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# Two or Three Incompatibilities Between Art and Technology

> We can hold in our minds the enormous benefits of technological society, but we cannot so easily hold the ways it may have deprived us, because technique is ourselves.
>
> *George Grant, "A Platitude"*[27]

> We live in a machine-made age. In such an age, can art flourish?
>
> *R. G. Collingwood, "Art and the Machine"*[28]

## 1. Introduction

It has long been unremarkable to note that contemporary Western and, increasingly, global society is an essentially *technological* one. As the quote above from Canadian philosopher George Grant suggests, the degree to which our lives and actions—and even our thoughts, feelings, and conscious awareness—are increasingly bound up with the use of technological devices, and with technologically oriented ways of thinking more broadly, can render the extent of their effect on us invisible through familiarity and

27 Grant (1969, 137).
28 Collingwood (c.1926, 292).

normalization.[29] The tendency to think (or, perhaps, to assume unthinkingly) that the mediation of an activity or experience through technology is, *ceteris paribus*, an 'enhancement,' making it better than it would be without this mediation, and to think that the more technically advanced the mediating technology is, the better the activity or experience will be, can be seen as both an expression of this technological orientation and an effect of its seeming normalcy. For just one example of this kind of thinking, consider the now-commonplace assumption that teaching and learning are improved by incorporating 'technology' into classrooms, with *technical* advances in the devices used being conflated with pedagogical advances (as if the use of a bulb-powered slide projector rather than a high definition LCD projector to show a still image, or as if using a VCR to play a film rather than streaming a digital file, will result in students learning less from what they are shown).

It is doubly unremarkable for this tendency to feature in practices and discourses related to art, given the general prevalence of this tendency and the importance placed on novelty in the arts. Artists are driven by internal as well as external (e.g., commercial) considerations to do something new and different in their work, and for someone to use the latest 'cutting-edge' technology is generally seen as a—if not *the*—way for them not only to be up-to-date but to be 'ahead of the curve,' i.e., already part of an ever-impending, more advanced future. As such, it makes sense for artists—who have always looked for new mediums of creative expression and for new ways of working with existing media in their art-making practices, and who have both intrinsic and pragmatic motivation to innovate—to explore and incorporate recent technologies

29 An example of this normalization can be found in the increasingly popular phrase 'the new normal', which frames the conditions it is used to describe as not only 'normal'—i.e., as both common and acceptable, or normative—but as an unavoidable part of our reality that is already in place and which we can do nothing about but adjust to it. The phrase is potentially dangerous insofar as it risks leading to a kind of passivity and sense of alienation, or diminishment of agency, in those who use and hear it, at least when it is used to describe conditions that are not truly both acceptable and inevitable.

that already possess the aura of 'the new.' Art exhibiters and curators, as well as critics and academics whose professions involve writing on art, have similar motivation to present, promote, and discuss works that incorporate or make use of the latest technologies: examples include the use of 'virtual reality,' recent exhibits such as "Beyond Van Gogh," "Beyond Monet," etc., which have been staged in several North American cities,[30] and recent debates among philosophers of art concerning digital images or digital art,[31] or whether or not video games, for example, can be artworks.[32]

It is against this background, both within the artworld and in society at large, that I wish to consider some fundamental respects in which art and technology are incompatible. I do not, of course, mean that artists cannot use technological mechanisms or devices in their creative processes or that 'real' artworks cannot incorporate or contain such mechanisms or devices. Nearly all traditional artforms involve the skilled use of tools of some sort, whether instruments to produce music, brushes to apply paint to

30 In these Beyond exhibitions, famous paintings—or rather, digital images of them—are projected in large-scale onto the walls, ceilings, and floors of rooms through which spectators walk, with the projected images moving along these surfaces, shifting and swirling, and with parts of the images being animated or being superimposed and dissolving into each other. This visual display is accompanied by a soundtrack of background music, audio effects, and voice-overs reading the artist's words, e.g., from letters or journals. The promise of these exhibitions is to offer viewers an 'immersive experience' that 'puts them inside' the paintings and allows them to encounter the artist's work in a new—and, it is implied, more direct and immediate—way. What is overlooked is that what the 'visitor' encounters and experiences is anything but the artwork the artist created—i.e., the painting as he or she painted it—which was not moving nor animated, was not intended to be the size of an entire wall, was not two-dimensional but included the build-up of paint on canvasses with the subtle shadowing and depth this adds, etc. Hence, if we take the paintings qua artworks to be the things that the artists made and did, such exhibits have nothing to do with the art in these paintings but merely repurpose and reproduce many of their visual properties for the sake of spectacle, effectively reducing them to a kind of wallpaper.

31 For a recent comprehensive contribution to the discussion on the nature of the digital image, see Thomson-Jones 2021. On the topic of digital art in general, see Paul (2015).

32 See, e.g., Tavinor (2009).

canvasses—not to mention the paints and the canvasses themselves— hammers and chisels to carve stone, cameras and lighting equipment used in the shooting of films, etc. If the claim were that 'real' art can never involve technology in these ways it would be clearly false. Rather, the incompatibilities I am concerned with run deeper, and ultimately do not separate objects that are artworks on one hand from objects that are tools or products of technology on the other, but lie between art and technology as forms of making things and as ways of thinking or experiencing, and of conceiving of and relating to reality: i.e., what we might call our 'being in the world'.

The first of these, which I will call the 'conceptual' or 'ontological' incompatibility, is a matter of a fundamental difference between the way that works of art are made or brought into being and the way in which products of technical processes of making are made, with a related incompatibility between the aspects or properties in virtue of which something counts as art and those in virtue of which something counts as a product of technical making or a technological device, i.e., a tool. While this does not entail that an object cannot be both a work of art and a product or a piece of technology, it does entail that whatever makes it art will be distinct from, and conceptually incompatible with, whatever makes it technological.

