and present a significant challenge for developed and emerging organizations alike. The impact of this revolution on the workplace is Among the most significant transformations that have become tangible. First, in terms of the structure and size of professions and jobs, compared to the number of people employed, and, secondly, compared to the new skills required by contemporary technology, the structure and size of professions and occupations have changed significantly.

Like other industrial revolutions, it will generate new professions and jobs. But, on the other hand, according to the organization, it will lead to the extinction of many occupations and careers based on the industrial revolution and its predecessor. However, what is certain so far is that the number of created disciplines is much less than the number of extinct professions, as millions of domains become extinct every year in developed countries and less developed countries. The Industry 4.0 poses a challenge to all organizations. One of the most prominent of these challenges is whether the Industrial Revolution affects the vitality and Flourishing of the workplace? To avoid the significant negatives of this revolution and take advantage of its opportunities, it is necessary to start thinking to crystallize a future vision based on the economic and social effects. Which can result from these transformations, leading to the development of a clear strategy that becomes a program for all organizations concerned

with this field, the most important of which is the industrial and technological sector and the education sector. No matter there is a program here or there.

One of today's most critical challenges is understanding the new technology revolution. Which involves humans transforming into a new way of living and communicating with each other (Schwab, 2016), where we still have to understand this new revolution that is unlike any that humanity has experienced before, and it is called the "Industry 4.0" (Stearns, 2018). Therefore, it can be said that the Industry 4.0 is a change, development, or transformation that occurs in human society, such as the use of communications and machines and the growth in the use of technology in the life and work of human beings. Likewise, it is a change in organizations' policy to provide services to individuals so that this policy affects society's social and economic aspects. The first industrial revolution (1IR) began between the years (1750-1760 AD) in England and lasted approximately between the years (1820-1840 AD) (Mohajan, 2019). It is considered a significant turning point in human history in (1IR), as technology shifted from human and animal work to machines in daily work. Such as the steam engine, spinning and weaving machines, and facilitating the iron smelting process (Sihlongonyane et al., 2020). New sources of energy such as coal, steam, wind, and water were used to create machines that save from human and animal labor and increase the production capacity of factories.

The second industrial revolution (2IR) appeared at the beginning of the nineteenth century as technology developed in various fields such as chemistry, steel, and electricity. The invention of electrical energy was a fundamental shift in switching to electrically powered machines (Mohajan, 2020). In addition, the emergence of internal combustion engines, petroleum refining, chemical industries, and electrical communication technologies changed many individuals' work practices and lifestyles in that era (Savić, 2018). As a result of the significant positive impact of Vitality, it has been encouraged to promote Vitality widely in applied settings, such as in the educational sector (2016). The U.S. and Australian governments have attempted to promote vitality citizens through social programs that aim to improve general well-being by addressing aging with vitality (e.g., Government of Nashville, and De Vidson County, Tenn., 2018) (Salama-Younes, 2011:92). Organizations may also use Vitality to enhance product offerings (Vital juice, rechargeable toothbrush, face cream." Surprisingly, no rationale has been given behind the selection process for the name of the products concerning Vitality. However, given the vast beneficial consequences of Vitality, Shouldn't the concept be applied more broadly in a more deliberate, conspicuous, and comprehensive manner? In an attempt to further reveal the structure of vitality (Lavrusheva, 2020:2). (Carmeli, 2009:53) identified two dimensions for studying vitality in the workplace: (positive attention and reciprocity) and we will address them both by my agencies:



*Figure 1. Historical development of the Industrial Revolutions*

The Third Industrial Revolution (IR3) got underway during the second part of the twentieth century. It moved from mechanical to digital automation and widespread communication and information technologies (Fomunyam et al., 2020). It is also called (IR3) the digital revolution due to semiconductors, personal and central computing, and the Internet in the nineties. The increase in the computer's speed has led to a stage where machines have become linked, communicate, and communicate directly with individuals. (Bonhoure et al., 2021). As a result, society in the twenty-first century is witnessing the Industry 4.0, which combines digital, physical, and biological components to improve systems that serve individual life and protect the environment (Ally et al., 2020). The new revolution is characterized by ubiquitous mobile internet, ultra-small, more powerful, and cheaper sensors powered by artificial intelligence (A.I.) and machine learning. These technologies have also helped governments and private sector companies achieve faster growth and facilitate business (Deloitte Development L.L.C., 2020).

## **2. Literature Review**

### **2.1. Vitality In The Workplace**

Concepts depicting an organism's energy or vitality have been theoretical in many schools of thought that describe human functioning and health (Lavrusheva, 2020:1). Perhaps the most famous theory that presents the relationship between mental health and energy is Freud's theory, whose "economic view" indicates that we have a limited amount of psychological energy derived from the drives of life (Freud, 1923:112). For Freud and subsequent ego psychologists (Hartmann, 1958; Nunberg, 1931), the more free individuals are from oppression, the more they have access to the conflict-free energy of life's drives. The more energetic they show, the more creativity and energy they have (Shirom, 2011:51), and other psychodynamic theorists also postulate energy-related structures. Despite the differences in approach, they converge on the idea that conflict resolution and integration are related to increased energy availability to the ego or self (Wright & Bonett, 2007:146). Although the psychodynamic approach has been criticized, it assumes energy concepts that are too abstract and can only be observed loosely (Kubzansky & Thurston, 2007:1395).

