THE CRITIQUE OF DIGITAL CAPITALISM

AN ANALYSIS OF THE POLITICAL ECONOMY OF DIGITAL CULTURE AND TECHNOLOGY
Anything that can be automated, will be. The “magic” that digital technology has brought us — self-driving cars, Bitcoin, high frequency trading, the internet of things, social networking, mass surveillance, the 2009 housing bubble — has not been considered from an ideological perspective. The Critique of Digital Capitalism identifies how digital technology has captured contemporary society in a reification of capitalist priorities, and also describes digital capitalism as an ideologically “invisible” framework that is realized in technology. Written as a series of articles between 2003 and 2015, the book provides a broad critical scope for understanding the inherent demands of capitalist protocols for expansion without constraint (regardless of social, legal or ethical limits) that are increasingly being realized as autonomous systems that are no longer dependent on human labor or oversight and implemented without social discussion of their impacts. The digital illusion of infinite resources, infinite production, and no costs appears as an “end to scarcity,” whereby digital production supposedly eliminates costs and makes everything equally available to everyone. This fantasy of production without consumption hides the physical costs and real-world impacts of these technologies.

The critique introduced in this book develops from basic questions about how digital technologies directly change the structure of society: why is “Digital Rights Management” not only the dominant “solution” for distributing digital information, but also the only option being considered? During the burst of the “Housing Bubble” burst 2009, why were the immaterial commodities being traded of primary concern, but the actual physical assets and the impacts on the people living in them generally ignored? How do surveillance (pervasive monitoring) and agnotology (culturally induced ignorance or doubt, particularly the publication of inaccurate or misleading scientific data) coincide as mutually reinforcing technologies of control and restraint? If technology makes the assumptions of its society manifest as instrumentality — then what ideology is being realized in the form of the digital computer? This final question animates the critical framework this analysis proposes.

Digital capitalism is a dramatically new configuration of the historical dynamics of production, labor and consumption that results in a new variant of historical capitalism. This contemporary, globalized network of production and distribution depends on digital capitalism’s refusal of established social restraints: existing laws are an impediment to the transcendent aspects of digital technology. Its utopian claims mask its authoritarian result: the superficial “objectivity” of computer systems are supposed to replace established protections with machinic function — the uniform imposition of whatever ideology informs the design. However, machines are never impartial: they reify the ideologies they are built to enact. The critical analysis of capitalist ideologies as they become digital is essential to challenging this process. Contesting their domination depends on theoretical analysis. This critique challenges received ideas about the relationship between labor, commodity production and value, in the process demonstrating how the historical Marxist analysis depends on assumptions that are no longer valid. This book therefore provides a unique, critical toolset for the analysis of digital capitalist hegemonics.
THE CRITIQUE OF DIGITAL CAPITALISM: AN ANALYSIS OF
THE POLITICAL ECONOMY OF DIGITAL CULTURE AND
TECHNOLOGY
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First published in 2015 by
punctum books
Brooklyn, New York
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Cover Artwork: Michael Betancourt, 2014_023 (0:01;

ISBN-10: 0692598448

Facing-page illustration by Heather Masciandaro.
Chapter Three

The Aura of the Digital

By dividing the interpretation of art work into several distinct “levels” it becomes possible to recognize a fundamental distinction between digital and non-digital art works, as well as recognize an underlying belief in the illusion of infinite resources: it replicates the underlying ideology of capitalism itself—that there is an infinite amount of wealth that can be extracted from a finite resource. It is an illusion that emerges in fantasies that digital technology ends scarcity by aspiring to the state of information. The digital presents the illusion of a self-productive domain, infinite, capable of creating value without expenditure, unlike the reality of limited resources, time, expense, etc. that otherwise govern all forms of value and production. The rise of automated, immaterial production reflects this process in action.