The second incompatibility, which I will call 'attentional' or 'experiential,' involves a conflict between the kinds of engagement proper to encountering artworks, on the one hand, and to the use of technological devices or processes on the other. As well as arguing for a general conflict between these ways of engaging, I argue that the uses of certain recent technologies that are increasingly ubiquitous in their mediation of many people's experiences—specifically including, but not necessarily limited to, internet-connected screen-based technologies—encourage or require, and habituate their users to, ways of being conscious of and relating to things that are largely incompatible with, and so work against, the forms of consciousness and engagement that are most plausibly

involved in the proper apprehension and appreciation of artworks *qua* art. The final section brings together the preceding two lines of discussion to argue that the attentional or experiential incompatibility is grounded in the ontological incompatibility, with both being symptoms of an incompatibility between art and technology as ways of understanding and relating to the world.

My analysis draws largely on the work of R.G. Collingwood, especially his distinction between art and 'craft' in *The Principles of Art* (1938; hereafter *PA*) and its similarities to distinctions found in Henri Bergson's thought between organic creation and what he calls 'manufacture' or 'fabrication,' as well as appealing to Martin Heidegger's notion of technology as 'enframing.' Despite drawing on the latter two thinkers, my project is not one of 'continental' philosophy as typically understood, nor is my approach typical of current 'analytic' philosophy, despite also drawing on recent work by Bence Nanay. If labels are desired, my approach could be called 'synthetic philosophy' insofar as it involves considering the views of different thinkers, bringing together what is similar or compatible in them, and relating this to empirical observation in order to gain a more synoptic and perspicacious understanding of a phenomenon. Moreover, my aim is not merely to draw conceptual distinctions for their own sake but for my discussion to have potential practical application, with the incompatibilities I highlight helping to show how certain presuppositions and ways of thinking, which seem to be behind some of the ways that artists, curators, exhibiters, etc. have adopted certain technologies—especially digital and internet-related technologies— risk conceptual confusion to the potential detriment of what is valuable in the art they make and exhibit. I hope not to be construed as 'telling artists how to do their job,' but as pointing out these conceptual confusions and explaining how they might be detrimental if they go unrecognized, where recognizing them might usefully inform artistic practices in ways that artists, exhibitors, etc. are best positioned to determine.[33]

33 Cf. Collingwood (1931) for his argument that how we conceive of and think about art makes a difference for artistic practice, with confused thinking

## 2. The Conceptual or Ontological Incompatibility

The first incompatibility involves a difference between two kinds of making—viz., between processes of artistic creation on the one hand and processes of technical manufacturing on the other— with this difference grounding a further distinction between things that result from these processes: viz., artworks and products of technique. While these two sorts of making and the two sorts of thing that result from them are conceptually distinguishable, in practice they can and often do overlap: the process by which a work of visual art is created, for example, can involve the artist's skilful employment of techniques such as the mixing of pigments according to a known formula to achieve a certain colour on the canvass, the use of linear perspective or foreshortening to achieve a naturalistic-looking depiction of a scene or object, geometrically organizing the composition according to the golden ratio to achieve a balanced composition, etc. Likewise, some works of art, once made, can be used as tools and so will have technological functions: e.g., some works of ceramic art can be used as bowls or flower vases, some quilts can be both works of art and practical blankets, etc. However, while a work of art can also be a product of technical making and can itself be a tool or piece of technology, the respects in which it may be technological will always be distinct from the respect in which is it art: ontologically speaking, we might say that such a thing has two distinct aspects or parts to its being.

Moreover, whatever artistic value a thing might have will be grounded in its art-aspect, with any technical value it might have relating to its technical aspect but not to the former. For example,

being likely to lead to worse practice. This is in tension with a famous quote by the painter Barnett Newman to the effect that artists need aesthetics like birds need ornithology—which is to say, not at all. While witty, Newman's aphorism rests on a false analogy: it is artworks, not artists, which are analogous to birds. The proper analogy here would compare artists and bird-watchers, or perhaps avian veterinarians, for whom ornithology, or at least good understanding of what birds are and what they do, is clearly relevant.

the fact that a work functions well as a tool will not itself add to its value *qua* art, and the fact that its production involved a difficult technical accomplishment or the use of a technically advanced piece of equipment does not, on its own, make it any better *qua* art, nor do the facts that its production was technically simple or crude, or that it fails to function well as some kind of tool, make it any worse *qua* art.

This distinguishing between the respects in which a thing may be art from the respects in which it may be technological largely maps onto, but goes beyond, the distinction Collingwood draws between what he calls 'art proper' and 'craft' (*PA*, chs. II-V). This difference is at the core of his argument against what he refers to as the technical theory of art, which he takes to have dominated Western thinking about art since at least Ancient Greece, where dismissing the technical theory upfront clears the ground for him to lay out his own positive theory of just what art is, if it is not a form of craft.

Although Collingwood does not define craft in terms of necessary and sufficient conditions, he does offer what we would now call a 'cluster account' of craft, according to which the possession of all or most of a number of features that are characteristic of craft can suffice for something to count as a work of craft, and where lacking all such features will discount a thing from being a work of craft.[34] These features are: (i) a distinction between means and end, where the means "are passed through or traversed in order to reach the end, and are left behind once the end is reached" (*PA*, 15); (ii) a distinction between planning and execution, where "the result to be obtained is preconceived or thought out before being arrived at," where this result is the end as distinct from the means that are used to realize it, and where precise foreknowledge of what is to be realized is "indispensable to craft" (*PA*, 15–16);[35] (iii) a reversal of

34 Cf. Gaut (2000) for a cluster account of art which works to illustrate the nature of cluster accounts in general.

35 Collingwood's point here is that "if a person sets out to make a table, but conceives the table only vaguely ... he is no craftsman" (PA, 16).

the relation between means and end in the planning and execution stages, such that envisaging the end is prior to determining the means to realize it in the planning stage, whereas when executing the plan the means are enacted before the end comes about; (iv) a distinction between raw material and finished product, where the process of crafting something transforms a pre-existing material into some other thing, e.g., transforming logs into a table; (v) a distinction between form and matter, where the matter remains the same in both the raw material and the finished product but the form this matter takes is changed via the process of crafting; and (vi) a hierarchical relationship between crafts, where the end or product of one craft serves as the means or the raw material for another, or where there is a hierarchical division of labour between, e.g., the making of an artifact's parts and their assembly (*PA*, 16–17).

