

*Humanity's Contradictory Relationship with Technology:
Through Marx's Views on Human Nature and His Theory of Alienation*

Angelique Antonini

Hidden in the countryside of France's Dordogne region lies a cavern whose stalactite-strewn interior has been transformed from yellowing limestone to a field of color, curated with streaks of red clay, black charcoal, and orange ocher. On these walls, Paleolithic humans dedicated their precious time, not pursuing necessities for survival, to depict dancing horses, charging buffalo, and pacing rhinoceroses, thus creating a *magnum opus* of the prehistoric world. The over 17,000-year-old Lascaux Cave art has been regarded as exemplary of human beings' inherent capacity for creativity and their natural capacity to utilize technology to transform their worlds, inspiring later artists, including Pablo Picasso, in his eleven-part lithograph series *Bull*,¹ to imaginatively build upon the work. However, not all endeavors resulting from humans' utilization of technology to transform have positively impacted the capacity for creativity. Karl Marx's critique of the capitalist means of production in his work *Economic & Philosophic Manuscripts of 1844* unveils a contradiction in human beings' relationship with technology: that one with an inherent capacity to create can forge a technology that subverts creativity itself. This discrepancy is elucidated by analyzing Marx's view on human nature, which includes his presumption of human beings' creative capacity, and his theory of alienation, which exhibits how the capitalist system, a technology, subverts this capacity.

Before evaluating Marx's critique of the economic system and its effect on the human capacity for creativity, it is important to determine what technology encompasses, which can be accomplished by peering into the word's linguistic origins. While the word "technology" may call AI chatbots and vacuuming robots to the modern reader's mind, the word's Greek root,

¹ Lavin, "Picasso's Lithographs," 22–23.

tekhnē (τέχνη), meaning “art, skill, [or] craft,” suggests that the production of such products should also be understood as technologies, not only the products themselves.² The computer programmer’s meticulous application of mathematical axioms to create ChatGPT and the software engineer’s careful tinkering to construct a Roomba are far from haphazard processes. Rather, the developers must utilize their “skill” of knowing how to apply their knowledge in ways that will create products for tired philosophy students and homemakers. Aristotle’s definition of tekhnē in his *Nicomachean Ethics* as a “rational quality concerned with making” further reinforces the characterization of these means of producing technologies as technologies themselves.³ The engineer does not apply principles of circuit design and programming aimlessly; rather, she is “concerned with making” an end product that rivals the Dirt Devil and applies her knowledge in a rational manner that is likely to produce this outcome.⁴

The capitalist means of production can be understood as a form of technology when viewed through the Aristotelian conception of tekhnē. Like the prehistoric painter skillfully wields charcoal because she is “concerned with making” a bear, modernity’s Rockefellers skillfully employ the capitalist means of production because they are “concerned with making” profit. Neither the artist nor the CEO attempts to accomplish these ends by employing random means. Instead, as Aristotle’s definition demands, they each select means that will likely result in their desired ends—rational means—by accounting for context. To illustrate, recall the prehistoric painter’s dynamic zoo: if the cave walls were black, it would have been unlikely for her to rely on charcoal sketching as a rational means of depicting visible creatures, the very thing she is “concerned with making.” However, because the walls are limestone, the modern eye still beholds her stark line work.

² Greene and Lancaster, “Technology.”

³ Aristotle, *Nicomachean Ethics*, 6.3.1.

⁴ Aristotle, *Nicomachean Ethics*, 6.3.1.

Similarly, Marx in *The German Ideology* details the impact that “different conditions of production” have upon which “association against a subject producing class” the ruling class utilizes, meaning that context informs which means of production are employed.⁵ For example, Marx details the context underlying the emergence of the feudal means of production, a system in which working-class serfs performed agricultural labor on the ruling class’s land. *The German Ideology* recalls the barbarian conquest of the Roman Empire, which resulted in the population being “scattered over a large area” and agricultural decline.⁶ The feudal system, adopted by the ruling class, accounted for this context, as scattered nobles oversaw their own lands instead of relying on a centralized, micromanaging monarch and protected their underlings, who were continuously farming. Thus, the feudal system was likely to produce what it was largely “concerned with making”—food—because it took context into account.

After the feudal system, the capitalist means of production emerged, a means to the end of what the ruling class is “concerned with making”—profit. To classify this system as a technology, one must consider whether capitalism, given its context, is likely to result in profit, and thus whether it is a *rational* means to its end, as Aristotle's conception of *tekhnē* demands. In *Capital: A Critique of Political Economy*, Marx recounts two shifts that had to occur before the capitalist system could emerge.⁷ First, the ordinary producer had to be emancipated from serfdom, and become the “untrammelled owner of his capacity for labor.”⁸ Only then could he sell his own labor on the market, which the capitalist means of production depends upon. Second, the working class had to be expelled from the land they tended so they would have “nothing to sell but [themselves],” referring to their labor.⁹ This “expropriation of the

⁵ Marx, *The German Ideology*, 1.3.

⁶ Marx, *The German Ideology*, 1.3.

⁷ Katz, “Karl Marx on the Transition from Feudalism to Capitalism,” 366.

