

Original Paper

Technē's Twofold Effects: Revelation and Manifestation as Factors in Its Practical Applications

Theodore John Rivers^{1*}

¹ History Department, John Adams High School, NY, USA

* Theodore John Rivers, History Department, John Adams High School (retired), NY, USA

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Abstract

Although it might be said that technē describes a mechanism that concerns all practical endeavors, it could also be said that the result of technē's twofold effects concern the being of reality. Regardless of how reality is conceived, it may be described as the convergence of humanity (subjects) and the world (objects) within the context of the former's practicality that indicates a process of becoming. The first of these effects concerns the idea of revelation that is essential as the cause of any manifestation, and the second of these effects concerns manifestation as the fulfillment of any revelation. Nevertheless, revelation is more important because not only is it a cause, it is also demonstrative of a process in which manifestation occurs. Due to the difference between these two effects, this mechanism is indicative of the innate relationship between what is (being) and what could be (becoming) from neither (non-being). Technē contains an intensity of far-reaching possibilities that reveals and manifests a process of becoming that is projected, when practically applied, as the purpose of its being. In this sense, it is the seminal word for any technological endeavor.

Keywords

technē, revelation, manifestation

1. Introduction

The Greek word technē (τέχνη) is the etymological root for words relating to technology, and it is derived from the Indo-European root tek that refers to the skills of a carpenter (Note 1). Although the first known appearance of technē is datable to Homer (8th century BCE) (Note 2), it is presumptuous to insist that technology in any of its forms did not exist before this time because there was no word that described it. Remembering that Greek civilization began approximately 5000 years ago in the bronze age with the Minoans followed by the Mycenaeans (or Archaeans) and the Dorians, the length of time

associated with Greek civilization was brief when compared with the vast expanse of time associated with hominid evolution. Whether or not there were comparable words in use before the appearance of technē that refer to technology and technologically related concepts, the fact remains that technology had an influence on all hominids and was applicable in all phases of hominid and human evolution, an influence that existed for tens of thousands of years before any word was devised to describe it.

Even when acknowledging that technē has long-lasting importance, its use was minimal when compared with what became technology's full evolutionary scope. As it evolved, the English language accepted the Greek meaning of art or skill for technē as did many other languages which assured that it became a universal term of far-reaching applications, especially in reference to prescribed knowledge with definite rules of procedure. Technē signified the ability to do something efficiently that impacted all types of activities, and it was intended to achieve its goal with as little effort as possible. Therefore, technē represented not only art or skill, but also the best way toward its achievement. Technē's efficiency rendered supplemental efforts unnecessary because its essence concerned the ability to do what was intended to be done, and it was capability that formed the basis of this intent.

Because technē was projected to the accomplishment of something attempted, planned, or desired, it enforced the practical effect of acquired knowledge. As understood by Aristotle, this practical effect presupposed that it would be applicable when expressed as know-how or understanding (Note 3), and it was directed to the maker or technician rather than the object of its intent (Note 4). Originally associated with the idea of production that was tied to natural processes, technē was thought to be imitative of nature (Note 5). Although it concerned acquired knowledge, the meaning of technē in modern usage surpasses its meaning in antiquity. In modern usage, art or skill is no longer assumed to be the equivalent of technē because it is not limited to "well-established knowledge and ability associated with a technique or a profession." (Note 6) Ideas relating to art or skill, as they are now understood, are more open-ended than the traditional meaning of technē, but such a view cannot displace its initial importance.

2. Heideggerian Interpretation

Nor can we accept the interpretation of technē put forth by Heidegger who states that it does not mean art or skill despite Greek sources contradicting him (Note 7). While upholding the notion that technē means knowledge, Heidegger seems to circumvent the idea of how knowledge originates or how art or skill can be knowledge-based at all. Although associating knowledge with inquiry, this view does not affirm that art or skill can still be technē even when it is associated with technical skill, tools, or materials (Note 8). And Heidegger's reliance upon Plato's Phaedrus as support for his interpretation is not confirmed because this dialogue discusses knowledge in relationship to art (Note 9). His interpretation distorts and misconstrues technē's Greek meaning, and falsifies the praxis associated with an artist, artisan, or anyone else who wishes to make a practical application for any effort. Heidegger denies that technē can signify practical performance because he relies upon technē as a

mode of knowing that “never signifies the action of making” (“bedeutet nie die Tätigkeit eines Machens”) (Note 10). Nevertheless, knowing is the antecedent to making as making is the affirmation of knowing, and it is pointless to separate them. Heidegger makes matters worse by being affirmative in one sense and negative in another because he contradicts himself by asserting *technē*’s importance for the artist while denying any importance for the artisan (Note 11). Both the artist and the artisan require skill in order to achieve their goals.