Collingwood goes on to argue that even if some works of art share certain of these features, for any of these features, taken individually or in some combination, there will be examples of works of art that lack them, where this includes the possibility of works of art that have none of these six features. Artworks need not be means to anything but can be ends in themselves, and artists do not need to have definite plans in mind of what they are going to make before or while they are making it: moreover, there is a sense in which they *cannot* have too precise an idea of what a finished artwork will be, since, in cases where the final form of a work can be fully envisioned before it is externalized—as in the case of a poem for which all of the words and their exact order are composed 'in the poet's head', so to speak, without being written or spoken— the 'envisioning' or planning just is that work's creation. Not all artworks have anything like raw materials from which they are made, even if some, such as works of sculpture or architecture, do; and in many artworks there is no clear way of distinguishing between their 'form' and a 'matter' that could have been formed differently, where the works just are the matter-so-formed. Finally, artworks with multiple authors or makers do not exhibit the same

kinds of hierarchical relationship that, e.g., the manufacture of the parts of a car and their assembly do, with multiply-authored works being collaborations rather than assemblages. Thus, Collingwood concludes, none of these features, either separately or jointly, is proper to art: hence art is essentially distinct from craft, with the feature or features in virtue of which something is art being separate from the features in virtue of which it is a work of craft, i.e., an artifact.

This distinction between art and craft is not unique to Collingwood, and so accepting it does not entail an acceptance of his positive theory of what art is. It is also found in Dewey's *Art as Experience* (1934; hereafter *AE*), where despite the fact that Dewey writes of the "raw material of experience" being "reworked" in the course of creative expression (*AE*, 77) it would be a mistake to read him as advocating what Collingwood calls a 'technical' theory of art. The difference here is largely terminological, with Dewey being comfortable using the metaphor of 'raw materials' to talk about experience and feeling where Collingwood does not: however, both would agree that experiences, feelings, etc. do not already exist as determinate 'objects' in their own right prior to their development via expression, and so are not 'raw materials' in the same way that lumps of ore or bars of iron are for a blacksmith or wooden planks and beams are for a carpenter.

That Dewey's is not a 'technical' theory of art that conflates art with craft can be seen from his insistence that "craftsmanship alone is not art" (*AE*, 148), and from the distinctions he draws between art and mere technique (*AE*, 49), between the artistic and the merely "artful" or artificial (*AE*, 65), and between artistic and merely mechanical processes (*AE*, 49-50, 52, 144, 200). Also, like Collingwood, he does not take the end result of a process of artistic creation—i.e., an artwork—to be something that can be pre-determined or precisely envisioned before its creation, writing that something someone makes "may be a display of technical virtuosity" but that "if the artist does not perfect a new vision in his process of doing," i.e., does not make something that was at least in

some ways unforeseen, "he acts mechanically and repeats some old model fixed like a blueprint in his mind" (*AE*, 52, cf. 144). Moreover, he takes artworks to be intrinsically meaningful rather than instrumentally purposive, at least *qua* art (*AE*, 94, 117, 119, 122), and, like Collingwood, does not take artistic creation or artworks to admit of essential distinctions between means and end (*AE*, 65) or form and matter (*AE*, 114).

The kind of making that Collingwood calls craft corresponds to what Bergson, in *Creative Evolution* (1907; hereafter *CE*), alternately calls 'manufacture' or 'fabrication,' and to which he opposes the kind of organic creation involved in the development and growth of living organisms, species, etc., which he calls 'organization.' Manufacture, Bergson writes, "consists in assembling parts of matter which we have cut out [i.e., abstracted from the whole material plenum] in such a manner that we can fit them together and obtain from them a common action," where "[t]he parts are arranged ... around the action as an ideal centre" (*CE*, 92), which is to say, the artifacts that manufacturing produces by putting parts together or otherwise shaping matter is done for the sake of some use this artifact will have for us, i.e., how it will contribute to our possibilities for acting on other parts of matter.[36] In other words, the products of manufacturing are, at least paradigmatically, tools, with these products' values and the processes by which they are made being instrumental.

One of the ways that manufacture differs from organization—i.e., organic creation—is that the manufacturer produces new forms by acting on these parts and materials 'from without,' so to speak, where both the manufacturer's actions and the parts or materials used are external to the form created: e.g., neither the iron, the fire, nor the smith's activity of hammering and quenching is the resulting horseshoe. Organization, however, is a kind of growth or development *from within*, occurring by dissocia-

36 Cf. CE, 182-83: "Fabrication consists in shaping matter, in making it supple and bending it, in converting it into an instrument in order to become master of it."

tion rather than association and producing more from less, so to speak, rather than bringing together multiple things to form one new thing. We can think of cellular division here, where one cell becomes two, or the development of a new organ such as the eye where its parts, e.g., the cornea, retina, lens, etc., did not pre-exist the eye and were not assembled in order to form the latter but rather came into existence through the development of the organ itself (*CE*, 86-89). Another way that manufacture and organic creation differ is that organic creation, while teleological, is not done for the sake of a pre-determined purpose or final cause in Aristotle's sense, with the form of an organism not being given in advance but emerging through the organism's growth and development: however, the purpose and form of a manufactured artifact is given in advance, at least in the manufacturer's plans and purposes if not in the material world. As Bergson puts it, "the manufacturer finds in his product exactly what he has put into it" (*CE*, 92), referring both to the material parts used, with the product being nothing over and above the sum of these parts, and to the form and function, which were conceived and intended before they were materially effected.

This distinction between the organic creation of living organisms and the manufacture of artifacts is relevant in this context because Bergson clearly takes artistic creation to parallel biological creation and artworks to parallel organisms, with artworks being organic unities, counting as what he calls 'organized' things as distinct from fabricated artifacts which, in his terms, exhibit a 'vital' or 'willed' order but are not, strictly speaking, 'organized' (see *CE*, 224). This is made clear by his many examples of artworks and artists' processes of creation, where he uses these examples to illustrate, by analogy, the differences between life and matter.[37] So, although Bergson does not explicitly contrast artworks with fab-

37 See CE, 6, 7, 44-45, 89-90, 177, 209, 239-40, 258, and 340-41 for some of these analogies. Cf. Bergson (1920) for a similar point about works of art not being foreseeable in advance of their creation, and hence being genuinely novel creations.

ricated artifacts in the way that Collingwood contrasts art with craft,[38] because he takes artworks to be analogous to living organisms with respect to their creation and because he explicitly contrasts organic creation with fabrication/manufacture, it follows that he takes works of art to differ from fabricated or crafted artifacts with respect to both the processes of their production and the kinds of entity they are: viz., self-contained organic unities vs. assemblages that are individuated by our possibilities for acting on them—i.e., for using them as instruments or tools— respectively.