Nevertheless, the apparent differences in the vitality of individuals as a function of dynamic factors led to the continued consideration of such issues within the theories (Hobfoll, 2002:309). Eastern perspectives on vitality occupy a central place in concepts related to vitality. For example, the Chinese concept (Xi) partially represents vital force or energy. It is the source of life, creativity, correct movement, and harmony (Bech et al., 2003: 86). In Japan, the concept of ki similarly involves energy

and strength that one can rely on and is related to physical, mental, and spiritual health (Hobfoll, 2011:118). Balinese healers attempt to mobilize the bayou, a spiritual or vital force that varies among individuals, representing what is required for life, growth, and resistance to disease. The importance of concepts related to vitality in Eastern thought is also attested by many health practices directed towards increasing the influence of vital energies, such as acupuncture, Reiki, yoga, and herbal remedies. In these methods, vitality represents an energetic inner force that facilitates mental and physical health (Wikan, 1989:302).

The concepts of energy and vitality also depict applied health to professionals. For example, Selye (1956), in his well-known theory of stress, suggested that individuals possess a limited reservoir of adaptive energy, which is critical to maintaining health. He said that adaptive energy is different from caloric energy, and its nature is largely unknown, yet Selye felt that individuals use it when facing environmental stresses and disease. It thus represents a significant factor in flexibility. Unfortunately, however, theoretical perspectives on vitality have been relatively separated from empirical work on the topic, increasing in recent years, particularly in health-related fields (Peterson & Seligman, 2004:56). McNair et al., 1971 stimulated work on this topic by developing the Organization's Mood Status Profile (POMS), a widely used measure that contains a factor called activity. The strength factor has been negatively associated with stress, depression, anger, fatigue, and confusion in construction studies, and (Thayer, 1987:121) has used a different adjective checklist in his studies of mental repetition (Ryan & Frederick, 1997:536). It includes feelings of vitality, optimism, and positive energy at work, which often fuels enthusiasm to explore new ways to complete a task. Vitality is also: "an expression of physical and mental strength at work (Kark & Carmeli, 2009: 787). Leadership behaviors can strongly influence the degree of feeling. The individual is psychologically safe within the team, and this degree of trust that enables the team to develop its creativity requires a leader who displays openness, availability, and accessibility (Carmeli et al., 2010:252). In addition, leaders in organizations encourage risk-taking and share the importance of communicating new ideas to the group. As well as not bearing the burden of excessive concern on the horizon that negative consequences might follow employees pursue new ideas or take risks, leaders who penalize experimenting behaviors impede the flow of creative participation in the team, and leaders support risk-taking. They are available and open to suggestions of new ideas and encourage experimentation (Au & Johnston, 2014:23). Vitality is the fuel for everyday life available to all, embracing vitality rather than physical vitality while retaining enthusiasm and spirit (Ryan & Frederick, 1997:529). Although the existing literature on vitality does not provide a single, brief definition of what it is, it claims that it is an experience, feeling, or act, and its conclusions about the beneficial effects of vitality on an individual's health are the ultimate results (Morelli & Cunnigham, 2012: 148). It is vitality that enhances physiological behavior, speeds up recovery from physical disorders, and enhances physical performance Figure 2. Moreover, vitality has many mental health consequences, such as decreased anxiety, increased self-confidence, and vitality helps improve individuals' performance in self-control and creativity (Titchen & McCormack, 2011).



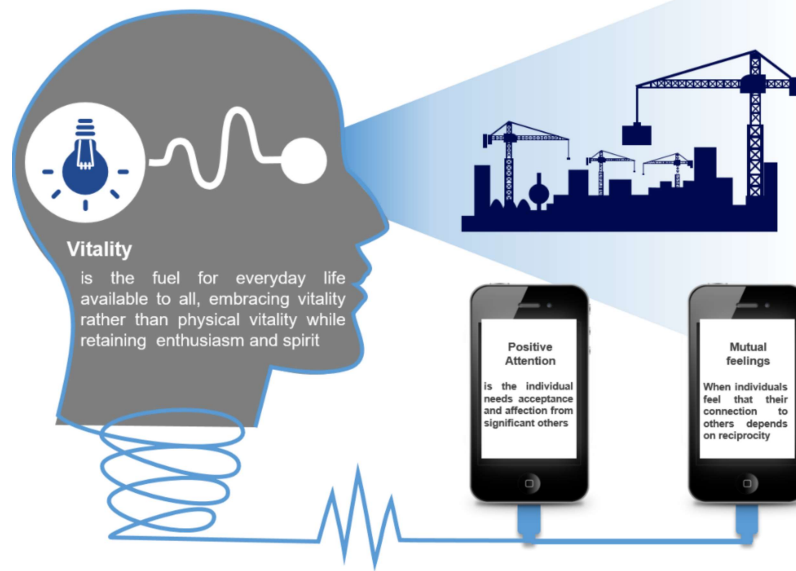


Figure 2. Dimensions of vitality in the workplace

**1- Positive Attention:** Positive Attention is a term developed by Rogers (1951), which investigated the relationships between the organization and the customer. Rogers has argued that the individual needs acceptance and affection from significant others because this unconditional positive regard is critical to positive self-esteem, and such communication necessitates deep connection (Quinn & Quinn, 2002:9). The reason is that the individual feels known or respected, and employees who are known and respected by their co-workers tend to develop more self-esteem and experience deep emotions. Conversely, when individuals are unknown and liked, they do not feel valued and valued (Dutton & Heaphy, 2003:265).

**2- Mutual feelings:** When individuals feel that their connection to others depends on reciprocity, they are more likely to engage in everyday activities. Thus, both the abilities and experiences of the interrelationships and the feelings of individuals may correlate with the vitality at work (Miller & Stiver, 1997:43).

