

Gilbert Simondon's Ethics of Technology: An Extended Analysis

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Introduction

Gilbert Simondon (1924-1989) stands as one of the most innovative yet historically underappreciated philosophers of technology of the twentieth century. His work has experienced a remarkable resurgence in contemporary philosophical and technological discourse, particularly as digital technologies increasingly mediate human experience. Simondon developed a radically original perspective on the relationship between humans and technology, moving beyond the conventional dichotomies of his time—technological determinism versus social constructivism, materialism versus idealism, and anthropocentrism versus technocentrism. At the heart of his philosophical project lies an ethical vision that seeks to reconcile human culture with the technical world, offering a path beyond both technophobic rejection and uncritical techno-optimism.

This essay explores Simondon's ethical perspective on technique and technological change, highlighting both the philosophical foundations and practical implications of his thought. It will examine how Simondon's ethics emerges from his ontological and epistemological commitments, while drawing connections to contemporary technological challenges and comparing his approach with other philosophical traditions. By engaging with Simondon's work as a living philosophical resource rather than a historical artifact, we can discover valuable insights for navigating our increasingly complex technological environment.

Philosophical Foundations

Beyond Hylomorphism: Individuation and Technical Objects

Simondon's ethics of technology cannot be understood apart from his broader philosophical project of rethinking individuation—the process through which beings come into existence as distinct entities. He rejected the traditional hylomorphic model derived from Aristotle, which understood beings as resulting from the imposition of form upon passive matter. Instead, Simondon proposed that individuation is an ongoing process rather than a completed result, with beings existing in dynamic metastable systems containing potentials for further transformation.

This reconceptualization has profound implications for understanding technical objects. Rather than seeing technologies as fixed entities resulting from human design imposed upon passive materials, Simondon views them as participating in their own processes of becoming. This becoming follows what he calls "concretization," the process by which technical objects evolve toward internal coherence as their elements become increasingly multifunctional and interdependent. As Bernard Stiegler notes, "Simondon's analysis of technical evolution aims to show that technical objects have their own mode of existence and evolution that is irreducible to their human creators or users" (Stiegler, 1998, p. 82).

The Mode of Existence of Technical Objects

In his seminal work *On the Mode of Existence of Technical Objects* (1958), Simondon argues that technical objects possess a unique ontological status—what he terms "technicity." This technicity represents a particular way of being in the world that differs from the modes of existence characteristic of natural objects, aesthetic objects, or religious entities. Technical objects exist in relation to other technical objects, forming what Simondon calls a "technical ensemble" or "technical milieu." Their functioning and evolution depend on these relationships within technical systems rather than on isolated individual properties.

According to Simondon, the ethical failure of modern society stems largely from our inability to recognize and respect this distinctive mode of existence. As Pascal Chabot explains, "For Simondon, the main ethical problem concerning technology is not how to limit its impacts or how to make it more humane, but how to understand it according to its own logic" (Chabot, 2013, p. 41). This misrecognition leads to various forms of alienation that Simondon seeks to overcome through a new technical culture.

Cultural Alienation and Technical Objects

Diagnosis of Alienation

Simondon diagnoses modern culture as suffering from a profound alienation from the technical world. This alienation manifests in two dominant but equally problematic attitudes toward technology:

1. **Technology as servile instrument:** The first attitude reduces technical objects to their utility, viewing them merely as tools for human purposes with no intrinsic significance or mode of existence. This perspective fails to recognize the internal dynamics and evolution of technical objects.
2. **Technology as threatening automaton:** The second attitude, common in popular culture and some philosophical traditions, imagines technology as an autonomous force with its own agenda, potentially threatening to human freedom and dignity. This view projects human intentions onto technology rather than understanding its actual mode of operation.

Both attitudes, Simondon argues, prevent genuine understanding of and ethical engagement with technology. As Jean-Hugues Barthélémy writes, "The cultural unease identified by Simondon results from a double misunderstanding: technical objects are either reduced to their utility or inflated into threatening entities competing with humans" (Barthélémy, 2015, p. 56).

The Need for Technical Culture

To overcome this alienation, Simondon calls for the development of a genuine "technical culture" that would integrate technology into human culture as a whole. This technical culture would move beyond mere technical education (teaching how to use machines) toward a deeper understanding of technical objects in terms of their operational schemas, evolutionary tendencies, and relationships with other elements of human and natural worlds.

As Simondon writes, "Culture has become a system of defense designed to safeguard man from technics. This is the result of the assumption that technical objects do not contain a human reality"

(Simondon, 1958/2016, p. 15). The development of technical culture therefore requires a recognition that technical objects embody human intelligence and creativity—they are expressions of human reality rather than alien impositions upon it.

This cultural integration would involve new forms of education focusing on the internal operations of machines rather than merely their use, new aesthetic appreciations of technical objects beyond mere industrial design, and new forms of philosophical thinking capable of grasping the ontological status of technical objects. As Arne De Boever notes, "Technical culture for Simondon is not simply about teaching people how to use machines better, but about fundamentally reconceptualizing the relationship between humans and their technical environment" (De Boever et al., 2012, p. 23).

