

2 Review and definition of key terms

In this chapter, the relevant ethical dimensions that have a bearing on the key terms of “human labor” and “automation” in alignment with the current state of research will be identified. Correspondingly, these dimensions can serve as a basis for further evaluation.

2.1 Human labor in an ethical context

Human labor can be defined as “the employment of the physiological functions of human life as a means”, emphasizing that “labor is a means, not and an end itself”⁴⁴. Another way would be to outline human labor as “any socially integrating activity which is connected with human subsistence (...) and which presupposes, creates, and recreates social relationship (...) in order to gain livelihood”⁴⁵. Other approaches have highlighted the ethical value of human labor, whereby work serves to facilitate human development in addition to survival and security and plays a key role in protecting human dignity⁴⁶. In the context of increasing the division of labor and the associated advancement of individuality, the preservation of human dignity becomes particularly crucial⁴⁷. For most of the working population⁴⁸, human labor is tied to an employee status that provides certain rights and benefits, such as minimum wage, protection from discrimination, unemployment insurance or worker’s compensation⁴⁹. The opportunity to work is further considered crucial to the maintenance of social peace as a source of stability that permits members of a community to contribute⁵⁰, an effect that has been subject to considerable discussion⁵¹.

44 Mises 2012: 131

45 Steiner 1957: 118-129

46 Liszcz 2017; Sison et al. 2016; Thistlethwaite 2009

47 Herdt 2019: 137-141

48 ILO 2021

49 Cherry 2016

50 Somavia 2015

51 Cramer 2015; Brueck et al. 2021

Labor can be characterized in various ways, including, for example, in accordance with skill level or the nature of the employee's relationship with their employer⁵². In a technical sense, labor may be defined as "any valuable service rendered by a human agent in the production of wealth, other than accumulating and providing capital or assuming the risks that are a normal part of business undertakings"⁵³. In that regard, labor is commonly seen as a human service that takes place primarily in an interhuman setting.

A further dimension that affects human labor from an ethical perspective is relationships with others and the common good. Anthropologically, human work may be defined as a universal experience⁵⁴, in that all societal organizations engage in work to ensure their subsistence. In this regard, the right to participate in the labor market is key, not only in terms of economic self-preservation, recognition, or interaction with nature, but also in terms of allowing gender gaps to be overcome from an ethical perspective. This includes socially necessary work, such as so-called reproductive activities and child-rearing, which have traditionally been categorized as women's work⁵⁵. In this sense, the ethical relation to the "other" (i.e., gender) is a characteristic feature of human labor and the opportunity to work as part of a good life. In the context of these types of work and activities, a considerable portion of human labor is not recognized as part of the labor market and thus fails to provide sufficient compensation.

To understand labor from an ethical perspective, employees require ethical awareness to elaborate principles that are relevant to define human labor. Members of society should be educated from an early stage as to how they might implement ethical sensitivity and reasoning in the workplace⁵⁶. In this context, the educational aspect contemplates a further ethical dimension of human labor, with a particular focus on identifying, for instance, injustices or practices that undermine the dignity of others.

From an ethical perspective, the quality of work should also be considered in addition to rather simply the quantity of available jobs in a given economy⁵⁷. For instance, aside from the sheer availability of work, labor should improve community living and generally protect the integrity of

52 Amadeo 2021

53 Encyclopedia Britannica n.d.

54 Keskuela 2018: 1-3

55 Gurtler/Smith 2005

56 Winstanley/Woodall 2000: 16-17

57 Arenas 2003: 94-95

nature. An illustrative decision would be to consider work as enabled self-fulfillment through service to others as part of an “ethical mysticism” that appreciates the importance of the connection between all living entities—human and non-human—equally⁵⁸. Respect, in the sense of “dignity toward the self and the ultimate purpose of the product or service”, is essential to understanding human labor from an ethical perspective⁵⁹. According to this interpretation, on the one hand, pride and self-esteem are highlighted when work is approached simultaneously as a quest for both meaning and one’s daily bread at the same time⁶⁰. On the other hand, respect may apply to public goods, including the environment. In this position, therefore, respect may be described as the minimum basis for “good work”. The discussion of the role of work is extended in the chapter Three on the ethical point of reference.

Undoubtedly, human labor has always been affected by contemporary factors, and its nature is influenced by technological advancement, as reflected, for instance, in the shift from physical to mental labor⁶¹. The utilization of knowledge (i.e., having the right specific mental skills) for access to human labor has become more salient⁶², and the question of which skills will be relevant in the context of new technologies is subject to considerable debate⁶³. A preliminary consensus on this question has highlighted the importance of social skills, as human labor will increasingly be conceived by non-automatable work.