## 2.2. Flourishing in the workplace

Flourishing is one of the most promising topics studied in positive psychology, and it is not just about many other positive concepts. Instead, it is key to improving the quality of life for individuals worldwide. Discovering burgeoning syllables and learning how to effectively apply research findings to real life has enormous implications for how we live, love, and relate to one another (Carver & Scheier, 1990:20). The idea of Flourishing as a separate - but closely related - concept of happiness and well-being began long ago. Still, it was formally proposed by the "founding father" of Flourishing, Dr. Martin Seligman, in the early years of positive psychology. Seligman initially believed that happiness consisted of three factors: positive feelings, engagement, and meaning. In reality, after taking a closer look at the pursuit of happiness, he noticed that specific essential criteria were being overlooked in the general definition of the "good life" attempted. After doing some research, he identified the two missing components: accomplishments (or need for achievement) and relationships. Although Seligman and his 2011 book raised interest in flourishing, it wasn't the first exploration of the topic. The researchers Keyes & Haidt published an edited book on Flourishing in 2002, which included the findings of leading psychologists about happiness, well-being, and living the best life possible. The prosperous movements go beyond simple happiness or well-being. They have a wide range of favorable psychological structures and provide a more comprehensive perspective on what it means to feel happy. According to Seligman, Flourishing is "the result of careful attention to the construction and maintenance of the five

aspects of the PERMA model,” a model developed to explain what contributes to a feeling of Flourishing. The five factors in this model are Positive Emotions, Connection, Relationships, and Meaning Achievements. Using this model as a framework can understand Flourishing as the state created when individuals tend to each model aspect.

For example, increase positive emotions, engage with the world, work (or hobbies), develop deep and meaningful relationships, and find meaning. Purpose in life and achieving goals by cultivating and applying the strengths and talents of individuals (Briscoe et al., 2006:31). (Seligman ,2011:16) defines Flourishing as: “finding fulfillment in one’s life, accomplishing meaningful and worthwhile tasks, connecting with others on a deeper level—of substance, and living a good life. Sots cautions that Flourishing is not a trait or a characteristic. It is not something you “have or don’t have.” Flourishing is not a fixed piece but rather a process that requires action. Some effort to get there (Singh et al., 2009:12). Flourishing at work refers to the desired state of employee well-being, achieved through positive experiences and effective management of job-related factors (Rautenbach, 2015:32). Prosperous individuals feel and perform well at work.

In contrast, weak individuals do not feel and perform well (Keyes ,2013:5). The positive effects of Flourishing are on the self-related to the well-being of work (Keyes, 2013:209) provides a compelling argument for investigating the factors of work related to thriving subjective well-being. It refers to the feelings of individuals and their work based on three dimensions: emotional well-being, psychological well-being, and social well-being (Diedericks & Rothmann, 2014:29). (Keyes & Annas ,2009:199) has researched the continuum of personal well-being, and the difference between thriving to vulnerability in work contexts is vital. Not only because of its relevance to the functioning and outcomes of organizations but also because research has shown that many individuals do not thrive (Ryde & Sofianos, 2014: 87). The precedents of workplace Flourishing have not been comprehensively investigated (Rothmann, 2013: 125). However, knowing the keys to lasting Flourishing and preventing harmful habits from forming is essential in enhancing the well-being of individuals. Also, organizations find that individuals who enjoy a high level of mental health are characterized by positive emotions and positive performance in life (Keyes, 2007:97). As defined by feeling good (emotional well-being) and doing well (psychosocial well-being), they have psychological well-being or a sense of independence in the workplace, competence, connectedness, meaningful work, work engagement (including absorption, vitality, and dedication), learning. It also has a sense of belonging to the workplace or social well-being (Keyes & Annas, 2009:200). Mental health in the workplace is continuous and ranges from Flourishing to vulnerability. Flourishing refers to: “the feeling that one’s life at work is going well and one is doing well” (Rautenbach, 2015:33). The opposite language of Flourishing refers to the absence of mental health. Yet, the concept of flourishing has been used to describe and validate personal well-being in the workplace without adequately explaining the term (Grimland et al., 2011:1075). Moreover, previous research on Flourishing (Diedericks & Rothmann, 2013:31) was conducted using a tool that was not designed to suit business conditions. It appears that the multidimensional perspective of Flourishing includes three dimensions Figure 3:

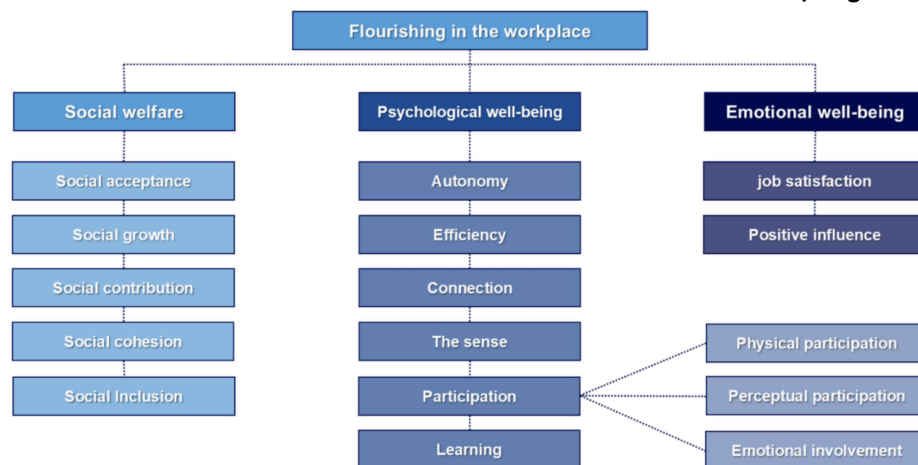


Figure 3. Dimensions of Flourishing in the workplace

1- **Emotional well-being:** It is a set of biological, relational, and contextual factors that allow an individual to feel good, and in a global and comprehensive sense, to feel good about oneself and the physical and social context in which the individual lives. It consists of two components:

A- **job satisfaction:** Job satisfaction affects the balance and the relative permanent evaluation of an individual's job, resulting from individuals' perceptions of all aspects of their current jobs in terms of achieving their desires (Rojas & Veenhoven, 2013: 416), and the negative impact balance reflects an unpleasant impact on the individual's experiences. Directing into action (Schwarz & Strack, 1991:29).