Digital forms also exhibit what could be called the “aura of information”—the separation of the meaning present in a work from the physical representation of that work. As digital works, via the “aura of information,” imply a transformation of objects to information, understanding the specific structure of digital art makes the form of the “digital aura” much more explicit. This clarity allows a consideration of the differences between the scarcity of material production in
physical real-world fabrication versus the scarcity of capital in digital reproduction: the necessity for control over immaterial commodities (intellectual property) in the virtuality of digital reproduction. Because capital is a finite resource itself subject to scarcity, yet also caught in the capitalist paradox of escalating value—in the dual forms of interest and profit on capital expenditures—there is the constant demand to create more commodity value in order to extract more wealth from society in order to maintain the equilibrium of the system: digital capitalism necessarily moves between “boom and bust” because of this inherent imbalance.

Understanding this “aura of information” requires an acknowledgement about the nature of the digital object: it is composed from both the physical media that transmit, store and present the digital work to an audience; the digital work itself is actually composed of both a machine-generated and a human-readable work created by the computer from a digital file (itself actually stored in some type of physical media). This “digital object” is the actual form of the digital work—a series of binary signals recorded by a machine and requiring a computer to render this unseen “code” readable by humans. The “digital object” becomes the human-readable forms of image, movie, text, sound, etc. only through the conventionalized actions of a machine that interprets the binary signals of the digital object and follows the built-in interpretative paradigm that renders this binary code into a human-readable form and thus superficially distinct works. All ‘digital objects’ have this singular underlying form—binary code—a fact that makes the digital object fundamentally different from any type of physical object precisely because it lacks the unique characteristic of specific form that defines the differences between paintings, drawings, books, sounds, or any other physical object or phenomenon. Unlike physical objects, digital objects are all basically the same, whatever their apparent form once they are interpreted by a machine. This transfer from instrumental code to human-readable object happens autonomously—no human agency is required to set the translation in motion; the illusion created
by the ideology of automation proceeds from an extension of this active element in digital technology beyond these generative dimensions of digital reproduction’s display of (art) works.

§3.1

Walter Benjamin’s 1936 essay, “The work of art in the age of mechanical reproduction” initiated the critical discussion of the idea that artworks have “aura,” and proposed that this “aura” is destroyed by the process of mechanical reproduction. His notion of “aura” quickly expands to include more than just art—anything that is reproducible is folded into his construction. While this description of Benjamin’s article is highly reductive, it captures his essential thesis that inherently suggests a historical loss brought about by technological change. Following Benjamin’s argument it is logical to suppose that art would be without “aura” once mechanical reproduction gives way to digital reproduction. As Dutch artist/economist Hans Abbing has noted in his study Why are Artists Poor?:

Walter Benjamin predicted that the technical reproduction of art would lead to a breaking of art’s spell (‘Entzauberung’). Art became less obscure, more accessible and thus less magical because of technical reproduction. ... Benjamin’s prediction is not difficult to grasp. Technical (re)production enables a massive production of artworks at low prices. It would be very strange indeed if this didn’t reduce the exclusive and glamorous allure of art products. ... But thus far, this hasn’t happened; [the composer] Bach and his oeuvre maintain their aura. In general, if one observes the high, if not augmented status and worship of art since Benjamin’s essay first appeared, his prediction was either wrong or it is going to take longer before his
predictions are borne out.¹

Abbing’s observations about Benjamin’s thesis that technological reproduction and mass availability result in diminished “aura” suggest that instead of diminishing the “aura” of art, reproduction helps to extend the aura of the works reproduced instead of destroying that aura. This inverted interpretation of “aura” produced by the readily accessible and available art work shifts the emphasis in Benjamin’s article from the traditional ‘cult’ value of art objects to what he terms their commercial ‘exchange’ value. This emphasis on what Benjamin supposes to be the traditional role of art works in religious practices appears in his concept of aura as the physicality of the art object, what he refers to as “authenticity”:

> The authenticity of a thing is the essence of all that is transmissible from its beginning, ranging from its substantive duration to its testimony to the history it has experienced.²