Core Ethical Principles

The Liberation of Technical Objects

A central ethical imperative in Simondon's philosophy involves what might be called the "liberation" of technical objects from their status as mere instruments or commodities. This liberation would recognize technical objects as entities with their own evolutionary dynamics and modes of operation rather than as passive tools subject to human will. For Simondon, treating technology as merely instrumental represents not only an epistemological error but an ethical failure.

Muriel Combes articulates this aspect of Simondon's ethics: "Liberating machines does not mean giving them 'rights' analogous to human rights, but rather recognizing their specific mode of existence and allowing this mode to flourish according to its own tendencies" (Combes, 2013, p. 78). This liberation involves a shift in human attitudes toward technology, from domination to understanding and collaboration.

Technical Mediation and Human Becoming

Simondon's ethics also entails a reconsideration of the relationship between technical and human becoming. Rather than seeing technology as either enhancing or diminishing human capabilities, Simondon proposes that technical objects mediate human relationships with the world in ways that transform both humans and their environments. Technical mediation opens new possibilities for human experience and action while also constraining others.

This view leads to an ethical principle of balanced engagement with technology—neither rejecting technical mediation as inherently dehumanizing nor embracing it uncritically as intrinsically liberating. Instead, Simondon advocates for thoughtful integration of technical objects into human life in ways that expand rather than contract the field of human possibility. As Andrea Bardin explains, "For Simondon, the ethical question is not how to protect the human from the technical, but how to discover new forms of humanity through technical mediation" (Bardin, 2015, p. 112).

The Technician as Mediator

Within Simondon's ethical vision, the figure of the technician—broadly understood to include engineers, designers, repairers, and hackers—occupies a pivotal position. The technician serves as a cultural mediator between technical objects and the broader human community, translating between

technical operations and human meanings. Rather than merely implementing predetermined designs or fixing broken machines, the technician engages in a form of ongoing dialogue with technical ensembles.

This mediating role carries significant ethical responsibility. As Xavier Guchet writes, "The technician in Simondon's philosophy is not a mere executor of technical operations but a figure of ethical significance who helps society understand and integrate technical realities" (Guchet, 2010, p. 143). By understanding both the internal logic of machines and their significance for human communities, technicians can guide technological development in directions that enhance rather than diminish human flourishing.

Inventive Ethics

Perhaps most distinctively, Simondon's ethics places invention at its center. Rather than establishing fixed norms or boundaries for technological development, he proposes that ethical engagement with technology requires ongoing invention of new technical forms and new relationships between humans and their technical environment. This inventive ethics responds to the open-ended nature of both technical and human becoming.

Jean-Yves Chateau characterizes this aspect of Simondon's thought: "Simondon's ethics is not normative in the traditional sense but generative—it seeks not to constrain technical development according to pre-established human values but to discover new values through technical invention itself" (Chateau, 2008, p. 67). This approach avoids both technological determinism (where technology develops according to its own autonomous logic) and strong social constructivism (where technology merely reflects existing social values). Instead, it proposes a co-evolutionary model where technical and ethical systems develop in dynamic interrelation.

Application to Specific Technical Domains

Information Technologies and Networks

Simondon wrote before the digital revolution but developed concepts with remarkable relevance to contemporary information technologies. His understanding of information as a process of individuation rather than a quantifiable entity anticipated many later developments in information theory. Moreover, his concept of "transindividuality"—the idea that individuation occurs not within isolated subjects but across networks of relations—provides resources for thinking about digital networks and their social implications.

As Yuk Hui argues, "Simondon's philosophy offers unique resources for thinking about digital technologies beyond both techno-utopianism and digital pessimism" (Hui, 2016, p. 214). In particular, his emphasis on the need for technical knowledge can inform debates about digital literacy and algorithmic transparency. Rather than treating digital systems as either magical "black boxes" or mere tools, a Simondonian approach would emphasize understanding their operational principles and evolutionary tendencies.

Environmental Technology and Sustainability

Simondon's conceptualization of technical objects as mediators between humans and the natural world has significant implications for environmental ethics and sustainable technology. By emphasizing that technical objects create new relationships between human activities and natural processes, Simondon offers a framework for evaluating technologies in terms of the quality of these relationships rather than merely their efficiency or productivity.

Vincent Bontems suggests that "Simondon's understanding of technical ensembles provides conceptual tools for designing technologies that create more sustainable relationships between human societies and their natural environments" (Bontems, 2009, p. 189). This approach avoids both naive back-to-nature environmentalism and uncritical techno-solutionism, instead seeking technologies that establish more harmonious mediations between human purposes and natural processes.

Biotechnology and the Living

Simondon's philosophy also provides valuable resources for thinking about biotechnology and its ethical implications. His concept of "associated milieu"—the idea that technical objects create and require specific environmental conditions for their functioning—helps analyze how biotechnologies transform living systems and their environments. Moreover, his emphasis on understanding the specific operations of different domains (technical, vital, psychosocial) cautions against simplistic application of mechanical metaphors to living systems.