B- **Positive influence:** Positive influence refers to pleasant responses to work events, such as joy, gratitude, pride, and amusement, and negative impact refers to unpleasant feelings, such as anger, sadness, anxiety, boredom, frustration, and guilt. Positive and negative are related and affect the need for gratification. (Rojasf & Veenhoven, 2013:417).

2- **Psychological well-being:** It includes subjective well-being, moods and emotions, and assessing personal satisfaction with the general and private aspects of an individual's life. The concepts covered by emotional well-being include happiness (Diener et al., 1999: 278).

Subjective well-being is closely related to personality traits, and there is evidence that health and emotional well-being may influence each other reciprocally. Good health tends to be associated with greater happiness. Several studies have found that positive emotions and optimism may benefit health (Steel et al., 2008: 140). Psychological well-being as a dimension of Flourishing in the workplace has six elements (Rothmann, 2013: 126), which are:

A- **Autonomy:** It refers to the need for autonomy and the experience of having choices and freedom when carrying out work activities.

b- **Efficiency:** The need for competence refers to the effectiveness in carrying out work tasks.

C - **Connection:** It is the feeling of belonging, interdependence, care, and love, or love of others, and this is satisfied when there is a feeling of closeness and intimate relations with others.

D- **the sense:** It refers to the importance of work for individuals who experience their jobs as valuable and worthwhile.

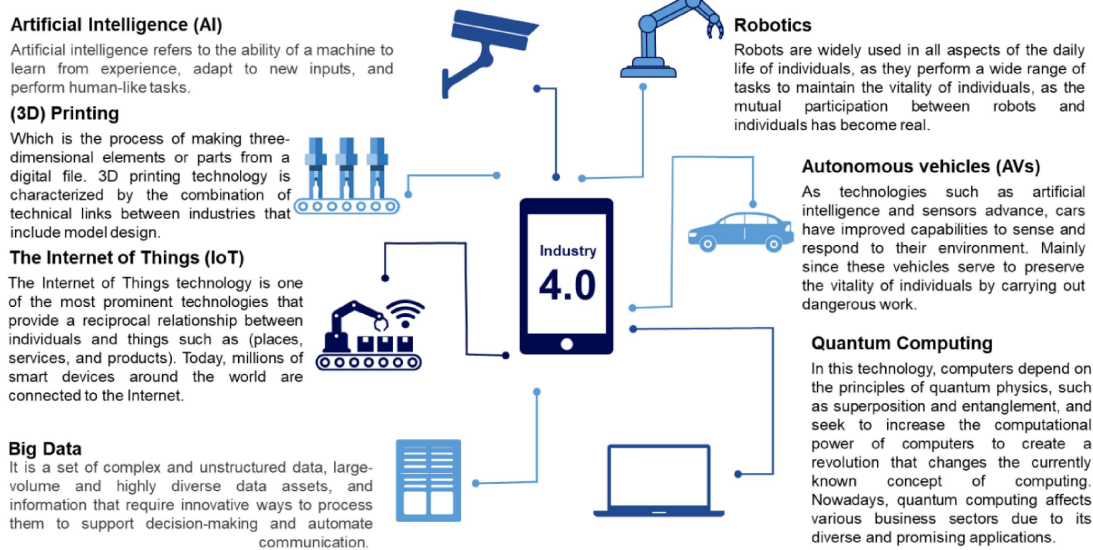
E - **Participation:** The word participation refers to the presence of a psychological employee in a role, and it has three components:

- **Physical participation** (activity - actually participating in a task and investing energy).

- **Perceptual participation** (absorption - alertness in action and exposure to involvement).

- **Emotional involvement** (dedication - being connected and committed to the job, etc.).

F- **Learning:** Education refers to the feeling that the individual acquires and can apply knowledge and skills to the individual's work" (Spreitzer et al., 2010:132).



3- **Social welfare:** Social welfare in organizations is defined as: “assessing the individual’s circumstances and his work in the organization” (23Keyes, 1998:) and includes five elements, namely:

- A - **Social acceptance** (a positive attitude towards and acceptance of diversity in the organization).
- b- **Social growth** (belief in fellow employees, groups, and organizations).
- C - **Social contribution** (whether individuals believe their daily actions add value to the organization and others).
- D- **Social cohesion** (whether employees find their organizations and social lives meaningful and understandable).
- E - **Social Inclusion** (the practice of individuals to experience a sense of comfort and support from the organization).