As Abbing’s proposition implies, Benjamin’s idea of “authenticity” only becomes a meaningful value once there are reproductions of an art work, similar in appearance, but not identical to their source. Thus, the more widely promoted an art work through reproduction, it is possible to suppose that its “aura” would logically then increase as well; there is an inversion of Benjamin’s thesis. What Abbing suggests is that “aura” is not as Benjamin proposed it, but is instead a function of the reproductive process itself. This shift in conception of Benjamin’s “aura” suggests that art objects have a dual character. Their “aura” is both the physical traces of the

particular history that an object has experienced, and the relationship of that object to the tradition that produced it. These are two distinct values: one resides in the physical object, the other lies in the spectator’s knowledge (and past experience) of the object’s relationship to other, similar objects. If the first value is a “historical testimony,” the second value can be called a “symbolic relationship.” Even though the relationship to tradition is an independent value, separate from the physical properties forming the “historical testimony,” it cannot be reduced to a set of physically present characteristics because it depends upon conceptual relationships produced in the minds of the human audience—functionally a semiotic ‘reading’ of a work guided by past experience with similar works. Separating these two values results in a new conception of “aura” independent of Benjamin’s initial proposition that is specifically applicable to digital technology: the idea of “aura” results from the role the work plays for its audience sociologically (how they employ the work in their society.) This conception, as related to the audience’s access to that art work, makes conflicts over “intellectual property” an inevitable consequence of the emergence of digital technology.

Mechanically or manually (re)produced objects always have an implicit limit on their availability (thus their accessibility); digital objects do not have a limit of this type—in principle an infinite number of any digital work could be produced without a change or loss, or even deviation between any of the works.3 This distinction between all physical objects and digital objects reveals a fundamental similarity between the original art work and its mechanical reproductions; such similarity does not conflate the older relationships of copy with original: instead it reveals the basic difference between the digital and the physical. Every digital reproduction is identical to every other; digital objects are stored as a

3 It is “in principle” only because infinite reproduction is a literal impossibility; however, an unlimited quantity of copies can be produced without deviation.
form of information, rather than limited as physical objects inherently are; thus, the digital state can be understood as a form of instrumental language—instructions for executing the “retrieval” that is a specific digital (art) work.

With physical objects each object is in fact unique, even when it is an identical example of a given type: while two sheets of white paper may be apparently identical in every way, each sheet is a unique example, physically discrete and independent of all others. Digital reproductions are all the same, rather than being unique examples of a given type (as with sheets of paper), each is an identical execution of uniform, constant instructions, a “copy.” Information theory describes works of this kind as exhibiting zero information-theoretic entropy: because the execution of the instrumental data of digital objects (the electronic file stored by a computer) is an entirely predictable process within the framework of a given digital system, no information is required to produce a digital work from a digital object (electronic file). Digital reproduction is therefore fundamentally different from any kind of reproduction previous to it, and the digital objects subject to this type of reproduction can be seen to constitute a new class of object.

Digital (art) works retain their initial form over time without degradation because there is no physical object that is subject to the decay of time. They can be edited, compiled, combined, and distributed without any change in any subsequent reproduction; “copies” can then be reproduced further, infinitely, without ever being subject to the necessary loss inherent to physical media. One “copy” is not only equivalent in content, it is identical to its source. The concept of a digital “original” disappears because all versions are all identical “originals,” or are all identical “copies.”

Contemporary language lacks the terms needed to describe the relationship between distinct instances of an iden-
tical digital object: “copy” assumes the traditional mode of originals and replicas; “clone” introduces a biological analogy that nevertheless suggests some anterior original source that (at least) potentially exists as the source. Because the data comprising the digital work itself remains constant, digital objects are indistinguishable; the distinction between any two iterations of a singular digital work is not an issue of content or form because the digitized information remains constant; it is an issue of location and physical presentation—where a specific version is located on (or in) the physical media that carries its imprint and/or displays it in a human-readable form.