⁸ Marx and Engels, *Capital*, 165.

⁹ Marx and Engels, *Capital*, 165.

agricultural producer” from the land, which the ruling class maintained control over, made it likely that the capitalist system would result in profit because it was not only possible for the lower class to sell their labor, given their liberation from serfdom, but it became strictly *necessary* for them to do so to survive once they were severed from the soil.¹⁰ These two contextual shifts *ensured* that the capitalist system would have the piecemeal labor it needed to function and generate profit. The capitalist means of production, thereby, is a “rational” means to profit, which it is “concerned with making,” and consequently, it can be classified as a technology.

Now that the capitalist means of production has been established as a technology, it is important to understand the human capacity for creativity that this technology, forged by creative agents, subverts. To embark on this analysis, it is first essential to grasp Marx’s understanding of the defining characteristic that distinguishes the human beings who participate in this system from all other life forms: *species-being*. To arrive at this distinction, Marx begins with the empirical observation that man produces his physical environment even “when he is free from physical need.”¹¹ Marx contrasts this characteristic with the obligated labor of an animal, which only produces when its immediate needs for survival compel it to act “in accordance with the standard and the need of the species to which it belongs.”¹² The animal’s forced labor is disparate from the dramatist’s careful composition of a tragedy, the architect’s ornate construction of a Gothic cathedral, and the marine biologist’s charting of the octopus’ hearts. Each work-intensive feat exemplifies human labor that is not directly compelled by one’s physical needs. While an animal’s species presupposes its life activities, for example, a sow perennially nurses its young, man’s work is not a “determination with which he directly

¹⁰ Katz, “Karl Marx on the Transition from Feudalism to Capitalism,” 366.

¹¹ Marx, “Economic and Philosophic Manuscripts of 1844, First Manuscript,” 31.

¹² Marx, “Economic and Philosophic Manuscripts of 1844, First Manuscript,” 32.

merges.”¹³ Instead, according to Marx, “man makes his life activity itself an object of his will and consciousness.”¹⁴ This free and conscious production (and the relation to one’s life activity instead of strict identity with it) is an exclusively human capacity and precisely what makes human beings *species-beings*.

In Marx’s articulation of one’s nature as a species-being, he presupposes man’s inherent capacity for creativity. This assumption can be clarified by first considering the logical opposite of the species-being, the “non-species being.” Non-species beings, like bees, for example, can be characterized by their life work: building hives. The ability to characterize requires that the animal possess the opposite of creativity—conformity. If non-species beings’ life activities were indeterminate of their species, like that of humans, then they could creatively assert their unique inner worlds upon the outer world. But this assertion is not empirically observed in animals to the same capacity; a creative honey bee does not erect a dam instead of a hive. Such a reality would leave the species unable to be categorized by its work.

If species-beings worked conformably instead of creatively, like animals, all human work would be duplicated and strictly categorizable. This reality would manifest if the work of species-beings were solely driven by survival, like the non-species-being because all humans share basic needs, as described by Maslow’s hierarchy.¹⁵ The species-being’s inherent desire to work independently of their basic needs, as Marx articulates, allows for variability in human production.¹⁶ However, this desire to work outside of one’s needs does not mandate distinct work. Without the underlying assumption that species-beings possess a creative capacity, all human beings might naturally choose, for example, star charting as their work beyond that required by survival. The assumption that species-beings have and utilize their creative capacity

¹³ Marx, “Economic and Philosophic Manuscripts of 1844. First Manuscript,” 31.

¹⁴ Marx, “Economic and Philosophic Manuscripts of 1844. First Manuscript,” 31.

¹⁵ Maslow, “A Theory of Human Motivation.”

¹⁶ Marx, “Economic and Philosophic Manuscripts of 1844, First Manuscript,” 31.

is necessary to arrive at a vision of human nature as it is empirically observed, where the way one asserts their own unique inner world upon the outer world through work differs from one's neighbor. If a human is by nature a species-being and species-beings must possess creative capacities, then technology's effect upon this creative capacity can be examined to analyze technology's impact on human nature. Marx's theory of alienation examines this relationship between a technology, the economic system of capitalism, and one's innate capacity for creativity.

To analyze the contradiction inherent in humanity's relationship to technology, consider a further analysis of capitalism's status as a technology by examining sociologist Max Weber's account of its development. In *The Protestant Ethic and the Spirit of Capitalism*, Weber asserts that capitalism emerged from the protestant ideal of asceticism, the self-imposed abstention from earthly pleasures. Weber argues that while they refused to splurge on frivolous worldly goods, Protestants ascetics engaged in "restless, continuous, systematic work in a worldly calling" to increase their assets for God's glory, as scripture commanded.¹⁷ Believing their profits to have been entrusted to them by God, Protestant ascetics saved and invested, resulting in their accumulation of capital that became "the surest and most evident proof of rebirth and genuine faith."¹⁸ Together, the protestant conceptual understanding of God as a being that desires his followers to live according to scripture and the Protestant goal of attaining proof of their salvation were realized through the technology of the capitalist system, the creative formulation of which allowed Protestant ideals of asceticism and frugality to be supported.