### 2.3. Industry 4.0

The term Industry 4.0 is being replaced by Industry 4.0, and this term (Industry 4.0) is used in the business world (Rotatori et al., 2021). It creates more digital systems and integrates wireless sensor networks through intelligent systems Figure 4. The digital systems will gradually replace the current designs through the use of intelligent machines instead of humans in performing various tasks (Bag et al.,2021), and one of the most important technologies used in Industry 4.0 are:

Figure 4. The most important techniques used in Industry 4.0

A. **Big Data:** It is a set of complex and unstructured data, large-volume and highly diverse data assets, and information that require innovative ways to process them to support decision-making and automate communication (Ajah et al., 2019:32). And that one of the main reasons for the phenomenon of data inflation is the massive number of processes within organizations, which lead to the generation of a large amount of data. Knowing that this data is fundamental in the survey processes to provide a deep understanding of the work context within organizations (Ogrean, 2018:153). In-depth data analysis positively impacts (Ali, S. et al., 2020:190).

a. **Artificial Intelligence (A.I.):** Many organizations adopt the latest technologies that lead to increased vitality and Flourishing in the work environment to increase production (Mishra et al., 2021:3). One of these technologies is artificial intelligence, which has taken the lead as the innovation entity in the organization. Artificial intelligence refers to the ability of a machine to learn from experience, adapt to new inputs, and perform human-like tasks (Kitsios et al., 2021:2025). Individuals can adopt artificial intelligence for decision-making in dynamic environments to increase their vitality in accomplishing their daily tasks through positive attention between the organization and the customer using these technologies (Sestino et al., 2021:4).



B. **Autonomous vehicles (A.V.s)**: There is a significant trend worldwide in autonomous vehicles for transportation, including boats, planes, and trucks (Kayembe et al., 2019:79). As technologies such as artificial intelligence and sensors advance, cars have improved capabilities to sense and respond to their environment. Mainly since these vehicles serve to preserve the vitality of individuals by carrying out dangerous work such as checking electrical power lines or delivering medical supplies in war, and they also promise to increase the driver's comfort and safety on the road (Cavazza et al., 2019:31). Furthermore, improving the quality of life of individuals is one of the essential things to achieve Flourishing for individuals, as self-propelled vehicles are changing the shape and lifestyle of individuals (Stoma et al., 2021: 4777).

c. **Robotics**: Robots are widely used in all aspects of the daily life of individuals, as they perform a wide range of tasks to maintain the vitality of individuals, as the mutual participation between robots and individuals has become real (Siderska, 2021:8020). Because of other technological advances, robots are becoming more flexible and adaptable as an extension of a process called biomimicry. As a result, nature's strategies and patterns are better simulated, responded to, and mutually engaged with various tasks to achieve Flourishing in people's work and living environment (Rampersad, 2020:68).

D. **The Internet of Things (IoT)**: Industry 4.0 has enabled critical communication technologies between physical and digital components of machines. The Internet of Things technology, called the "internet of all things," is one of the most prominent technologies that provide a reciprocal relationship between individuals and things such as (places, services, and products. Today, millions of smart devices around the world are connected to the Internet, which is changing the way we control manufacturing, smart cities, transportation, and energy networks by enabling us to monitor, improve and share activities and tasks At an exact level (Haaker et al., 2021:126). The Internet of Things facilitates communication and positive participation between the organization and individuals on the one hand and between individuals and the machine on the other hand, which achieves vitality and Flourishing in the workplace(Malik et al., 2021: 125).

e. **Three-dimensional (3D) Printing**: In Industry 4.0, it has become the era of 3D printing, which is the process of making three-dimensional elements or parts from a digital file (Leso et al., 2021). This technology has become widespread in the labor market, especially in aircraft, cars, smart devices, and medicine, manufacturing artificial organs similar to human organs (Yang et al., 2021). 3D printing technology is characterized by the combination of technical links between industries that include model design, manufacturing equipment, manufacturing materials, and manufacturing method that leads to the production of a new set of manufacturing industries (Rainnie, 2021:115).

F. **Quantum Computing**: In this technology, computers depend on the principles of quantum physics, such as superposition and entanglement, and seek to increase the computational power of computers to create a revolution that changes the currently known concept of computing (Bhasin et al., 2021:1). Quantum computing may take hours or days to solve problems that may take billions of years to solve using ordinary hardware (Piattini et al., 2021:12). It also enables discoveries in energy, healthcare, environmental systems, innovative materials, and more. Nowadays, quantum computing affects various business sectors due to its diverse and promising applications (Bova et al., 2021:2).

#### 2.4. **Vitality and Flourishing in the Industry 4.0**

The development of new technologies has dramatically made the present and the future a period of great potential for the global workplace and its workforce. The Industry 4.0 brings together advances in artificial intelligence (A.I.), 3D printing, robotics, genetic engineering, the Internet of Things, big data, and other technologies. Industry 4.0 is collectively transforming traditional ways of doing business and industries in general (Calitz et al., 2017:12). Leading employers recognize that the actual value and potential lie in their workers' collective strength and talent. With 4IR on the horizon, the vitality of its workers will rise, and more innovative and adaptable organizations will flourish (Stubbings, 2018:3).



Many people working in organizations fear that robots and artificial intelligence will take their jobs. But that is not precisely what will happen, as workers will coexist with A.I., and if it is learned how to manage it well, these technologies can improve its work in many ways (Oosthuizen et al., 2019:4). It is essential to understand and accept this change because it is already happening Figure 5. While machines can replace some specific jobs within the role, there will still be jobs for humans to perform and completely new jobs that did not exist a few decades ago (Chen & Sengupta, 2014:1089). For example, data scientists and social media strategists are now some of the most sought-after employees globally, and the world of work would be different. People will need to think about how value is currently being added, how this might change, and how they can adapt to avoid being left behind (Spath, 2013:5).