These points from Bergson inform Collingwood's distinction by showing that the difference between works of art and works of craft is not only a difference between ways of making things but is also an ontological difference between their products: i.e., the kinds of things made. It is important to keep in mind that, as mentioned above, this difference in kind does not necessarily entail a difference between separate objects, since the same object, e.g., a ceramic vase or a Gothic cathedral, can be a work of art in one respect and a work of craft in another. The difference, rather, is one between what we might call 'aspects' of objects. Analogously, we can talk of the mental and physical aspects of a person, or the cultural and material aspects of a piece of currency, as aspects of the same 'thing' rather than as two different substances. The same person can be seen as an intentional or moral agent in one context, e.g., in a court of law, and as a physical body of muscle, bone, organs, etc. in another, e.g., on a surgeon's operating table—or where the same piece of paper can be seen as valuable in the context of a commercial transaction and as worthless to someone lost in the wilderness in need of food and shelter.

This entails that the kinds of decisions and choices that go into making an artwork and into making a artifact or tool, and the value-bearing or 'good-making' properties of each, will be different. For instance, the maker of an artifact will choose to make

38 The one explicit contrast he makes is between artisans (i.e., fabricators) and artists, where he notes that the latter, but not the former, accept the unforeseeability of what they are making prior to its realization (CE, 45).

it one way rather than another because of the difference this will make to the artifact's ability to perform the function for which it is being made, whereas the maker of an artwork will choose to make it a certain way rather than another in light of the difference this will make to its expressiveness, or beauty, or whatever else one holds to be a distinguishing characteristic of art *qua* art. Likewise, the craftsperson's design choices, and the product thereof, will be evaluated *qua* craft on the basis of how well the product performs its intended function and how well the maker's choices contribute to this. On the other hand, an artist's creative choices, and the artwork that emerges from them, will be evaluated *qua* art based on a different set of values, where these will be artistic or aesthetic values[39] rather than instrumental or practical ones.

All this is to say that something is, and has value as, a work of art in a wholly different way than that in which something is, and has value as, a work of craft or a manufactured artifact, even if the same object is both a work of art in one respect and a work of craft, e.g., a tool, in another. Importantly, this distinction applies not only to the kinds of craft that Collingwood refers to in his examples but to technology in general, including both technological devices or tools and technical, means-end processes for which there is no physical object that results from the shaping or assembling of material parts: an example would be following a method or formula for action when performing a certain activity. If anything is essential to technology in general, it is instrumentality, and so any form of technology will involve a relation between distinct means and ends, where products of manufacture are not only ends resulting from the utilization of means but are themselves means

39 Whatever one takes these distinctly artistic values to be will be tied to how one understands art. On a Collingwoodian account, for instance, this will a matter of a work's success in expressing, i.e., articulating and clarifying, the qualitative dimensions of experience. Because I do not want to tie my argument here to any particular theory of art, I leave these artistic values undefined. However, my points will work for any account of art that takes what makes something art to be separate from any practical or instrumental function it may have.

to achieve some further end, or ends, via their use. Moreover, the ends that are involved in technological processes, whether this is the design of a tool or the purpose which that tool is meant to realize through its use—e.g., the shape, material composition, and weight distribution of a hammer as the end to which means are employed in its making, or the end of driving nails into wood to which the finished hammer is a means; or, equally, a portable computer and its software as ends of processes of manufacturing and programming, respectively, or the ends for which the software is used—will necessarily be pre-determined: one must envisage the end to which a tool is meant as a means in order to know how to design and make that tool well, i.e., in order to find the right means to the end of its making.

Unlike technological devices or processes, works of art are not, *qua* art, means to achieve pre-determined ends, with what is artistic about a work—i.e., what the artist created and what bears artistic value—not resulting from a technical process of making where it is a pre-envisioned end to which means are found and employed to bring about. Moreover, whereas technological devices or processes are repeatable and are largely interchangeable with other devices or processes that achieve the same results, works of art are unique and non-fungible. This has implications not just for the nature of artworks but for their value, with the value of an artwork *qua* art being intrinsic and the value of a tool or technical process being extrinsic, deriving entirely from the value of the end or ends to which it is a means.

More will be said below about the further metaphysical implications of this distinction between the artistic and the technological, where, for example, the repeatability of technological devices and processes is tied to a view of reality as uniform and determinable—and so, predictable and controllable—whereas the uniqueness of artworks implies that reality contains at least some room for indeterminacy and difference, e.g., in the way that works of art will affect each audience member differently, or the same person differently on different occasions, in ways that are not determined

in advance. Before getting to these points, however, there is another incompatibility to discuss: one between the ways of apprehending and relating to things that are proper to artworks on one hand and tools and technological processes on the other.

## 3. The Attentional or Experiential Incompatibility

Since instrumentality, or the use of means to achieve ends, is essential to technology, relating to something *as* technological is a matter of using it for the sake of some purpose beyond that thing and beyond one's experience of and interactions with it. For instance, to relate to a pen as a piece of technology is to use it to write or draw something, where what is written or drawn is the end the production of which the pen is used as a means, where this end, *qua* the written word(s) or drawn shape(s), is distinct from the pen and one's action of writing with it. Likewise, perceiving or experiencing something as technology is a matter of seeing it *as* something-to-be-used: i.e., experiencing it in terms of its functionality, with the ends to which it can serve as a means being implicit in one's experience of it, in the way that, e.g., we experience a chair in a room as 'pointing to' the possibility of sitting, a cash register in a store as 'pointing to' the possibility of making a purchase, etc. It follows that relating to or experiencing something *as* technological positions oneself as essentially a *user* of that thing, if only potentially, just as it views the thing in question as essentially something to be used.