Although we have questioned the conclusions of Heidegger in regard to *technē*, there are other considerations by him that should also be addressed. And these considerations relate to his understanding of revelation. Because we can say that anything that comes to be by means of becoming can be described as a mode of revealing, we can conclude that reality is posited by it because revealing has no choice other than to be what it is. Revelation makes reality seemingly apparent, perceptible, and objective, despite all three being imperfect and incomplete. Unfortunately, Heidegger’s description that “technology is a way of revealing” (Note 12) tells us very little, since anything existent, whether object or subject, must pass through it also. Everything, not just technology, comes about by means of revealing from our own birth to the birth of stars. There is nothing special about technology’s revelation and nothing special about Heidegger’s description of it. To say that technology is a way of revealing simply states the obvious, confuses inherent proclivities, and adds little to a meaningful discussion. Heidegger’s description of technology as the effect of revelation merely inflates the meaning of a common and familiar term.

Similarly, describing technology’s revelation as an example of truth (*alētheia*) also tells us very little, since anything revealed, unconcealed, disclosed, acknowledged, affirmed, or discovered is an example of truth. What needs to be emphasized is the effect of revelation and that effect is its manifestation. Revelation is the cause, and manifestation is the effect. Although a cause is essential for an effect and is the reason for its being, nevertheless it is an effect that extends and perpetuates its cause. As important as the cause of a condition or event may be, its effect is more important because it can linger indefinitely, thereby aggravating the ground to its existence, that is, the cause of its being.

All technologies, whether prehistoric or historic, ancient or modern, Eastern or Western, primitive or advanced, are modes or ways of revealing. It is unreasonable to assume otherwise. What is noteworthy is not Heidegger’s statement that technology is a way of revealing, but rather the intended end of that revelation, which is similar to saying that any revelation, even a revelation from God, is meaningless without being manifested, that is, without being rendered practical and emphatic, or without having some worldly effect. Revelation posits manifestation, and manifestation confirms the reality of revelation. By being emphatic, whatever is manifested is conspicuous in some way, thereby showing what it is. Revelation thereby attracts attention to itself and makes itself worthy of recognition.

3. Historical Meaning

The discussion above is related to the assumption that an understanding of technē is essential for an understanding of technology or any technical apparatus, as it is also related to the assumption that technology is best understood in terms of technē. In general, technē describes what is practical as it pertains to the interpersonal relationships or activities within society. It would be reasonable to assume that technē concerns how societies function within a technological matrix, even if they function unfavorably. But the Greek understanding of technē was altered by the Romans who introduced techna, meaning trick or artifice, in place of art or skill. Perhaps the connection between technē and techna resides in the notion of a craft that means not only the ability to do or make something as the result of knowledge, but also the ability to evade or deceive, as when a person is described as being crafty. Techna continued throughout the Middle Ages with the same meaning. Apart from the ability of words to acquire new meanings or to lose them, whatever was positive in the meaning of technē was converted into something that was negative in techna which indicates how the Romans used Greek words by adopting them outright or by changing them.

Although the Latin word techna continued throughout the Middle Ages with the same meaning, technē disappeared from usage, perhaps because it was a Greek and not a Latin word. Technē was replaced by ars that in classical Latin meant an occupation or profession as well as the skill or knowledge needed to pursue it, an understanding that passed into medieval Latin. Originally, ars included the notion of a rule or method that could have either good or bad effects. In the Middle Ages, the singular form ars was also used to designate a medieval craft guild (Note 13), whereas the plural form artes meant the arts collectively, as in the mechanical arts (artes mechanicae) or the liberal arts (artes liberales). Apart from its practical effects, ars failed to emphasize the cultural rather than the technical meaning of technology. When related to technē and used in its place, ars deviated little from Aristotle's definition. Nevertheless, technē reappeared in the 16th and 17th centuries, either as τεχνολογία (Greek) (Note 14), technologia (Latin) (Note 15), or technologie (French) (Note 16), with minimal differences in meaning. The English word "technology" was derived from technologie by means of its Greek and Latin counterparts (Note 17).