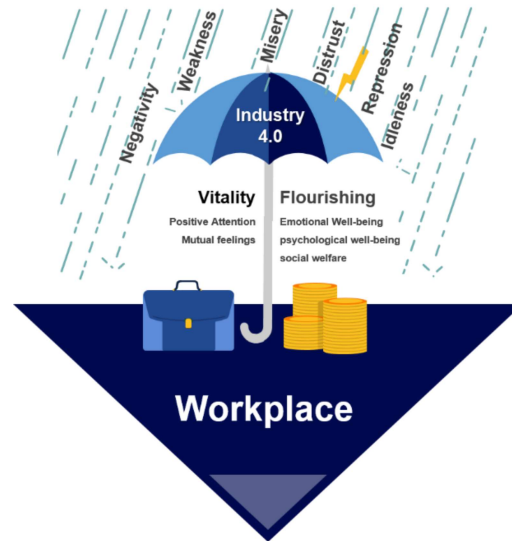


Figure 5. Vitality and Flourishing in the Industry 4.0

All workers need to increase their current skills under 4IR. Therefore, organizations need to research and connect what is required by the changing labor market and start building the skillset with this future role in mind. In addition, organizations need to prepare for challenges and new situations when they come on. It requires flexibility on many levels - which is why investing in worker vitality is so essential under 4IR (Louw, 2015:670). Vitality is a broad concept that can refer to workers' physical health, emotional and mental well-being, social and community participation, financial and legal stability. Being a good organization in all aspects of life makes workers more cohesive, calm, and capable, and this is reflected positively in their work performance and reliability (Porter & Heppelmann, 2015:98). Organizations may rely on the power, adaptability, creativity, and devotion of healthy people in times of economic and social turbulence to succeed in the workplace under the 4th Industrial Revolution Industry 4.0 (Leonard & Grobler, 2006:392). The workers are listened to and cared for by organizations creates a sense of belonging. Moreover, when workers feel that their ideas are valuable, this increases their vitality and adds to their general well-being (Steyn & Cilliers, 2016:4). And that this work is worth the effort because these employees will become personal brand ambassadors for their organization, which is the kind of factor that both thriving organizations want and need to turn to Industry 4.0 (Pietersen, 2007:61).

(Hendriksen et al., 2016:784) claim that organizations that have created a strong culture and brought dynamism into the workplace have a purpose beyond recognition or profit and see no greater purpose than serving their customers. And (Kram et al., 2012:304) argue that happy, motivated, and creative workers are more productive and innovative and help the organization win overall to prosper the organization under Industry 4.0. Therefore, organizations must be vigilant in responding to the

requirements of their industry, work, and employees. (Kawabata et al., 2017:1794) Achieving this purpose may be difficult for many organizations (Guérin, 2012:897). According to the above discussion, the following hypotheses have been formulated:

**The first primary hypothesis:** There is a significant correlation between vitality in the workplace and Flourishing in the Industry 4.0.

**The first sub-hypothesis:** There is a significant correlation between positive attention and Flourishing in the Industry 4.0.

**Second sub-hypothesis:** There is a significant correlation between mutual feelings and Flourishing in the Industry 4.0.

**The second main hypothesis:** There is a significant effect relationship between vitality in the workplace and Flourishing under (Industry 4.0).

**The first sub-hypothesis:** There is a significant effect relationship between positive attention and Flourishing in the Industry 4.0.

**Second sub-hypothesis:** There is a significant relationship between mutual feelings and Flourishing in the Industry 4.0.

### **3. Research Methodology and Data Collection**

The opinions of a sample of Iraqi journalists were surveyed from the Najaf office. To achieve this goal, the questionnaire was used to collect the required data by distributing it to the sample members numbering (1289) out of the study population (2000). Then it became clear that there are (20) The questionnaire did not contain complete data, so it was excluded in addition to conducting the anomaly data test (OUTLIER), as it was found that (41) outliers and extreme data were present. Thus, it was excluded from the data so that the final sample size was (1255). Finally, it was analyzed using several statistical tests available within the two statistical programs (SPSS V24 and SMART PLS). The first part of the questionnaire included the personal information of the members of the studied sample (human gender, age group, educational attainment, number of years of service). The second part was devoted to measuring the vitality variable in the workplace. The scale was developed by (Carmeli 2009), and it consists of (9) items divided into two dimensions: positive attention (5 items) mutual feelings (4 items). Items and the five-point Likert scale were used to measure the phrases, and it was specified with five answers: (I agree, agree, neutral, disagree, do not agree at all). The third part was devoted to measuring the Flourishing variable in the workplace. It was developed by ((Rautenbach, 2015)). It consists of (16) items distributed on three dimensions: emotional well-being (2 items), psychological well-being (9 items), social well-being (5 items), and the six-item Likert scale was used to measure Phrases, and select six answers (never, rarely, sometimes, often, always, every day).

#### **3.1. Scale stability test**

Although there are several ways and methods to test scale stability, the most common method in this field is by measuring the internal consistency of the scale items using the Cronbach Alpha coefficient. For example, table 1 shows that the items have recorded acceptable stability values more significant than (0.70), which shows that the scale is characterized by stability.

**Table (1)**

**Stability factor**

Variables and dimensions	Stability factor
Vitality In The Workplace	0.954
Positive Attention	0.911
Mutual feelings	0.945
Flourishing in the workplace	0.820
Emotional well-being	0.844
Psychological well-being	0.847
Social welfare	0.874
All axes	0.894

**3.2. Anomaly test**

The Outlier test was used to test for biased or abnormal data. The results of the abnormal data test (Outlier) indicate that several anomalous and biased items need to be deleted for the data to be suitable for statistical analysis, as shown in Figure (6).