On the other hand, if works of art are not, *qua* art, instruments or means to ends, relating to something *as* art necessarily will not be a matter of using it as a means, and attending to or experiencing something as art will similarly not involve seeing or experiencing it in terms of any function it has or any end to which it points. Just what relating to and experiencing something *qua* art will properly involve, of course, will depend on the theory of art that one endorses or assumes. However, given that any plausible theory of art will understand it in non-instrumental terms—where

in the case of functional artworks, one will take what makes them count as art to be distinct from what makes them functional— this will always be some relation other than that between a user and a thing to be used.

Even with a particular theory of art in mind it will be difficult to specify just what relating to artworks properly *qua* art involves, partly because anything like a specifiable 'method' or 'technique' for how to attend to artworks is already technological and so foreign to art taken *qua* art, and partly because of the uniqueness of artworks, where each work will need to be apprehended, engaged with, and valued in a potentially different way from any other artwork, in order to be properly appreciated as the work it is. Still, from this we can infer that whatever apprehending or relating to something *qua* art will look like in any given case, it will involve being open to the work as a particular; to 'getting on its wavelength,' so to speak, apprehending it for what it is—what Collingwood calls "a certain thing"—rather than apprehending it in terms of a generalized category or type—or as what he calls "a thing of a certain kind" (*PA*, 114).

Engaging with something openly and attending to it in its particularity plausibly requires certain attitudes and dispositions, as well as certain ways of perceiving and experiencing. For example, it will plausibly involve being psychologically (mentally and emotionally) 'present' to the object of one's engagement in the way that people who practice meditation speak of being fully present and 'in the moment,' where this will preclude thinking ahead to a use to which the object could be put. It will also plausibly involve paying close, sustained attention to the object's qualities or features, and to how these relate to each other and to the object as a whole as an organic unity or *Gestalt* that is more than the sum of these 'parts.'[40] This kind of attention is in keeping with traditional talk in aesthetics of 'disinterestedness,' which, as Jerome Stolnitz explains,

40 Cf. AE, 24, for what Dewey refers to as 'really perceiving' something as a particular thing, as opposed to merely recognizing it as a member of a general kind, and Stolnitz (1960, 34), for what he calls "read[ing] the labels."

is a matter of attending to something "not ... out of concern for any ulterior purpose which it may serve," and so, without "trying to use [it]" (Stolnitz 1960, 35). Moreover, the idea of attending to an artwork as a unique particular or a 'certain thing' is in keeping with the second part of Stolnitz's definition of the 'aesthetic attitude' as disinterested *and sympathetic* attention, where by 'sympathetic' he means appreciating an object's "individual quality" and accepting the object "on its own terms" (Stolnitz 1960, 36).[41]

It is also in line with what Bence Nanay calls 'distributed attention,' which he takes to be the way of attending to things that is characteristic of many paradigm cases of aesthetic experience, including the experience of artworks. By this he does not mean a form of attention that is solely or entirely spread about among its intentional objects, but one wherein our attention is focused on a single perceptual object[42] while being distributed across a wide range of this object's properties (Nanay 2016, 12-13, 23). For instance, the viewer of a painting might focus on the whole painting as her perceptual object while simultaneously having her attention distributed among the variety of shapes and colours it contains and their arrangement and interrelations within the overall composition. According to Nanay, this is an inversion of the way people typically attend in 'ordinary' experience, which involves distributing our attention over several perceptual objects while focusing on a limited set of properties of these objects, especially properties that relate to our practical purposes or 'interests' (Nanay 2016, 23-24). For instance, someone engaged in cooking a meal might be distributing his attention across a number of objects—in-

41 Although Stolnitz is claiming this of what he calls aesthetic attention, or the attention characteristic of one who regards something with an 'aesthetic attitude,' and so does not mean this to be specific to or exhaustive of the ways we experience artworks, both disinterestedness and sympathy as he explains them are plausibly part of what it is to attend to and apprehend or experience a work of art qua art, vs., say, qua material object, qua commodity, qua tool, etc.

42 By 'perceptual object' Nanay means coherent sets of things as well as individual things, so that a whole landscape and one tree within it could both count as single perceptual objects. See Nanay (2016, 25).

gredients, utensils, kitchen appliances, etc.—but focusing only on the properties of these objects that relate to the act of cooking and the meal he is making.

Nanay backs up these claims by citing empirical studies tracking the eye movements of viewers looking at paintings and photographs, where the movements of experienced artists and art critics are compared with those of viewers without any special experience of engaging closely with visual art. Setting aside questions of just how eye movement patterns correlate with attention, these studies show a strong tendency for the eyes of 'expert' viewers to move over the whole of an image and to look back and forth between certain non-dominant graphic features of the image, other such non-dominant features, and the image's dominant features or central figure—e.g., a human face or form— and to spend less sustained time on the dominant features alone. This suggests that they are attending not just to these features sequentially but to their relations within and to the composition as a whole, with the composition being the perceptual object within which this distributed attention is focused (see Vogt and Magnussen 2007). On the other hand, 'layman' viewers show a tendency to look more at the dominant feature or central figure of an image and for their gaze to return to and linger on it, which suggests they are attending to these features in a focused way. (If my own personal experience of watching people in galleries is representative, this is likely to be combined with distributed attention spread over the multiple paintings in a given room in a gallery.)

These forms of what, following Nanay, we can call 'aesthetic' and 'ordinary' attention—where the former is not only characteristic of aesthetic experiences generally, e.g., of natural objects and scenes, urban landscapes, etc., but also of the way an informed viewer will typically attend to an artwork—are not the only ways we can attend to things. We can also distribute our attention across both a range of objects and a range of properties thereof, where we might call this 'unfocused' or 'distracted' attention; or, we can focus our attention on a single object and a limited set of

its properties, where we might characterize this as 'interested,' 'hyper-focused,' or perhaps 'single-minded' attention (see Nanay 2016, 24-25). Notably, this last form of attention is most plausibly characteristic of the way we attend to tools or technological processes when we are using them—e.g., methods with steps to follow in order to attain a result— or at least when using them non-habitually and non-automatically: i.e., paying focused attention both to the tool or device as an object and to a limited range of its properties, viz., those of its properties that count towards its function or instrumentality and so are relevant for achieving the end to which we are using it as a means.[43] The habitual and automatic use of technological devices and processes, on the other hand, where we do not need to actively attend to them in order to use them, plausibly might involve our mind wandering as we are going through the familiar motions of their use, with our attention being distributed among both objects and properties in the manner characterized as unfocused or distracted.