As Elizabeth Grosz notes, "Simondon's careful distinction between different regimes of individuation—physical, vital, psychosocial, technical—provides resources for thinking about biotechnology without reducing life to mechanism or elevating it to mystical vitalism" (Grosz, 2012, p. 43). This nuanced approach can inform debates about genetic engineering, synthetic biology, and other biotechnological interventions by emphasizing the distinctive characteristics of living systems while acknowledging their technical manipulability.

Critical Assessment

Strengths of Simondon's Approach

Simondon's ethical perspective offers several notable strengths. First, it avoids both technophobia and techno-utopianism by grounding ethical evaluation in concrete understanding of technical operations rather than abstract fears or hopes. Second, it recognizes the agency of both humans and technical objects without reducing either to the other, allowing for a more nuanced understanding of sociotechnical systems than either technological determinism or strong social constructivism. Third, it connects ethical questions about technology to broader philosophical issues of ontology, epistemology, and anthropology, providing a comprehensive framework rather than mere case-by-case analysis.

As Luciana Parisi argues, "Simondon's ethics goes beyond merely applying existing ethical frameworks to technology and instead reconstructs ethics from the ground up through engagement with technical reality" (Parisi, 2019, p. 156). This reconstructive approach offers resources for addressing novel ethical challenges posed by emerging technologies that may not fit within traditional ethical frameworks.

Limitations and Critiques

Despite these strengths, Simondon's approach has faced significant criticisms. Some critics argue that his focus on the internal evolution of technical objects neglects the ways external social, economic, and political forces shape technological development. Andrew Feenberg, for example, contends that "Simondon sometimes underestimates how capitalist imperatives and power relations determine which technologies flourish and which are suppressed" (Feenberg, 2002, p. 178). This critique suggests that Simondon's ethics may need supplementation with more robust social and political analysis.

Others note that Simondon's emphasis on technical knowledge may inadvertently privilege those with access to technical education and resources. As Isabelle Stengers observes, "The call for technical culture may not sufficiently address who has the power to participate in technical decisions and who bears their consequences" (Stengers, 2010, p. 92). This concern highlights the need to connect Simondon's technical ethics with questions of justice and democratization.

Finally, some commentators question whether Simondon's concept of "concretization" as the natural evolution of technical objects risks naturalizing what are ultimately human choices. Bernard Stiegler argues that "Simondon's notion of technical evolution sometimes veers toward a kind of technological determinism despite his intentions" (Stiegler, 1998, p. 85). This critique suggests the need for caution in applying Simondon's evolutionary model of technology to ethical questions.

Contemporary Relevance and Future Directions

Despite these limitations, Simondon's ethical perspective continues to offer valuable resources for addressing contemporary technological challenges. His emphasis on understanding technical objects on their own terms provides an alternative to both uncritical acceptance and reflexive rejection of new technologies. Moreover, his integration of technical questions with broader philosophical concerns helps avoid the fragmentation that often characterizes technology ethics.

Future development of Simondonian ethics might productively integrate his insights with complementary perspectives. For example, connecting Simondon's technical philosophy with feminist theories of care could address concerns about justice and power, while bridging his work with phenomenological traditions could enrich understanding of lived experience with technologies. As Mark Hansen suggests, "The future of Simondonian ethics lies not in dogmatic application of his concepts but in creative extension of his approach to new contexts and in dialogue with other traditions" (Hansen, 2006, p. 201).

Conclusion

Gilbert Simondon's ethical perspective on technique and technological change offers a distinctive and valuable approach to understanding the place of technology in human life. By reconceptualizing the relationship between humans and technical objects, Simondon moves beyond both instrumentalist reduction and autonomous inflation of technology toward a more nuanced understanding of technical mediation. His ethics centers not on controlling or limiting technology according to pre-established human values but on developing new forms of engagement that recognize the distinctive mode of existence of technical objects while integrating them into human culture.

At a time when technological change continues to accelerate and traditional ethical frameworks struggle to address novel challenges, Simondon's philosophy provides conceptual resources for thoughtful engagement with our technical environment. His call for a genuine technical culture

remains as relevant today as when he first articulated it—perhaps even more so as digital technologies increasingly mediate every aspect of human experience. By developing such a culture, we might move beyond both uncritical embrace and reflexive rejection of technology toward a more balanced and informed relationship with the technical world.

The ultimate value of Simondon's ethics lies not in providing fixed answers to specific technological dilemmas but in offering a method for approaching these dilemmas with greater understanding and creativity. By encouraging us to comprehend technical objects in terms of their operations and evolution rather than merely their uses or effects, Simondon opens possibilities for new forms of technical becoming that might enhance rather than diminish human flourishing. In a world increasingly shaped by technological systems of unprecedented complexity and power, such an approach represents not merely an intellectual position but an ethical necessity.

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