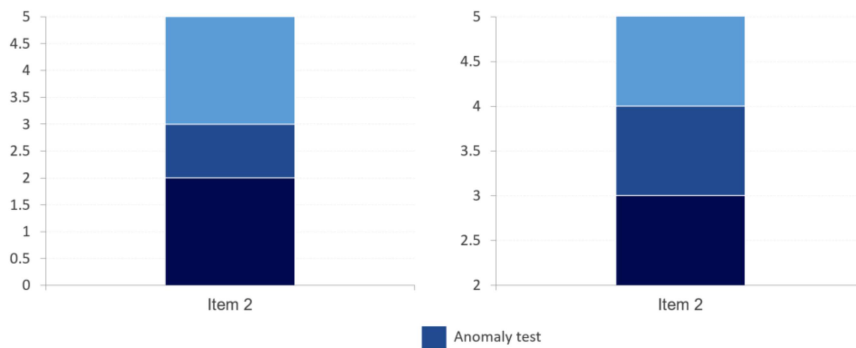


Figure 6. Anomaly test

**3.3. Factor analysis and model building:**

Confirmatory factor analysis and model building was used to identify the concept's validity. It requires that the paragraphs achieve saturations greater than (0.50) (Wathan et al., 2019:5), as follows:

**3.3.1. Workplace Bio-Variable Model:**

3.3.2. Results in Figure 7 and Table 2 indicate that workplace bio-variable data have achieved acceptance of saturation values that require them to be greater than (0.50) and are significant at the level (0.05), indicating that the data have achieved structural honesty.

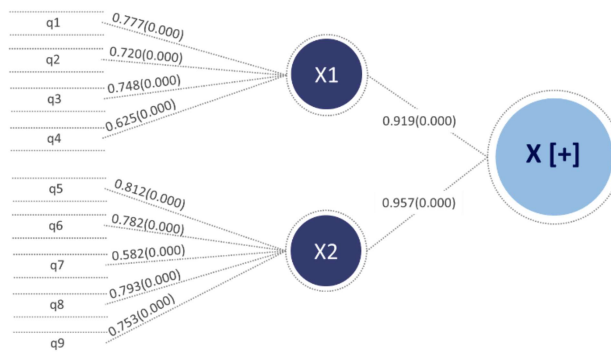


Figure 7. Vital variable model in the workplace

Results in Figure 8 and Table 2 indicate that workplace Flourishing variable data have achieved acceptance of saturation values that require them to be greater than (0.50) and are significant at 0.05, indicating that the data have completed structural honesty.

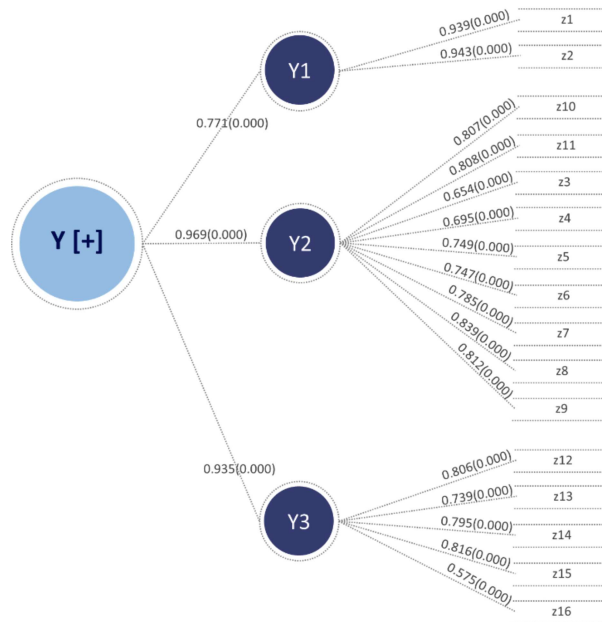


Figure 8. Flourishing variable model in the workplace

#### 4. Results and Discussion

##### 4.1. Testing the correlation relationships between variables

This paragraph aims to test the theories of the study to identify correlations between the main and sub-variables, and the validity of the assumptions will be verified through the use of several statistical tools and methods selected to analyze the variables of the study agencies:

**Test of the first main hypothesis:** The results of table (2) indicate the acceptance of the hypothesis in general where there was a positive and significant correlation between vitality in the workplace and Flourishing in the workplace by 9kh (0.716), a significant relationship depending on the level of significance, which was worth less than (0.05), and for sub-hypotheses, significant relationships were recorded with the dimensions of Flourishing in the workplace according to the level of significance, which was worth less than (0.05). Concerning sub-hypotheses, they were as follows:

**Test of the first sub-hypothesis:** Table 2 results indicate the acceptance of the hypothesis in general, where there was a positive and significant correlation between positive interest and Flourishing in the workplace amounted to (0.578), a significant relationship depending on the level of significance, which was less than (0.05), and for sub-hypotheses, significant relationships were recorded with the dimensions of Flourishing in the workplace depending on the level of significance, which was less than (0.05).

**Test of the second sub-hypothesis:** Table 2 results indicate the acceptance of the hypothesis in general, where there was a positive and significant correlation between mutual feelings and Flourishing in the workplace amounted to (0.626), a significant relationship depending on the level of significance, which was less than (0.05), and for sub-hypotheses significant relationships were recorded with the dimensions of Flourishing in the workplace depending on the level of significance, which was worth less than (0.05). Table (2) Matrix of relationships between vitality and Flourishing in the workplace:

**Table (2)**

Regression transactions between variables

independent variable	Form Parameters		(R <sup>2</sup> ) Selection factor	value of the statistic (F)	dependent variable	morale level
	$\alpha$	$\beta$				
Positive Attention	2.432	0.436	0.334	45.550	0.000	Flourishing in the workplace
Mutual feelings	2.241	0.482	0.392	58.412	0.000	
Vitality In The Workplace	1.854	0.586	0.513	95.147	0.000	