Perhaps it is coincidental that the word for art, skill, or the practical effect of acquired knowledge (technē) was transformed into artifice (techna) by the Romans, or perhaps it is unfortunate because artifice that can have negative connotations such as cunning or trickery should be viewed positively that may signify artful or skillful craftsmanship when referring to technology. In general, artifice means artfulness, skill, artistry, cleverness, adeptness, masterfulness, or skillfulness (Note 18). These positive attributes are fundamental for an accurate understanding of technology, but we are seeking more than the meaning of words. Putting aside any arguments for irrationality, artifice and especially technological artifice should be seen as basic characteristics in the development or unfolding of technology, and by so doing, emphasis should be placed not upon technology's moral impact that has other implications, but upon its technical and cultural parameters.

4. Revelation and Manifestation

In the light of what we have discussed above, technē as art, skill, or prescribed knowledge generates two effects: 1) the revelation or uncovering of something, regardless how it originates, that causes a manifestation, and 2) the manifestation that posits or affirms the thing revealed. As close as these two effects seem to be, there is a slight difference between them because revelation manifests more than itself. Not only does revelation manifest what entity is revealed, it also manifests the process or matrix by which manifestation occurs. And when it occurs, revelation is at the height of its powers. It is a directive to everything that follows, and if nothing follows, it is not in the least diminished. Regardless of how it is expressed, it is the mechanism of non-being into being, the means in which becoming comes to be. Without denying the obvious, revelation is necessary for anything that is needless, nonessential, or dispensable, not needed, essential, or indispensable. Manifestation results from revelation, and by being part of a process, it appears as an effect. Although effects normally follow their causes, this idea does not exclude the possibility that they may occur simultaneously. Revelation comes into the world because it does, and manifestation is posited because it is, making both effects interdependent because both are derived from the possibility of being, the possibility that lies within everything that is, or by extension, everything that we are and do. Both revelation and manifestation are active agents, but revelation as described here is not to be confused with the religious sense of revelation in which God wishes to communicate with us. Although revelation is a form of knowledge, in the religious sense it is not. It goes beyond knowledge or circumvents it. It remains self-contained and requires nothing from us or the world.

Nor is it surprising that the Latin infinitive manifestare from which the English word “manifest” is derived also contains in its meaning not only to manifest (or to show clearly), but also to uncover, make known, declare, unveil, and put forth as well as to reveal (Note 19). Thus, manifestare is especially important because in a declaratory sense it contains the idea of what is revealed within the act of manifesting, but it does not negate the importance of revelation as the cause of manifestation. Since manifestation is indicative of the presence of something that is made known, it serves as the verification of its being. An understanding of manifestare is helpful for an understanding of technē because technē is most pertinent when it shows what it contains, although we must supplement and expand the understanding of Aristotle noted above in which technē presupposes practical applications. In addition to praxis, it may be inferred that there is an interlocking network between what might be revealed and what is revealed. This network bears witness to an intricate functionality for those possibilities that have been actualized as well as those that might be. Therefore, revelation and manifestation are situated within the full context of being—open, questionable, uncertain, and therefore undetermined.

Considering that revelation and manifestation are concepts that predate Heidegger, Descartes, and Christianity, there are additional thoughts that apply to both words. Knowing how to do something (technē) is often used interchangeably with the knowledge that supports it (epistēmē) (Note 20),

although technē and epistēmē are not equivalent words, nor should either word be confused with aretē (excellence) when an action is performed. Technē concerns artificialities because they originate from human effort, but epistēmē concerns both naturalities that are the result of innate qualities as well as artificialities. Such a comparison is well-known, but what is noteworthy is how both words relate to any action they may influence. Even when acting on a whim, we usually act with some type of knowledge or what we presume to be knowledge. And it is knowledge that is supportive of actions. Although actions may be analyzed from many perspectives, essentially it concerns patterns of behavior that are derived from interlocking mechanisms of conduct that indicate how humans are situated in the world, both individually and collectively. These mechanisms constitute the techniques of technicity. What originally were spontaneous, impulsive, and natural tendencies among our hominid ancestors evolved into deliberate, willful, and intentional behaviors among us. Eventually, the ends of individual goals were reduced to their means which is how techniques are usually defined.