§3.2

The distinction between physical objects and digital objects is absolute. These distinctions are related to a duality between symbolic meaning and physicality that begins with the earliest forms of mass reproduction: minting currency. The stamping of emblems on coins renders each token valuable by dual means: though its material (precious metals), and symbolically identified as authentic (that its value is real) by the markings emblazoned on its surfaces (its symbolic content). Authenticity is an interpretation based upon a second order of interpretation, derived from a decision about the symbolic content of an object. The digital object, lacking a physical component, exists as symbolic content that becomes a physically accessible form only when presented through a technological intermediary, (for example, a video on a computer monitor) or transformed into a physical object (such as a paper printout).

The separate valences of material and symbol can be understood as existing at different levels of interpretation: the physical provides the first level, with all the conclusions about the object’s age, etc. forming a first order; the symbolic content, including its connection to traditions, similarity or difference with other objects, the interpreter’s relationship to the particular object, etc. all form a second order of interpre-
tation. While the second, symbolic order does require the first order (some type of physical presence) for its presentation, the interpreted content exists as an excess to the first order. It is information provided and created by the interpreter using past experience with interpreting the form and character of the first order that produces the second order.

The dualism of “aura” in physical objects appears as a function of both the material object and its symbolic content. That the dualism of “aura” is connected to the invention of exchange value (currency) is not accidental. Exchange value depends on human agency in social and political ways to achieve its meaning and maintain its value. It is precisely in the establishment of value through recourse to a particular scheme of many different objects governed by human agency that “value” emerges at all. Awareness of the symbolic relationship between one object and another is an interpreted result of human agency, and does not inhere in the object itself. Aura for digital works retains this dualism while shedding the literal constraint of specific physicality. The encounter with a digital object remains a material engagement, but one where the physical form is separate from the digital work, serving as a presentation of that work—i.e., what is seen and heard watching a video clip on a computer.

The separation of the specific presentation of a digital work from our conception of that work literally inscribes the Modernist desire to isolate the art work from the context that produces it into our consciousness and our interpretation of the digital (art) object: instead of requiring the sanitized, clean white gallery space to eliminate external context from the interpretations of art, with digital works this eliding of the specifics of location, presentation, context, etc. happens in the mind of the spectator. This effect derives from the digital aspiration to the state of information. It reflects the aura of information.

Because the material aspects of digital works are ephemeral, lasting no longer than the phenomenological encounter with the presentation of the digital object, (typically on a screen of some type), the “aura of information” suggests that the digital itself transcends physical form. This illusion defines the “aura of information.” Because digital works emerge from a second-order interpretation, they belong to the same category of objects as music encoded for playback by a machine, as with the player-piano scroll. Digital objects are not readily human-readable, and only become sensible as works when processed by machine. Like the music encoded on the player-piano scroll, the digital object is separate from its physical embodiment, often produced in ways and with technologies (like language) that are independent of digital forms, but are readily reproducible without loss and totally dependent on the specific technologies of their performance or presentation.

As digital objects do not degrade with time; they will not disappear over time. The limit for a digital work is not based on its physical demise, but rather on its availability within contemporary technology. Older digital works are only “lost” because the technological support for accessing them vanishes: the digital work, theoretically, endures and can be retrieved at some future time. Digital reproduction then becomes not only an inherent characteristic of digital objects, it is also their means to effective immortality. The digital reproduction and transfer of files from older technology to new technology enables the continuation (perpetual maintenance) of digital works regardless of what technology they may have begun within; early computer programs, such as 8-bit arcade games that originally existed as ROM chips in, for example, the Atari 2600 Home Entertainment System game cartridges, are still accessible because contemporary technology is able to emulate these discarded, obsolete systems, thus enabling otherwise inaccessible digital works to be read with equipment vastly more powerful and otherwise incompatible with the older digital files. In the case of the digital works contained by the Atari 2600 computer game system there is a
large, although limited, number of functional Atari Home Entertainment Systems, and when the last system irreparably breaks down, access to the original versions of the files on those ROM cartridges by their original hardware systems will be lost. Such a loss constitutes the historical testimony of this technology and the digital works accessible to it. However, the historical testimony these systems have is completely separate from the files contained by these ROMs, and the survival of the data on them is of a different nature than the survival of the original, physical system itself. (This reading is a result of a newer system emulating an earlier digital systems’ function.)

