Reijers, W., & Coeckelbergh, M. (2020). *Narrative and technology ethics*. Palgrave Macmillan.
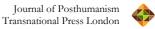
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Published in 2020, Wessel Reijers and Mark Coeckelbergh's *Narrative and Technology Ethics* provides insight into contemporary views on virtuous technical practices. As with their 2016 and 2018 papers on narrative technology, Reijers and Coeckelbergh's stated objective is to expand a philosophical theory of narrative technology in other spheres of human lives—in this case—ethics. Starting with the effects of technology on the Covid-19 pandemic, the book traces the evolution of technology throughout the twenty-first century. In tandem with Plato's technology of writing, Prometheus's technology of fire, and the technologies used by Icarus and Pandora, the book argues that technology has been responsible for both the development and the suffering of individuals. In its Introduction, the book states that it does not treat technology from a transhumanist point of view, which pits humans against machines; instead, technology is viewed as a mediating agency. As the authors state: "Technologies persuade us, teach us, invite us, inhibit us, harm us, and thereby passively or actively contribute to the ethical choices we make and actions we engage in" (Reijers & Coeckelbergh, 2020, 3). According to the authors, a technical practice can be considered virtuous only when there exists a reciprocal relationship between two agents whose roles are reversible, but they themselves are non-substitutable. Engaging in such a practice is integral to the good life since it allows us to attend to the suffering of others and to imply solicitude. Reijers and Coeckelbergh propose that technology can be conducive to a good life via correlating technical practice with narrative. By linking technological mediation with normative ethics, the book succeeds in bridging the gap between philosophical theories of technology and those of normative ethics, as in the works of Ricoeur.

As its title suggests, *Narrative and Technology Ethics* aims to integrate ethical practices with innovations in technology. According to the authors, integrating ethical reflection within designs is one way of practicing responsible innovation. They begin the first chapter with a reference to Heidegger's use of the term "modern technology" and Marx's reference to technology as a capitalist tool. Reijers and Coeckelbergh argue that technology has been portrayed as an instrument of oppression and alienation of the working class. Contemporary philosophy of technology has taken an empirical turn only during the 1990s in the works of Latour, who focuses on technology as a symmetry between humans and non-humans. Here, they stress the effect of language on technology practices—using the word "practice" to lay the groundwork for the term "technical practice". The authors merge practice with ethical inquiry by invoking Alisdair MacIntyre's narrative notion of practice. Hence, not only virtue but also practices should follow moral standards when it comes to technology. This

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understanding is then connected to narrativity, the book's central theme. By weaving virtuous practices into history and traditions, narrative embedding can be achieved successfully. According to the authors, technical practices can be distinguished between virtuous and non-virtuous practices. Virtuous practices refer to technical practices that are ethical and moral and are used appropriately at the right time and in the right manner. On the other hand, non-virtuous practices refer to errors and a non-serious way of carrying out technical practices. The authors then state the problems with MacIntyre's theory of practice and stress that his idealized notion of practice does not have any relevance when it comes to modern technical practices and innovations. The authors state that MacIntyre fails to integrate "the three major components of his theory of practice: practice, narrative unity, and moral community" (Reijers & Coeckelbergh, 2020, 40-41). Reijers and Coeckelbergh claim that they will integrate these three strands by focusing on the narrative turn, which brings together practice and technology as a mediator. By treating narrative as a mediation of human experiences, the authors lay down how such a narrative turn can improve our understanding of the micro and the macrocosm. Drawing on Burner's statement that "text affects the reader" (Bruner, 1991, 4), the authors believe that narrative will also affect how technology is used as a mediator in our lives.

In the third chapter, the authors attempt to bring together technology ethics in close association with technical practice. To carry out technology ethics, technical practice should be integrated with technical mediation. To establish this, the authors utilize Romele's (2019) "digital hermeneutics," which refers to the formation of meaning from the use of technologies. Drawing on Ricoeur's *Time and Narrative*, the book then focuses on how narrativity and temporality play a major role in the philosophy of technology. The mediation of human action is important in social reality, and it can be done only through linguistic means. The symbol of language becomes an essential means in the mediation of the human lifeworld. Referring to Aristotle and Heidegger, the authors argue that technical practices are generally placed in some context or relevance in a political community. However, a virtuous technical practice is different from other technical practices as it has a note of seriousness along with relevance, authenticity, and indeterminacy. Reijers and Coeckelbergh assert that only a narrative theory could be used to tie all these concepts together since the narrative mode presents practices, life plans, and a unity of life. A narrative theory comprises a long action chain, which makes it easier to understand how each basic action receives some sort of meaning in life. These actions interact with other practices, thus constituting a life plan with a connected beginning, middle, and end. By continuous complexification and simplification, the narrative unity of life is held to flawlessly integrate with a virtuous technical practice in order to fulfill the ethical aim of life.