To summarize, from an ethical perspective, human labor is affected by various dimensions, predominant among which is the focus on work’s qualitative aspects and characteristics. First, the protection of human dignity and the ability to live a life with human dignity are crucial to various concepts, in addition to securing survival, which, in most cases, is dependent on access to the labor market. Second, effects on others, such as the environment, and labor that takes place outside the traditional labor market—for example, reproductive work—constitute another ethical dimension. Third, the educational aspect of work, when it comes to accessing education regarding ethical issues as well as to gaining human develop-

58 Schweitzer 1981

59 Arenas 2003: 105

60 Terkel 1997

61 Cordes 2009; Fleishman/Reilly 1992

62 Witt 1997; Green et al. 2003; Atack et al. 2004

63 Danuser/Kendzia 2019; Panth/Maclean 2020: 3; Andrew/Higson 2008; Gehrke et al. 2015

ment, are further dimensions that indicate what a life with human dignity might look like. The role that work plays in fostering dignity will be further evaluated in Chapter Three.

2.1.1 Work vs. labor

While the terms have been used differentially in earlier literature (e.g., the use of the term “labor” in the context of Marxist theories), work (i.e., an activity, such as a job, in which a person invests physical or mental effort, typically for remuneration⁶⁴) and labor (i.e., the physical, mental, and social effort used to produce goods and services in an economy⁶⁵) are often perceived as the same activities⁶⁶. Given that the terms have become increasingly interchangeable in the current context of digital transformation, they are treated as synonymous in the present research project to avoid confusion with respect to the various theoretical traditions, which may influence how the terms are elaborated in the research. This is rendered more relevant, by the fact that the natures of paid labor and paid work are currently undergoing a process of transformation owing to advancing automation. In this sense, this research focuses primarily on paid or remunerated work; however, other types of work (e.g., unremunerated work exploited and encouraged by automation technologies, such as work on selfhood in social media) and the ways in which automation technologies impact how human work is performed will also be explored. Historically, it is likely that most work has gone unpaid or unremunerated, preventing the laborers in question from living dignified life, as the example of slavery illustrated.

2.1.2 Ethical vs. economic perspectives

It is important to clearly distinguish between economic and ethical perspectives on human labor. From a macroeconomic standpoint, the creation of new jobs—any jobs, regardless of their nature—is interpreted as a healthy economic sign. If jobs can be created, irrespective of the product or service, the consequences for individuals, the ecosystem, society, and the economy

64 Cambridge Dictionary n.d.-a

65 Amadeo 2021

66 Arendt 2010

are considered to be progressing⁶⁷. Efficiency is a crucial aspect of human labor. From a microeconomic perspective, the single-minded pursuit of efficiency jeopardizes justice or human dignity⁶⁸. This is also relevant in terms of the more general ethical considerations regarding digital transformation, given the predominant interest in efficient labor in the recent past⁶⁹.

The incorporation of moral concerns in work as opposed to exclusively considering self-interest is also crucial to distinguishing between the economic and ethical perspectives⁷⁰. Differentiation between “physiological” employment and the ethical value of human labor addresses the self-actualization needs of human beings⁷¹, which do not receive sufficient attention when analyzed purely from an economic perspective. An exclusive focus on physiological needs omits prosocial behavior from the analysis as well as issues such as the unemployed or working poor, who are forced to take part in economic practices that may have harmful effects on themselves and others.

2.1.3 Human labor as a control authority when deploying technology

With the increasing automation of human labor and the use of automation technologies, fewer humans are directly involved in the critical institutions that oversee social cohesion and the living together. This has led many to query how these technologies will be applied when humans are no longer working in democratically relevant services, such as government services or the media. In this regard, the automation of human work has resulted in increased dependency on these automation technologies, with algorithms determining what actions will be taken and how information is to be distributed⁷². For instance, the deployment of algorithms without human supervision by humans and without transparency could endanger the political rights of certain individuals by discriminating against certain groups as a result of opaque biases in terms of public services. Additionally, as human labor becomes less important in communication, algorithms increasingly determine in an automated fashion what information citizens

67 Arenas 2003: 94

68 Eecke 1998: 144-145

69 Kirchsclaeger 2021

70 Arenas 2003: 98-105

71 Maslow 1987

72 Cetina Presuel/Martínez Sierra 2019

and individuals receive, whereby the distribution mechanisms are also subject to decisions taken by algorithms rather than working humans⁷³. Both examples highlight ethical threats that must be analyzed, as human supervision is eliminated by automation of human work.

Human labor is one of the key terms used in this research. However, it requires further clarification in the context of the ethical point of reference. To sum up the discussion in this chapter and the different perspectives and approaches, *human labor* will be initially defined as *the use of physiological and cognitive functions to access the necessary resources for a dignified life—with equal respect toward all living entities, both human and non-human—and serving as a key facilitator of human flourishing as well as contributing to critical work processes associated with social cohesion*. The various components of this definition will be further probed in the discussion of the ethical point of reference in Chapter Three and complemented with an evaluation of the specific role that this definition of human work plays in pursuing a life with human dignity in light of the ethical point of reference.