In stark contrast with the feudal system, capitalism, developed by creative agents, subverts the human capacity to be creative. The latter dynamic is captured in and through

¹⁷ Weber, *The Protestant Ethic and the Spirit of Capitalism*, 116.

¹⁸ Weber, *The Protestant Ethic and the Spirit of Capitalism*, 116.

Marx's theory of alienation. Alienation occurs when an experience that should be intrinsic becomes foreign. According to Marx, the free and conscious work of the species-being is the source of human self-definition, and performing excellently the essence of what makes one human is the means to fulfillment.¹⁹ The capitalist system alienates the worker from their nature as a species-being and consequently from their innate capacity for creativity because it obstructs them from acting in accordance with this essence. Consider, for example, the assembly line worker whose task is to repeatedly glue a shoe's sole onto its body. Perhaps the laborer—struck with innovation—decides the shoe would be more aesthetically pleasing if its sole were glued opposite of the instructed position. This choice, through which one utilizes their innate creative capacity, would be punished under the capitalist system, likely resulting in job termination or reprimand for the damage inflicted upon a once profitable product. While one is deterred from utilizing the capacity necessary to one's humanity under capitalism, one is encouraged to practice conformity, like the non-species being, to maintain one's position and receive payment. This animalistic degradation of the species-being's work is a consequence of the capitalists' ownership over the means of production, which makes the capitalist the sole decider of which commodities are made and what their processes of production entail. The laboring species-being is consequently unable to utilize their capacity for creativity through choosing what to make and how to make it. Instead, their mandated work is unceasingly repetitive and identical to that of their assembly line neighbor. Together, laborers act like beavers assembling identical dams.

The necessity for one's work to conform under capitalism makes it impossible for individuals to achieve fulfillment by excellently practicing the attribute that makes them human: the ability to work freely and creatively. Contrary to their nature, species-beings must seek fulfillment outside of their work, but they cannot quit the estranging labor because the wage they

¹⁹ Marx, "Economic and Philosophic Manuscripts of 1844, First Manuscript," 30.

earn from selling their labor piecemeal is necessary for them to afford their livelihoods. One strives only for a wage, spent to fulfill one's basic needs, "as a beast reduced to the strictest bodily needs."²⁰ Modernity's fast food worker who assembles countless uniform McDoubles and the accountant who strictly follows the procedures she rigorously studied to become a CPA each exemplify the garnishment of the ability to freely exercise an essential element of one's human nature under capitalism, the capacity for creativity. Thereby, the technology forged by species-beings with an innate creative capacity subverts the capacity itself, alienating humans from their humanity.

Marx's *Economic & Philosophic Manuscripts of 1844* unveiled a contradiction in human beings' relationship to technology: that one with an inherent capacity to create can forge a technology that subverts creativity itself. This discrepancy has been elucidated by analyzing the capitalist system's status as a technology, Marx's view on human nature, which presumes human beings' innate creative capacity, and his theory of alienation, which exhibits how the technology of capitalism subverts this capacity. If the products of the capitalist means of production, like the uniformly assembled and affordable iPhone, have improved human life, it is necessary to weigh a commodity's merits against the erosion of a human being's innate capacity for creativity. We must wonder: does the value of cost-efficient and timely production outweigh the harm inflicted by separating humans from their humanity?

Columbia International University

²⁰ Karl Marx, "Economic and Philosophic Manuscripts of 1844, First Manuscript," 7.

Bibliography

- Aristotle. *Nicomachean Ethics*. Edited and translated by H. Rackham. Cambridge, MA: Harvard University Press. Accessed September 1, 2025. Perseus Digital Library.
<https://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.01.0054%3Ab ook%3D6#note15>.
- Greene, Kevin, and Lynne Lancaster. "Technology." Oxford Classical Dictionary. March 7, 2016. Accessed September 1, 2025.
<https://oxfordre.com/classics/display/10.1093/acrefore/9780199381135.001.0001/acrefor e-9780199381135-e-6251>.
- Katz, Claudio J. "Karl Marx on the Transition from Feudalism to Capitalism." *Theory and Society* 22, no. 3 (1993): 363–89. <http://www.jstor.org/stable/657738>.
- Lavin, Irving. "Picasso's Lithographs 'The Bulls' and the History of Art in Reverse." *Institute for Advanced Study*. Princeton, 2015.
- Marx, Karl, and Friedrich Engels. *Capital: A Critique of Political Economy*. United States: C. H. Kerr, 1909.
- Marx, Karl. "Economic and Philosophic Manuscripts of 1844. First Manuscript." In *Karl Marx and Friedrich Engels, Collected Works*, vol. 3, 31. New York: International Publishers, 1975.
- Marx, Karl. *The German Ideology*. 1845. Marx Engels Archive.
<https://www.marxists.org/archive/marx/works/1845/german-ideology/ch01a.htm>
- Maslow, Abraham H. "A Theory of Human Motivation." *Psychological Review* 50, no. 4. (1943): 370-396.
- Weber, Max. *The Protestant Ethic and the Spirit of Capitalism*. Translated by Talcott Parsons. London: Routledge, 2001.