Reijers and Coeckelbergh next argue that the technical practitioner should be awake and succeeding:

> To distinguish technical practices that cultivate the virtues from those that do not, we consider those modes of practice in which the practitioner is "awake" and "succeeding". Yet, this raises the question of genuine virtuous and responsible conduct: how to distinguish between a criminal hacker who is awake and succeeding in eliciting a zero-day vulnerability to attack a government service, and a responsible software engineer who builds an application that serves the common good? We saw that this question of authenticity leads to the question of temporality, which in turn brings us to narrative as that which endows practices with their temporal significance. (2020, 79)

As different people can carry out technical practice, it is their ethical attitude that will identify how they are carrying out the practice. Authenticity is then related to temporality, which is also connected

to the hermeneutic account of technical practice. Narrativity, when integrated with technical practice, becomes a significant factor in social reality since texts and literature, buildings, computers, and other objects can all enclose narrative mediation. In relation to narrativity, the fourth chapter then brings in Aristotle's concept of mimesis to argue that our understanding of the world is shaped by different symbols, structures, and temporal elements. Focusing on the second and third phases of mimesis, namely- narrative configuration and refiguration, the authors argue that the dimensions of narrative structures are mediated and deemed complete when human engagement with the world of action contributes to the practice of textual hermeneutics. On these grounds, they introduce the concept of distancing in the technological configuration, which is conceptualized as an abstraction from the world of action. This helps in the establishment of the difference between textual and technical narratives. In the case of textual narratives, textuality tells us where to look. But in the case of technical objects, there is a kind of distancing that makes us look beyond the world of action and contributes to ascending complexification and descending simplification- concepts elucidated in earlier chapters. Basic actions and practices are linked through life plans, which include a two-fold movement of ascending complexification and descending simplification in the process of technological configuration. Ascending complexification refers to the movement from basic actions toward ideals while descending simplification refers to the top-down movement from the ideal toward basic actions and practices. Reijers and Coeckelbergh excel at bringing together writings from across disciplines, ably pointing to the junctures where technology, narrativity, and temporality intersect.

In the book's fifth chapter, the theory of ethics that Reijers and Coeckelbergh apply to technical practice is closely associated with that offered by Martha Nussbaum in contrast to those of Kantian ethics and utilitarianism. Kantian ethics and utilitarianism fixate from the point of view of ethical principles about the notion of the good life. Yet, in *Narrative and Technology Ethics*, virtue ethics focuses on the idea that by adhering to just practices, we can become just people. In connecting virtue ethics with technology, the authors recapitulate the core virtues stated by Shannon Vallor in her book *Technology and the Virtues* (2016)—honesty, self-control, humility, justice, courage, empathy, care, civility, flexibility, perspective, magnanimity, and wisdom. For a technical practice to be ethical, the authors argue that its agents should be in a reciprocal relationship where there is a reversibility of roles. A technical practice should not only relate to the good life of an individual but also to others "as acting and suffering, who are irreplaceable and essentially like ourselves" (Reijers & Coeckelbergh, 2020, 137). Returning to ethical technical practice, the authors argue that it is necessary to consider the textuality of technology, along with temporality and the distancing of technological configuration, in order that we can interpret any technical practice by providing descriptive and narrative accounts, which will contribute to their technological mediation. This mediation will lead us to scrutinize technical practices in connection to a good life and just institutions.

In the next chapter, "A Method for Technology Ethics", the authors make the case that technology ethics not only concerns itself with developing a normative theory but also with applying theories to the practical setting of research and innovation. Technology ethics, when integrated with research and innovation, should be able to focus on embedding ethics in the design process to receive valuable outcomes. It is important to make sense of the narrative structures that are used to interpret technology and its respective technical practices. The authors suggest that this can be done by using the phases of description, interpretation, evaluation, and prescription. In order to link these phases, the chapter introduces the concept of personalization technology that can detect and tailor individual experiences in different technical practices. Personalization technology revolves around

concepts like adapting, fitting, and tailoring designs to suit individual requirements. The authors cleverly try to identify narrative structures where such technology is used, and once the technical practices are interpreted and analyzed according to the narrative technologies approach, the suggested next step is to evaluate the technical practices according to the narrative unity of life. The elements that constitute the narrative unity of life can be uncovered by inquiring into accounts of how to live together in a political community. Reijers and Coeckelbergh demonstrate that the well-being and sense of a political community are important to make a particular technical practice 'ethical' and exemplary.

In the concluding chapter, the authors reflect on the potential for new philosophical research on the prospects and limitations of narrative in interpreting technical practice. By establishing that technology also tells stories through configuration and refiguration, Reijers and Coeckelbergh develop the hypothesis that technical practices integrate actions related to life plans, thus contributing to the unity of life. Life plans constitute basic actions, practices, and ideals through which the movements of ascending complexification and descending specification are characterized. This reiterates the argument that a virtuous technical practice will always be preferred over a mere technical practice because only a virtuous one can lead to technical mediation by considering textuality, literacy, temporality, and distancing. Understanding the ethics of technical practices in relation to research and innovation will help in achieving standards of excellence while connecting practices to the narrative unity of a good life. As a blueprint for where a virtuous technical practice could take narrative technology, this book is conceptually invaluable. The authors never shy away from rejecting theories like the narrative theories of Aristotle, the Cartesian notion of the self, MacIntyre's theory of practice, or Kantian ethics. They state their arguments for rejecting these seminal theories and offer alternate theories that are well-suited to the narrative unity they integrate with technical practices. Overall, the book provides a fascinating perspective of the narrative theory of technology integrated with virtue ethics. Its conceptual tools and theories are cleverly chosen, and its theoretical framework opens up further avenues of research and contemplation in the fields of narrative theory of technology and virtue ethics of technology.

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