2.2 Automation of human labor

The following section discusses, defines, and clarifies the key terms of “automation of human labor” and “digital transformation” from an ethical perspective, in line with this research objectives and in line with the current state of research. Subsequently, specific topics that relate to these terms’ ethical dimensions will be explored. It is important to clarify these terms for multiple reasons. *First*, most terms in the technology field and pertaining to technology-based changes are coined by marketing experts seeking to introduce the next generation of cutting-edge technology⁷⁴. Whether a given term is sufficiently descriptive to permit ethical evaluation and in what sense must be determined. *Second*, the environment in which new technologies are used and advertised is associated with a conceptual imprecision that typically requires additional attention so that developments may be assessed from an ethical perspective. This chapter clarifies the terms “automation” and “digital transformation” by addressing other terminologies, such as “artificial intelligence” or “robotics”, which are frequently used in connection with advancing automation. Only after this process can the

73 Drunen et al. 2019

74 Metzinger 2019

relevant ethical dimensions be identified and aligned with the ethical point of reference and its principles regarding human dignity.

2.2.1 Clarification of the term automation

The increased automation of work processes is among the major consequences of digitalization when new sources of technology are introduced⁷⁵ precipitating “fundamental changes”⁷⁶ in everyday life, the economy, or society at large as a byproduct of digital transformation⁷⁷. Correspondingly, objects, phenomena, and realities connected to digitalization practices, including automation, are aspects of digital transformation, though they may not be digital as such but rather products or results of digital processes⁷⁸. Automation in its purest form “entails the elimination of human manual labor through the use of automatic devices” and “eradicates various forms of labor and makes certain types of professions obsolete”⁷⁹. The extent of automation’s potential as an aspect of digital transformation and its impact has been widely discussed⁸⁰, including the assumption that automation is even being increasingly substituted for intellectual work. Additionally, different approaches have been adopted to delineating the prevalent technological areas within automation, such as AI or robotics⁸¹. Additionally, automation technologies have largely taken over the critical role when it comes to social cohesion and the living together, resulting in a lack of human supervision, as discussed above.

In light of these considerations and in service of the research objective, *automation* will be defined as *digital technology that eliminates paid human labor to strive for efficiency leading to ever fewer humans directly participating in a more efficient and effective value chain and, in addition, substantially influencing the nature of the remaining human work*. This definition does not exclude any emerging, “cutting edge” digital technology, but it distinguishes “automation” from terms such as “artificial intelligence” or “robotics” (which are largely subject to marketing biases or conceptual imprecision), by clearly stating that all digital technologies that are bound

75 Betz et al. 2016; Hess et al. 2016; Moore 2015

76 Gong/Ribiere 2021: 9

77 Pousttchi 2020; Veldhoven/Vanthienen 2019

78 Ohly 2019: 25-29

79 Bard et al. 2020: 15; Grosz et al. 2016

80 Arntz et al. 2016; Heath 2016; Larsson 2020; Acemoglu/Restrepo 2019

81 Zande et al. 2020; Muro et al. 2019; Kurfess 2005; Hofmann et al. 2019; Nof 2009

to automation are required to be included in the ethical analysis. Furthermore, this definition encompasses the social phenomena that occur as a result of digital transformation, highlighting the use of digital technologies. The consequences of this development and definition merit an extended ethical evaluation in light of this thesis' ethical point of reference, which is concerned with facilitating life with human dignity.

2.2.2 Clarification of digital transformation

Digital transformation is widely considered an umbrella term⁸² that encompasses multiple technology-based changes, including digitalization, automation, robotization, or the use of AI⁸³. The process of digitization—the “conversion of text, pictures, or sound into a digital form that can be processed by a computer”—is typically regarded as a presumptive step towards digitalization, which is defined as the “adaptation of a system, process etc. to be operated with the use of computers and the internet”⁸⁴. They share etymological roots: “digit” refers to conversion into a sequence of digits, whereas “digital” denotes the signals or data expressed as series of the digits 0 and 1, and their activities are closely associated with each other⁸⁵.

Technology-based shifts prompt further questions as to how a fair social and economic system might be shaped, focusing on the distribution of financial means and equal participation in the labor market to guarantee physical survival, a life with human dignity, and peaceful coexistence⁸⁶. Digital transformation is subject to increased interaction between humans and machines and a high presence of social networks in daily life, which also promotes the technologization and robotization of ideas and concepts. Those social developments must be carefully analyzed from an ethical perspective. Therefore, in line with this research's aims, the term *digital transformation* will be defined as *an umbrella term covering all technology-related digital changes relevant in the context of human labor*.

82 Kirchsclaeger 2021

83 Mičić 2017; Tang 2021; Spremic 2017

84 Oxford English Dictionary n.d.-c; n.d.-b

85 Bloomberg 2018; Oxford English Dictionary n.d.-a; Mergel et al. 2019; Gong/Ribiere 2021; Tilson et al. 2010

86 Kirchsclaeger 2021: 103