The ability to separate the digital file from the hardware dramatizes the aura of digital objects: the digital work as immortal, transient, adaptable to any new presentation technology that comes along. It also connects the aura of digital objects to the aura of information since information is a function of interpretation and so can theoretically be transferred from one representational system to another, as when ancient, “dead” languages such as ancient Greek or Egyptian hieroglyphs are translated into contemporary languages such as English. Theoretically, the content of the earlier language remains constant; with digital objects this theoretical aspect of human language and meaning becomes actual fact because of the distinction between the machine language of binary code that is prescriptive, and human language that is descriptive and denotative. Because the binary machine language is a set of commands, the transfer and conservation of information held within that language is not subject to the semiotic “drift” of meaning that affects all human language. Thus the contents of even “dead” digital systems can be recovered, assuring the immortality of any digital object.

Yet, the immortality of digital files also leads to an accumulation of works whose management and accessibility inevitably will begin to become an issue in itself, beyond simply the question of being able to access antiquated files constructed and used with hardware that is obsolete and irreplaceable.
Once the immortality of digital works is understood to mean these works will accumulate and be immanently present indefinitely into the future, a Malthusian problem emerges. As more and more materials accumulate in digital form they will become increasingly difficult to organize, access, and use. The quantity of information will impede its ability to be used or evaluated. The “aura of information” implies that this continual databasing of information is a positive value in itself, separating information from the ability to use it or determine its significance. The “aura of information” gains its apparent value from information-poor pre-digital societies where access to and possession of information was a positive value because the volume of information even potentially available was limited both physically to specific objects, and by the ability to reproduce that information. In such an info-poor society, stockpiled information has value in itself because the amount of information remains limited. For digital technologies, the creation, storage, and distribution of information are not limited in the ways they are for traditional societies. Because digital information aspires to immortality, is infinitely reproducible, and claims the “aura of information”—the accumulation and management problematics of digital files necessarily emerges as an inevitable outcome of the development of digital technology.

§3.3

All mechanical reproductions are objects in themselves; they carry their own “historical testimony,” and are subject to the effects of time and decay as are any other physical objects. This is true for the mechanical reproduction at all levels of its existence; even the photographic negative is subject to decay and loss, just as the metal plate used in printing gradually wears away as it is used to make reproductions. The mechanical reproduction can therefore be regarded as having the same potential to authenticity (via historical testimony) as any other physical work of art.
In contrast to the mechanical reproduction, the digital reproduction is a multivalent object. The physical representation of a digital object, as on a computer screen for example, does not subject that file to the wearing away that physical objects suffer; nor does the copying, sending, or storage of these digital objects necessarily damage them. The digital transfer of files produces perfect, identical copies not subject to the historical testimony of physical objects. In effect, the digital object—the information contained in/as the digital file—is independent of historical testimony. However, the medium that stores the digital file is subject to “historical testimony.” This container is distinct from its contents, and should be understood as separate from them.

The types of “historical testimony” that do impact digital files can thus be divided into three types: (1) those that impact the container, whether it is the disk, CD, ROM, or other storage medium, (2) those that effect the digital file in itself as distinct from the storage medium, and (3) the accessibility of the file using contemporary technology (the issue of obsolescent software, hardware, and the files produced with that older technology). A broken CD may render the data it contains inaccessible, but it does not actually destroy the data. A damaged or corrupted computer file is a result of errors made by the system storing and displaying the file, and are not examples of historical testimony, but are more akin to misprints and errors made with the machinery of mechanical reproduction.

The accessibility of a digital object produced with obsolescent technology leaves no trace on the digital object itself; it is the ability to read that file’s content that becomes attenuated with time, not the file itself. Its contents remain constant even when we can no longer access those contents. This situation is akin to our ability to read ancient, “dead” human languages written in hieroglyphics or cuneiform: the contents of the text are independent of their storage medium or the format (language) in which they are written.