It follows that the characteristic form of attention paid to artworks in our engagements with them *qua* art is incompatible with the form of attention that is characteristically involved in our use of something as a tool, i.e., *qua* technology, insofar as attending in one way reverses the focus on objects and properties that comprises the other way of attending. There is, moreover, a further and more significant incompatibility here: not between art and technology in general but between the form of attention that is proper to engaging with artworks *qua* art, on the one hand, and habits of attention and awareness formed through the use of recent digital and internet-related technologies on the other. Insofar as the use of such technologies has become nearly ubiquitous over the last two decades, with these devices and software (or 'apps') coming to

43 The use of a tool or a technological process could also involve this type of doubly-focused or 'interested' attention paid to the end to which we are using it as a means, where our attention gets absorbed in the technical act itself to the point that we forget about the specific means we are employing in this act.

mediate more and more of our experiences, this could be called a practical and not just a conceptual incompatibility since it implies the real and present hampering of the capacities of users of these kinds of technologies—which is to say, the majority of us—to fully and properly attend to, and so apprehend, artworks *qua* art.

Some of the ways that internet-related technologies have been shown to affect their users' habits of attention and awareness are documented in Nicholas Carr's *The Shallows: What the Internet is Doing to Our Brains* (2011), which aims to make the results of empirical studies by neurologists, psychologists, and cognitive scientists accessible to a broader audience. A common idea that emerges from these studies is that internet use, partly in virtue of how the medium itself is designed, is rewiring the neural networks in users' brains to form new habits of attention, perception, and cognition (Carr 2011, 34), with these habits being of what Nanay would call unfocused attention: i.e., the distribution of our attention over both objects and properties.

Specifically, these studies show the attentional habits that are formed to consist in decreased concentration, absorption, and sustained attention and a tendency toward "staccato thinking" and "skimming" (Carr 2011, 7), combined with a practical or instrumental focus on efficiency, with readers tending to skim through the texts they read online—and, increasingly, off-line as well—and "shopping around" for the parts that happen to stand out as relevant to their interests while skipping over what does not appear at first glance to be important on this narrowly instrumental criteria of relevance (Carr 2011, 9, quoting Tapscott 2008). Moreover, given that a large part of the internet as a medium consists in the presence and functioning of links, this 'shopping around' is often done across multiple web pages and different sets of texts, akin to switching from one physical book to another and skimming each to see what catches one's attention. The possibility of hyperlinks and the inter-textual connections they lead us to make is an inherent factor of digitization, which allows for 'content' to be broken up and parcelled out in ways that are amendable to this linking, and

to keeping our attention distributed without encouraging or allowing it to focus on any one thing for any significant time. As a result, "our attachment to any one text"—and so, our ability to treat it as 'a certain thing'—"becomes more tenuous, more provisional" (Carr 2011, 91; cf. Mangen 2008).

Many of the studies Carr references focus on the effects of internet use on reading, including the effects of habitually reading from a screen on reading from the printed page. These include studies of the eye movements of users and readers similar to those that Nanay references in connection with looking at images, where these tests reinforce the claims of other studies that show tendencies towards skimming over material quickly and a drive to get to the next thing (webpage, etc.) over any tendencies to pay sustained attention either to any parts of a text or to any single text as a whole (Carr 2011, 134-38). As Ziming Liu, a library science researcher, puts it, a "'screen-based reading behaviour is emerging' ... which is characterized by 'browsing and scanning, keyword spotting, one-time reading, [and] non-linear reading,' [where] time 'spent on in-depth reading and concentrated reading' is ... falling steadily" (Carr 2011 138, quoting Liu 2005). If attentional and cognitive habits formed by frequent internet use and mediation by screens are shown to be affecting the ways we attend while reading, why would we not think that they are likely also affecting the ways we attend while viewing images or films, listening to music, watching live performances, etc.?[44]

All of this leads Carr to conclude that "[w]hat the Net seems to

44 See Carr (2011, 96), for a discussion of how internet and mobile phone use has altered the ways in which live performances are experienced. There are further implications for the effect this alteration of our attentional and cognitive habits have for the arts: "Jordan Grafman, head of the cognitive neuroscience unit at the National Institute of Neurological Disorders and Stroke, explains that the constant shifting of our attention when we're online may make our brains more nimble when it comes to multitasking, but improving our ability to multitask actually hampers our ability to think deeply and creatively" (Carr 2011, 140, my emphasis). Cf. Lotringer and Virilio (2005) concerning the effects of modern technology on our experience of time, and how this in turn affects and shapes how we experience art.

be doing is *chipping away [our] capacity for concentration and contemplation,*" and that the technology is in many cases deliberately designed to promote, by encouraging and rewarding, distraction and superficial consumption and to discourage, by not rewarding or by making difficult, sustained attention and committed engagement (Carr 2011, 6, 115-16, my emphasis). Since the capacities it is 'chipping away' or hampering are central to what I have argued is plausibly essential to our apprehension and appreciation of art, not only can we say that these forms of attending are incompatible but that the habitual and frequent use of these new technologies—or any amount that is sufficient to affect our perceptual and cognitive habits in the ways described above—is incompatible with maintaining and exercising our capacities to attend to, engage with, and experience artworks in the way that is plausibly proper to them *qua* art.