**4.2. Testing the impact relationships between variables**

This paragraph includes testing the impact relationships between variables, and the researcher has adopted a linear regression method to determine the relationship between variables and test their agency significance :

Test of the second main hypothesis: The results indicate a significant impact relationship between vitality in the workplace and Flourishing. The value of the 1,000-year decline constant was 1,854, and the slope reflecting beta impact capacity was 0.854). The significance of the relationship was achieved according to the statistic (F) value, which was higher than the scheduling value. The value of the selection factor was (0.513), i.e., its value (0.513) ). Changes in Flourishing in the workplace result from a change in vitality in the workplace, hence realizing this hypothesis. As for the sub-hypotheses, they were as follows:

**The First sub-hypothesis test:** The results of the analysis indicate that there is a significant impact relationship between positive interest and Flourishing in the workplace, with a constant value of 1,000 (2,241) and a slope value that reflects beta impact capacity of 0.4 82), as the significance of the relationship was achieved according to the value of the statistic (F) which was higher than the scheduling value, and the value of the selection factor was (0.392), i.e., its value (0.392) ) Changes in Flourishing in the workplace are the result of a change in positive interest, hence the realization of this hypothesis.

**Test of the second sub-hypothesis:** The analysis results indicate a significant relationship between mutual feelings and Flourishing in the workplace. The value of the 1,854-point constant decline and the slope reflecting beta impact capacity was 0.854. 586), as the significance of the relationship was achieved according to the value of the statistic (F), which was higher than the scheduling value, and the value of the selection factor was (0.513), i.e., its value (0.513) ) Changes in Flourishing in the workplace are the result of a change in mutual feelings, hence the realization of this hypothesis.

Table (3) Regression transactions between variables:

**Table (3)**

Summary of impact relationships between vitality and flourishing in the workplace

Significance	Value (T) computed	Standard deviation	Arithmetic mean	Factor	Path
0.000	4.605	0.097	0.436	0.446	X1 -> Y
0.000	3.869	0.1	0.397	0.387	X2 -> Y

Concerning the model of influence relations at the global level, it is clear from the model in Figure (4) and Table (3). The results show an influence relationship to the dimension of positive interest in Flourishing in the workplace, which amounted to (0.446). This relationship is significant according to



the significance level, which is less than (0.05). Regarding the effect of mutual feelings, the effect value was (0.387). This relationship is significant according to the significance level, which is less than (0.05).

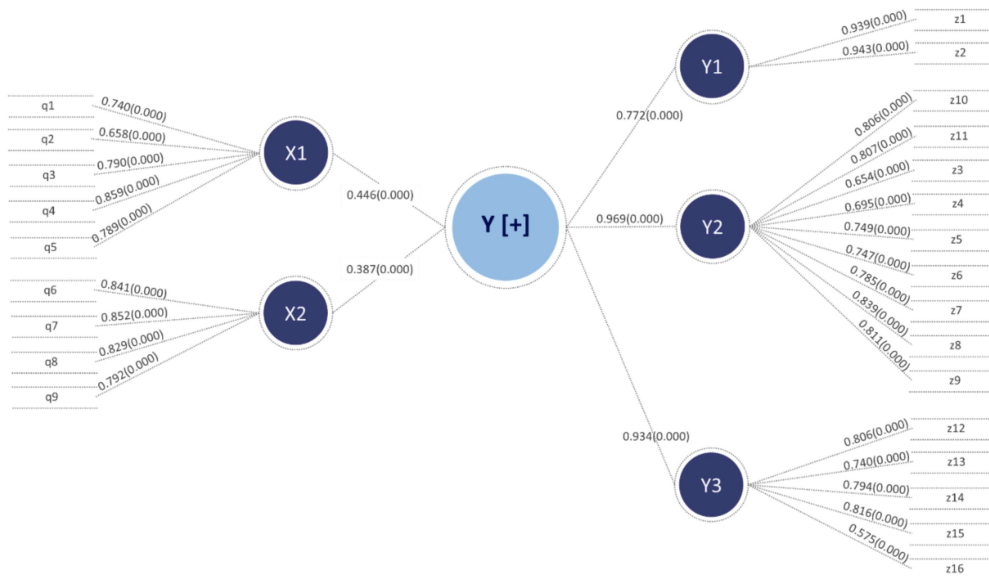


Figure 9 Model relationships of influence between vitality and Flourishing in the workplace

Table (4) Summary of impact relationships between vitality and Flourishing in the workplace:

Table (4)					
Summary of impact relationships between vitality and flourishing in the workplace					
Significance	Value (T) computed	Standard deviation	Arithmetic mean	Factor	Path
0.000	4.605	0.097	0.436	0.446	X1 -> Y
0.000	3.869	0.1	0.397	0.387	X2 -> Y

## 5. Conclusions

The current study results indicate that the Industry 4.0, with its advanced techniques, has made the workers of the research organization have optimistic feelings about their institution. It provides adequate support for training and career development by increasing interest in continuing education programs to keep pace with the rapid innovations of the Industry 4.0. Business organizations have created a favorable climate that enables them to develop their businesses to allow news organizations to create new jobs. The role of organizations does not lie in slowing down and disrupting technological progress. Still, it can help industrial and commercial institutions and workers achieve the highest performance levels in the labor market. Possible development, enabling them to generate new strategies that keep pace with this development and maintain the status of its employees. And to face the risk of robotic automation and the significant presence of artificial intelligence. Healthy workers are better able to cope with change under 4IR. Highly dynamic workers are more productive and innovative than others, seeking to flourish.

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