Technological failures, or glitches, do not constitute a historical testimony for digital objects; instead, they demon-
strate the digital work’s nature as second order interpretations presented for viewing. This explains their lack of physical presence and the uncomfortable relationship between the digital “template” or original digital file and the physical versions produced from it as print outs, displays on monitors, etc. The conflict surrounding intellectual property rights is most concerned with access to the art “object” itself, since in the digital realm the potential to reproduce and distribute does not necessarily include the right to read (access) the work—this is why every digital rights management (DRM) proposal limits and controls access to the (digital) art work, to the right to read.6

§3.4

First order interpretations of historical art works such as the Sistine Chapel proceed based on the fact that it remains the Sistine Chapel in all circumstances; however, this assumption reveals its attenuated character with mechanical reproduction, and announces itself clearly with digital works (if it is not rendered completely invalid by the myriad variability between different displays of the same work through the disparate presentations of projectors, monitors, different user parameters on various computers, etc.) to such an extent that it becomes less appropriate to think about digital works in terms of the specifics of a particular display than it is to think about them independent of the particular display where they may appear.

Consider the issue of color, for example. Different computer monitors display color differently, depending on the age of the monitor, how long it has been in use, the particular construction of the pixels in its screen, the specific settings it has at the moment of display, etc. Stores selling monitors will set up comparisons showing their available models because these differences impact the appearance of digital works dis-

6 The concept of the “right to read” originates with Richard Stallman, of the Free Software Foundation: http://www.fsf.org/.
played on them. The question of color becomes even more variable when consideration of presentation expands beyond desktop monitors to include other kinds of display such as projection, TV broadcast, or even video on cell phones. Each expansion of potential display increases the variation in how a digital file appears, rendering the question of which version is the “authentic version” problematic since the file being displayed can remain constant.

The superficial constancy of a human-readable form does not mean that apparently identical presentations produced by different sources are the same. Three apparently identical images may present the same human-readable result, but be generated by incompatible sources. Imagine the following situation: (a) an uncompressed raster file specifying each and every pixel displayed; (b) a compressed version of the same raster data; (c) a version of the same image, but produced and described using vector graphics. The apparent content of the image is irrelevant—it could be a photograph, typography, or simply a collection of linear elements—because any type of image can be stored in these three ways.

The human-readable product of each of these three images are identical, so completely similar that there is no difference between the data on display in a human-readable form in any of these images; thus it is impossible for a human observer to distinguish between them based on their human-readable form.

However, in spite of being apparently identical, each of these images is produced from an individual, separate, digital object. This remains the case with these images no matter how frequently they are rendered human-readable, copied, or otherwise reproduced as digital files. The idea that they are actually the same is an illusion created by the aura of information. It is this aura—that all digital information remains constant/equivalent no matter what types of transformations are applied (in this case both compression and the distinctions between raster and vector storage of image data)—that confuses these distinct files for one another. Each digital file and the rendition of that code as a human-readable object
(the apparently identical images) comprise separate, individual digital objects whose human-readable instantiation produces the illusion that they are the same. It is the belief in the equivalency between these distinct data files that contain unique, divergent code that reflects the aura of information in action.

Because the aura of information demands that spectators ignore the presentation (video monitor, projector, print-out, etc.) in considering the “context” of the work—conclusions related to what would be first order interpretations for non-digital works: for example, where the painting is from, how it is lit, how old it is—all these questions generally vanish when confronting a digital projection. Age, materials, etc. do not devolve from the physical materials of a digital work’s presentation, but from considerations relating to its symbolic content. To the extent that a digital work has a historical testimony, it is a result of historicizing the style and form of the work (second order interpretations.) That a digital work is shown on a flat-screen in one presentation, a cathode ray-tube in another, and as projection on another occasion does not effect our considerations of that digital work. While the display may change, the digital work is considered to remain the same whatever means are used in its presentation. This dismissal of the variability of digital works suggests that the digital work exists and is understood as being independent of its various presentations. The same dismissal of the physically stored digital file mirrors the dismissals of the specifics of presentations; both are effects of the aura of the digital creating the belief that digital objects are divorced from physicality.