## 4. Technology, Enframing, and Art

The two incompatibilities discussed above are connected, with the ontological incompatibility grounding the attentional incompatibility. That is, the kinds of attention that are characteristically involved in engaging with artworks on the one hand, and in using tools or understanding artifacts as the products of technical processes on the other, are incompatible because what makes something a work of art is different from, and incompatible with, what makes it either a tool or a product of a technical process of making. While this can be put in terms of attending to and engaging with art *qua* art being non-instrumental and non-purposive—or 'disinterested'—and the use of technology being instrumental—or 'interested'— this way of putting it leaves out much that is important, as I hope the discussion above shows.

These ways in which art and technology are not only different but incompatible points to an even deeper incompatibility on which both are grounded, which is not just a matter of incompatible aspects of objects or forms of attention, but of art and tech-

nology as manifesting two fundamentally different ways of experiencing and interpreting or cognizing things, and so two distinct ways of being in, and relating to, the world. The idea of technology as not a collection of tools and devices but as something like an attitude or a 'spirit,' and a way of understanding and relating to 'Being' or reality, is found in Heidegger's essay "The Question Concerning Technology" (1954). Just as Heidegger argues that "the essence of technology is by no means anything technological," by which he means that what it is for something to be technological is distinct from any piece or instance of technology, just as, analogously, what it is to be a tree "is not itself a tree that can be encountered among all the other trees" (Heidegger 1954, 4), what we can call the 'essence' of art—i.e., that which makes something count as an artwork, and which makes certain activities or practices count as ways of engaging with such works *qua* art—is distinct from any particular artwork or artistic practice. To grasp the roots of the two aforementioned incompatibilities, then, we need to consider what is 'behind'—i.e., what runs throughout and pervades—the ways of making and attending discussed above, considering art and technology not as kinds of objects or practices but, more fundamentally, as modes of what Heidegger would call our 'comportment' towards reality.

While it is beyond the scope of this chapter to explicate and discuss this difficult essay of Heidegger's in any depth, in brief, one of his central points is that the 'essence' of technology, beyond any technological thing, is a mode of existence—a mode of 'being technological,' as it were—that shapes how our world and the things in it, including ourselves and other people, 'show up' for us in our experience. Heidegger calls this 'enframing,' where this is a way of conceiving of, or 'disclosing,' things as items in a determinate network of instrumental or means-end relations, in which every part of reality is experienced as something-to-be-used, even if only potentially, such as in cases where no immediate practical use is apparent. This treats every entity as a sort of inventory item in the warehouse of reality, as it were, "standing-reserve" and awaiting

our future use (Heidegger 1954, 14-17). Because 'enframing' positions everything as primarily existing in order to be used, it also positions us as essentially users, with using things being our primary way of relating to them insofar as we are thinking and living 'technologically' in this sense, where this also precludes us from experiencing and valuing things in their own right and for their own sake. Moreover, the network of instrumental relations and values that it takes reality or 'Being' to consist in is an essentially *closed* system, wherein the potential uses of things and the means that will realize certain ends operate deterministically, being given in advance, and with no room for genuine novelty or creation over and above the mere rearranging of what is already there.[45]

Art is not automatically an alternative to this mindset and way of being in the world, since many common ways of relating to artworks involves using them as means to ends: e.g., looking at or listening to a work for the sake of the entertainment or pleasure it can afford us. What this suggests is that an apprehension or an experience of artworks that is proper to them *qua* art will not involve 'consuming' them, i.e., seeking to using them for an instrumental purpose or interest, including an interest in recreation or enjoyment.[46] Relating to artworks in this way and treating them as consumables will, I suggest, get in the way of a proper experience and appreciation of them *qua* art and instead will involve treating them as tools or instruments. For instance, reading novels or watching films in order to take a break and unwind, or as a form of escapism,

45 The common assumption that computerized machines and programs necessarily will function as they are designed to as long as they are used as intended by those operating them—e.g., assuming that certain inputs will always lead to the same outputs—, even in the face of multiple experiences of the contrary, can be understood in light of the way that technology as a way of relating to the world posits that world as a closed, deterministic system.

46 This does not mean, of course, that 'real' artworks cannot be enjoyable or that our engagement with them cannot be a form of recreation in the sense of a refreshment and renewal of our energies (i.e., as a re-creation). Likewise, friends can be beneficial or practically useful, e.g., when they help us with something, but relating to people with the aim of using them for help or benefiting from them in some way is not to relate to them properly qua friend.

treats them as one might treat a drug such as a sleeping pill, where consuming works of art for the sensations and emotions they can arouse in us—i.e., as entertainment or amusement—treats them as one might other kinds of drugs. This is in keeping with what I have suggested above concerning the need to be open to an artwork as the unique particular it is and to 'get on its wavelength' or experience it on its own terms, so to speak, without doing so for the sake of anything that might be gained by this, and instead valuing the apprehension and experience of a particular work for its own sake.

Even though artworks do not automatically escape the 'enframing' of a technological mode of being, since they can be used in various ways and so reduced to the status of tools or mere artifacts, art does give a potential alternative to technical thinking and enframing in virtue of the ontological differences between artworks and mere artifacts, and the possibilities for a different kind of perception or experience, and a different way of relating to reality or 'Being,' that this affords us. This is due to a dimension of art that might also be called 'enframing,' albeit in a different and opposite sense to Heidegger's, where *artistic* 'enframing' is a matter of viewing artworks as things that are marked off from the world of practical artifacts and instrumental interests and singled out for 'disinterested' attention, as parts of reality that are *not* there to be used and which must be approached on their own terms, so to speak: i.e., in terms of their intrinsic nature and value.