5. Process

As a result of these efforts, revelation implies that there is a process through which manifestation takes place. Revelation denotes a series of actions or events that through their interdependency produce an effect. Although actions might be equated with the notion of change, change is a highly abstract word that hinders understanding, since it has both negative and positive connotations that increase its ambiguity. Similarly, the notion of function as a substitution for action that is associated with process also hinders understanding. Regardless of what word is used to describe process, it concerns the completion of actions that are intended to attain the end sought, equated as its effect. And when this occurs, actions are appended to their causes. By definition, a process may be identified as a description of almost anything, which may explain why it has several different meanings and many more applications. In reference to technē, process denotes technique, and technique concerns the execution of something that when coupled with ability completes it. Hence, technē, process, and technique are interrelated, similar to being, essence, and existence. Technē cannot operate without a process that enables it, and in order to be enabled, it requires technique that defines the essence of its being.

When combined with technique, which is a term that describes a subordinate characteristic of method, technē becomes a pivotal concept of far-reaching importance. Because process signifies a series of actions that constitute a succession of events, it may not be successful or even long-lasting, but it always concerns a procedure for doing something, and that something is projected toward what it is to be. Therefore, a process embodies an innate mechanism or mode of becoming. Art, skill, and prescribed knowledge as features of technē are all included within its meaning, but none of these features can be performed without some type of process that allows their completion. Technē presupposes a means, rule, or manner in order to achieve a goal. In this sense, it denotes a method. Anything demonstrative of a process may be described as a becoming, and one such example is technē. Becoming signifies a procedure from which being springs forth, but it also signifies a modification of

being that already exists. Because becoming is supplemental to the being that is, it concerns any enlargement of being from which creativity might occur. Technē is aided by the mode of being that reveals its underlying basis. It manifests the means of doing something that in turn posits what it is. Technē is situated within the full context of being, that is, it is undetermined within its openness, its questionableness, its uncertainty. It is undetermined because it is undecided. Because the revelation of technē is the means to its manifestation, it remains a humble attempt that seeks to disclose what lies within.

As important as process is, process and becoming are not equivalent terms. Becoming pertains to something that already is present to being, but not in reference to its completion. It stands at the threshold of being because it is part of it, but not yet fulfilled. It lies in waiting as latent possibility, characterized as non-being. Technē projects toward an engagement with being when the latter reveals its manifestation. As a consequence of its nature, becoming innately contains a capability for being because it embodies the potentiality for actuality that indicates how being is presented to the world. And what better way is there for humans to be present in the world and to be engaged with being than through technology that in conjunction with ontological freedom posits human reality.

Since technē serves as an introduction to technology, the presence of technology should remind us of its engagement. Technology is not an exclusionary endeavor, for even the most rudimentary tasks point the way to its involvement, however primitive, slow paced, or disconnected they seem to be. The first tools made out of stone would be indicative of this process as would everything else that followed.

6. Conclusion

Technē signifies the becoming of being that represents more than just tasks, professions, or livelihoods projected as the result of choice. It relates to all human endeavors. Technē is an inclusive word that describes essential features of human consciousness, human nature, and human culture. It is reflective of fundamental elements within humanity's evolution. Above all, it concerns the quest for betterment, the desire for advancement, and the struggle to improve what already exists, but there would be less of a pursuit for improvement if there were no ideas akin to technē.

The methods associated with the Greek understanding of technē concerned ingenuity. Its importance began with localized and isolated Greek communities whose ideas and ideals would eventually influence the world at large. Technē concerned procedures and critical thinking that gave rise to reflection because it was conditioned by the art, craft, skill, and expertise of a people interested in the technicity of inventive creativity. As a result, its use disclosed its underlying mechanism. It indicated the techniques of a people not normally considered to be technically advanced, but when considering the nature of ancient Greek culture that can be extended to science, politics, philosophy, and literature, as well as architecture, shipbuilding, and medicine (Note 21), we can appreciate its phenomenal impact on later developments. Technē became an integral part of Greek culture and any other culture that promoted it. In fact, it became such an integral part that it existed almost without forethought and

became ubiquitous in the vast panorama of subsequent events, events that when extended by technology and its artifacts would apply to all of humanity.