The independence of digital works from their physical presentation is connected to the contingency of both the right to read a digital file and the technological basis of digital (re)production. Where both manual and mechanical reproduction always preserve the physical character of the object, leaving it subject to its particular historical testimony; digital works do not. Any type of printed matter retains its form unless physically assaulted—burying a book in peat
moss may result in the book decomposing, with the resultant loss of the book; a digital work cannot be thus assaulted, but neither can it be accessed away from a technological support. Digital files only appear through the variation of display that the above consideration of the issue of color implies.

Recognizing that the lack of historical testimony of digital works creates a framework shifting these objects away from the particular, physical, object-oriented attributes of their presentation towards being a non-object oriented art. The uniqueness of digital works cannot thus be a result of there being “only one,” nor can the uniqueness of digital objects be a result of a solitary (individual) character because all “copies” are identical in every way. In effect, for digital works (as with mechanically (re)produced works before them), there is no first order object, in the way there is a Sistine Chapel.

The impact of the digital work’s particular form of “uniqueness” on intellectual property reveals itself as the issue of access to the work: the right to read, rather than to own a copy. Possession and access are separated from one another. With first order objects, such as the Sistine Chapel, possession also confers the right of access: having possession guarantees access to the work; with digital works, possession becomes attenuated—it is possible to “own” files on a computer, but not have the ability to access those files’ contents. The model that intellectual property thus adopts is much closer to the idea of a bank where only authorized persons may do business and everyone else is turned away unless they, too, invest their money in the bank. In all cases, what the customers have access to, what actions they are allowed, and most significantly how much it costs to perform those acts is determined by the bank. What these “customers” may do is strictly limited by the particulars of their specific investment in the bank.

§3.5

Mechanical reproduction is always limited by the physical materials, both in the form of the (re)productive technology
(printing press, photographic negative, etc.) and the materials that form the reproduction itself. This basis imposes duration on the object; until the digital work is (re)produced physically, it lies outside this constraint, even though the digital file is always physically stored, the digital work that file produces remains a separate entity, although nevertheless inherently sourced to this digital file. And because the aura of information leads to the interpretative ignorance of the physical appearance of the work when it is presented to its audience, falling “outside” means that it is not subject to the effects of time degrading it via duration either when reproduced as an object, or in its native, digital form. Thus, the “authenticity” of the digital work lies in it being independent of the effects caused by the passage of time, its use (digital works do not “wear out” the way physical objects will), or via its replication and distribution in a digital form: unlike physical objects, digital works do not exist with physical constraint on the works themselves, only on the ability to store (and transmit) them, as with the limited ability to store files on a hard drive.

The absent physical limit means, in principle, that digital works can be regarded as immortal—making the lengthening of statutory ownership (copyrights, patents, etc.) a necessary and inevitable corollary to the conflict over intellectual property: the maintenance of the property demands that it last as long as the work in question. To do otherwise is to acknowledge the contingency of this right to read on the economics of object-based production and consumption that predate the emergence of the digital work. It is a lacuna which follows from the ideology of automation—the perpetual expansion of ownership reifies the fantasy of “self-made” success without recourse to social reproduction; in effect, the continuance of property claims in an immaterial medium is necessary for the valorization of authorship they enable through the dispropriation of agency (this fantasy of autonomy).

The aura of the digital describes the occlusion of the real conditions of physicality from considerations of the appar-
ently immaterial realm of the digital. These constraints and limitations are inherently imposed on all digital technologies, objects and systems. Yet because the specific ways the digital aspires towards the state of information, producing the illusion of completeness, and poses as independent from material reality, the digital, paradoxically, emerges as an immaterial physicality—spectral, it is both immanently present and creates the pretext of lacking a substantial, material link to reality.