This claim is not just metaphorical: we might think of the ways that many artworks have actual frames that mark them out as standing apart from practical reality, whether this is a literal frame in the case of a painting or a proscenium arch and curtain marking off the stage from the audience in a theatrical performance, or even the covers of a book that are not themselves part of the novel found within, or the brief moments of silence and focus before and after a musical performance at a live concert. And this is not only a matter of artworks being marked out for a certain kind of attention: the marking off of a particular artwork can be understood as part of what makes it an organic unity, or *Gestalt*, and so what makes

it a suitable recipient of the kind of attention that Nanay posits as characteristic of our engagement with art: viz., focused attention paid to it as a singular perceptual object and distributed attention paid simultaneously to its properties or 'parts' and their relations to each other and to the whole work they comprise. It is precisely on account of their being marked off from the practical world like this that artworks can serve as 'escape hatches,' so to speak, from the closed network of instrumental relations and means-end thinking that results from the *technological* enframing of the world, opening avenues for non-instrumental, 'disinterested' forms of attention that in turn open up our own possibilities for being in the world and relating to things since they free us from being positioned as essentially users within the aforementioned network of instrumental relations. Put more simply, artistic creations and works open up or expand our world whereas technological thinking limits and closes it or narrows it down: for example, in the way that it reduces things to their instrumental use and value.[47]

Notably, this calls into question—or at least qualifies—the commonly-held assumption that technology expands our possibilities and so widens, rather than narrows, our worlds. While it is obvious that certain pieces of technology will enhance our actions or allow us to do things that we could not have done without their mediation, the new possibilities for acting they offer us is necessarily finite. This can be seen by considering digital devices or software, where these can be used as tools only to perform a finite set of actions or functions. Even if this set of possible uses is very large, as is the case with modern computers, any use we can make of them is given in advance, with our being limited to performing one of the actions they are designed or programmed to perform. And, insofar as we are positioned essentially as users of things within the network of instrumental relations to which the

47 In Heidegger's terms, we could say that art is a way of 'disclosing' reality or Being different to the way in which it is disclosed by technology, with different aspects of things, and different values, being revealed or emerging from these different ways of disclosing.

technological or 'enframing' spirit reduces reality, our own being is limited, not only to being a user but to being a user of things for that finite set of purposes and no others. For example, a user of a computer, strictly *qua* its user, is essentially a potential writer, or calculator, or consumer of music, or viewer and editor of photos, etc., for each of the uses to which that computer can be put based on its software or applications. In effect, this gives us each of these things as possible ends of our actions, in virtue of having the means to them at our disposal: but the totality of what we can take as our ends, *qua* user, can never go beyond these and is given to us in advance, rather than being realized by us as the product of our own choices, actions, desires, wills, etc. When it comes to art, however, whether as creators or as spectators, listeners, readers, etc., the possibilities for how we can engage with artworks or an artistic medium, or how we can understand a work, or find it meaningful or valuable, are never closed off or given in advance but are, at least in principle, infinite and so open to the genuinely new.

## 5. Conclusion

I would argue that this last point gets at one of the reasons why art is an important a part of human life and culture that is essential for our well-being, and so shows why it is worthwhile to distinguish art and technology in terms of their incompatibilities: but this is a rather abstract note on which to end. The above discussion, and the distinctions that have resulted from it, also have more directly practical implications for our engagements with art.

For one thing, distinguishing between what makes something art and what makes it a product or a piece of technology gives us, as audience-members, a better idea of which aspects of a work to attend to when we're apprehending and evaluating it *qua* art. Since whatever makes a given work a work of *art* is not those aspects or properties of it or of its making that are technical or instrumental, its value *qua* art will be distinct from whatever technical value it might have. For example, the fact that the making of a work—e.g.,

a film—involved a difficult technical process—e.g., the complexly choreographed camera movements in a scene filmed in one unbroken take—that was successfully executed, and so counts as a technical achievement, will not make it more valuable *qua* art. Thus, this will be the wrong thing for us to focus on if we want to assess or understand its artistic value, where we would similarly be looking in the wrong place if we were to take a lack of technical achievement in making a work to count against its artistic value: we would, in effect, be valuing or denigrating it as the wrong kind of achievement. And, in letting us know which aspects of a given work are not relevant for apprehending it or evaluating it as art, this distinction puts us in a better place to grasp and appreciate what is relevant, and so, to properly experience and appreciate it as the work of art it is.

Similarly, distinguishing between the artistic and the technological in a work of art or in its making can help artists know what elements of their work or their medium to focus their own attention on, and what to consider when assessing a work-in-progress. For students of art, this can help them to avoid taking techniques or methods they are learning as formulas or algorithms for producing art, by making them aware that any techniques they are taught for using a particular medium will never be sufficient conditions for producing art, and that no single technique is ever necessary. For example, a student of photography who is able to distinguish what is artistic from what is technical in a photograph will not only not be overly focused on the technological specifications of camera equipment—e.g., how high a resolution the sensor of a new digital camera is capable of—except insofar as these technical details might be relevant for the artistic potential of the medium, but will not take techniques, which might seem at first glance to be artistic rather than technical, literally or at face value: for instance, not taking the 'rule of thirds' to be either necessary or sufficient for a well-composed image, but realizing that it is *a* way of composing an image. Likewise, understanding this distinction will allow exhibitors, curators, and those similarly positioned to influence how

artworks are presented to avoid modes of presentation that might interfere with the proper apprehension and appreciation of the art they are showing, or that might work against the kinds of values that can be realized by engaging with art *qua* art, and which, as exhibitors, they are likely concerned to help realize and promote.

If we agree that the creation, reception, and appreciation of art is an important part of human life and culture, being able to realize distinctly artistic forms of, say, cognitive or socio-political value, then we have reason to create, promote, teach, and engage with artworks in the ways that are proper to them *qua* art, and to avoid bringing a technical way of thinking or technological concerns to our artistic pursuits. If the points made above in Section 4 are right regarding a technological way of relating to things limiting our own existential possibilities, insofar as we occupy a relation to things as users of them as means to realize ends that are always given in advance and are partially determined by the things in question rather than by ourselves, then one of these values that art can realize when it is engaged with properly *qua* art is precisely the alternative to a technological way of being in the world that this allows. To return to the line from Collingwood quoted at the start of this chapter, in which he asks whether art can flourish in a technological age, we can answer: if it can, it is only insofar as that age is not wholly technological, which is to say, only if the people living in that age are able to conceive of and relate to reality in ways other than just through the kind of technical thinking that Heidegger calls 'enframing'. Sadly, if the frequent use of recent internet-based technologies is affecting our attentional, cognitive, and affective habits and capacities in the ways that the studies referenced in Section 3 suggest, the answer to the question whether art can flourish in a specifically *online* age would seem to be that the continued existence of art *qua* art, let alone its flourishing, is increasingly unlikely.

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