Since ontological freedom is an innate and essential characteristic of choice, this conclusion helps to explain why technological artifacts as the effects of *technē* must be distinguished from technological artifice as its cause. This distinction between artifice and artifact concerns the difference between an idea or concept (artifice) and its result (artifact) (Note 22). These thoughts help us to conclude that *technē*'s twofold effects increase humanity's importance, an importance that is achieved by means of becoming. As the agency of this importance, *technē* demonstrates that inventive ingenuity transforms human possibilities. It gives to technology its greatest inclusivity that when universally applied influences all areas of human culture.

Notes

Note 1. Julius Pokorny, *Indogermanisches Etymologisches Wörterbuch*, 2 vols., Bern: Francke, 1959-1969, vol. I (1959), p. 1058.

Note 2. Homer, *Iliad*, bk. I, 571; III, 60-93; XV, 14; XVIII, 143 and 391; and XXIII, 415-16 in which *technē* or its derivatives mean craftsman, in addition to skillful, crafty, or a plan (in general). See Homer, *Iliad*, with an English Translation by A.T. Murray, rev. by William F. Wyatt, 2nd ed., Loeb Classical Library, 2 vols., Cambridge [MA]: Harvard University Press, 1999, vol. I, pp. 56-57 and 132-33; vol. II, pp. 106-07, 296-97, 316-17, and 522-23. Homer, *Odyssey*, bk. III, 432-33; IV, 455 and 529; V, 259 and 270; VI, 232-34; VII, 110; VIII, 296 and 326; XI, 613-14; and XVII, 382-88 in which *technē* or its derivatives mean master builder (or master of some public craft), in addition to craft, arts, device, skill or skillfully, handiwork, and cunning. See Homer, *Odyssey*, with an English Translation by A.T. Murray, rev. by George E. Dimock, 2nd ed., Loeb Classical Library. 2 vols., Cambridge [MA]: Harvard University Press, 1995, vol. I, pp. 112-13, 150-53, 156-57, 200-01, 236-37, 254-55, 292-93, 294-97, and 444- 45; vol. II, 182-83. Also see Rudolf Löbl, *Texnh-Techne: Untersuchungen zur Bedeutung dieses Wortes in der Zeit von Homer bis Aristoteles*, 3 vols., Würzburg: Königshausen & Neumann, 1997-2008, vol. I (1997), pp. 9-19 for the *Iliad*, and pp. 20-30 for the *Odyssey*.

Note 3. Aristotle, *Metaphysics*, 981a5-12. See *Metaphysics, Books I-IX* with an English Translation by Hugh Tredennick, Loeb Classical Library, Cambridge [MA]: Harvard University Press, 1933, pp. 4-5.

Note 4. Aristotle, *Nicomachean Ethics*, 1140b13. See *The Complete Works of Aristotle: The Revised Oxford Translation*, ed. Jonathan Barnes, 2 vols., Princeton: Princeton University Press, 1984, vol. II, p. 1800.

Note 5. Aristotle, *Physics*, 194a21-26. *Ibid.*, vol. I, p. 331. Also see Wolfgang Schädewaldt, *Natur, Technik, Kunst: Drei Beiträge zum Selbstverständnis der Technik in unserer Zeit*, Göttingen: Musterschmidt Verlag, 1960, pp. 35-53, esp. p. 50. Translated into English by William Carroll as "The Concept of Nature and Technique according to the Greeks," *Research in Philosophy and Technology*, 2 (1979), 159-171, esp. 167.

Note 6. Werner Jaeger, Paideia: the Ideals of Greek Culture, 3 vols., trans. Gilbert Highet, New York: Oxford University Press, 1939-1944, rpt. 1976-1986, vol. II (1986), p. 129.

Note 7. Martin Heidegger, An Introduction to Metaphysics, trans. Ralph Manheim, New Haven: Yale University Press, 1959, p. 16. Heidegger's "The Question Concerning Technology" ("Die Frage nach der Technik") contradicts what he said in his Introduction to Metaphysics (originally presented in 1935 and published in 1953) where he admits that *technē* pertains to the skills of the craftsman. See Martin Heidegger, The Question Concerning Technology and Other Essays, trans. William Lovitt, New York: Harper Colophon Books, 1977, p. 13.

Note 8. Heidegger, An Introduction to Metaphysics, pp. 159-60. Also discussed in Joseph J. Kockelmans, Heidegger on Art and Art Works, Dordrecht: Martinus Nijhoff Publishers, 1985, pp. 169-71.

Note 9. Phaedrus, 267a-269e. See The Collected Dialogues of Plato, including the Letters, eds. Edith Hamilton & Huntington Cairns, Princeton: Princeton University Press, 1963, pp. 512-15.

Note 10. Martin Heidegger, "The Origin of the Work of Art" in Poetry, Language, Thought, trans. Albert Hofstadter, New York: Harper Colophon Books, 1975, p. 59. For the German original, see Martin Heidegger, "Der Ursprung des Kunstwerkes," in Holzwege, 6th ed., Frankfurt: Klostermann, 1980, p. 45. Even something as broad as Heidegger's description of technology is not consistent with his view of industrial production.

Note 11. Martin Heidegger, Nietzsche, trans. David Farrell Krell et al., 4 vols., New York: Harper & Row, 1979-1987, vol. I (1979), p. 81. See n. 7 above that refers to Heidegger's interpretation that, indeed, *technē* pertains to the skills of a craftman (or artisan).

Note 12. Heidegger, The Question Concerning Technology, p. 12.

Note 13. Steven A. Epstein, Wage Labor & Guilds in Medieval Europe, Chapel Hill: University of North Carolina Press, 1991, pp. 32 and 72.

Note 14. Petri Rami [Petrus Ramus] professoris regii et Audomari Talaei [Omer Talon], Collectanae praefationes, epistolae, orationes: Cum indice totius operis, [printed with royal permission]: Paris, October 19, 1576, p. 91 describes technology (written as Greek *τεχνολογίαν*) as being suitable for the orderly or methodic instruction of students.

Note 15. John Brinsley, Ludus Literarius, or, the Grammar Schoole showing how to proceede from the first entrance into learning, London: Printed [by Humphrey Lawnes] for Thomas Man, 1612, p. 245 describes technology, written as *technologia*, as technical apparatus that is methodic. Hence, technology, as described by Brinsley, is associated with a method that impacts education, language development, science, and all manner of things large and small.

Note 16. Johann Michael Moscherosch, Technologie Allemande & Françoise. Das ist: Kunst=übliche, Wort=Lehre. Teutsch [sic] and Franz öisch, Strassburg: Josias St ädel, 1656.

Note 17. George Buck, The Third Universitie of England, sect. 48 and conclusion in The Annales, or Generall Chronicle of England, began first by maister John Stow, and after him continued and

augmented ... unto the ende of this present yeare 1614 by Edmond Howes, gentleman, Londini: Thomas Adams, 1615, p. 988. This reference to Buck's appendix is cited in the Oxford English Dictionary, eds. J.A. Simpson & E.S.C. Weiner, 2nd ed., 20 vols., Oxford: Oxford University Press, 1989, vol. XVII, p. 705.

Note 18. Theodore John Rivers, "Intuition and Technological Artifice: The Interplay of Their Importance," Science, Technology & Public Policy, 4 (2020), no. 2, 61.

Note 19. Thesaurus linguae Latinae, published by the academic council of five German universities, 11 vols., Leipzig: B.G. Teubner, 1900--- (in progress), Vol. 8 (1936-1966), col. 304.

Note 20. In general, see David Roochnik, Of Art and Wisdom: Plato's Understanding of Techne, University Park: Pennsylvania State University Press, 1996, pp. 90-100.

Note 21. Serafina Cuomo, Technology and Culture in Greek and Roman Antiquity, New York: Cambridge University Press, 2007, p. 40.

Note 22. Dominique Bourg, L'homme artifice: le sens de la technique, [Paris]: Gallimard, 1996, p. 20.