This supposed rupture—in the form of a penumbral immateriality—is the specific illusion that defines the aura of the digital: the denial of immanent physicality in the face of apparent and structural physical limitations and material basis. The confusion of our ability to identify the falsehood that is the digital immaterialism reflects this aura in action. It is precisely because of the confusion of physical and immaterial that the aura of the digital is pervasive.

The nature of the technology itself—the semiotic, immaterial manipulation and transformation of codes—generates the falsehood that the digital is, in fact, immaterial; contrariwise, it is actually a physicality whose encounters with human actors produce the same divergence between object and form that is familiar in our encounters with language: the symbolic interpretations generated by the digital overwhelm the physical testimony of the digital presentations themselves.

The issue with the aura of the digital is not that there is an inherent connection to the physical, but rather that this very real connection is not only denied, it is stripped from our awareness; this absence is the aura of the digital.

Implicit in the right to read is the ideology of the “cutting edge” that renders digital technologies obsolete. With this technological shift from current to antique is a constraint on the particular deployments of the technology—what has variously been called cut-up/mash-up/remix/collage/montage/database-driven work—based around a reassembly of existing materials into “novel” forms. That this aesthetic form has recurred in almost identical approach and form with each
new technology (Dziga Vertov experimented with wax recordings to make “remixes” in the 1920s⁷) suggests these approaches are banal rather than disruptive, (except in the economic language currently attached to “intellectual property” and copyright). Rather than an “exploration” of the new technology, these works suggest a Freudian avoidance of the potential shocks this technology implies through repetition. The psychological dangers unheimlich works may pose are avoided in advance through the rubric of obsolescence and the repetitions inherent to remixing existing familiar materials.

§3.6

The nature of digital technology and reproduction creates a fundamental paradox between the interests of ownership and the function of technology: where ownership has always already been a feature of possession, with digital reproduction this connection presents a new problematic. The right to limit access (via DRM) is the key aspect to ownership of digital works. Control over the right to read digital works finds its basis in the older laws designed to control printing and publication: copyright laws that codify assumptions about physical objects and the access and ownership of those works.

Because digital works are (primarily) second order non-object based artifacts, i.e. they are works without particular physical form (and therefore limited by natural conditions of scarcity, manufacturing and material), increasing the ability of the producer to control their digital “property” even when sold to another person becomes an inevitable consequence of the steady shift to digital technology for creating and distributing all aspects of culture.

The transformation of everything that can be digitized into a digital form (the universal aspiration to achieve the state of information as instrumentality) follows from the logic of DRM: the conflict over intellectual property is therefore inevitable, as is the elision of agency and the valorization of social action (refracted through the valorization of the author). Object-based works automatically become the consumer’s property, and can be given, resold, etc. once possession is attained, but for non-object based works the digital rights management schemas mean that digital works lack this possession-based dimension of property. Even after a work has been purchased, the banking model for ownership obtains: once possession is achieved, the consumer does not own the work—they only have a contingent right to read; in its hypothetical form, consumers are unable to resell, give, lend, or share any of the digital works contained by DRM. The mechanisms that control access to digital works also reproduce the conflict they were meant to resolve in a vicious cycle where each new restriction on the right to read intensifies the conflict. In its most basic form, this is a conflict over whether non-object based works are entitled to the same treatment as object-based works.

§3.7

The “aura” of a work of art can be regarded as the tertiary interpretative effect resulting from a third interpretative act that uses past experience to create an awareness of that object exceeding both its physical form and its relationship to tradition. This difference allows the existence of “aura” (contra Benjamin) in mechanically reproduced works, via mechanical reproduction—and thus, also allows “aura” in digital (art) works. Awareness of this kind becomes possible through reproduction even though it exists to lesser degrees in traditional societies where awareness of the art works are “reproduced” as linguistic artifacts rather than visual ones. This awareness is imbued with special values (as Benjamin has observed). The earlier works can be understood as being
subjects of verbal (non-visual) reproduction and the awareness this type of reproduction produces generates “aura” that is consistent with that generated by digital/mechanical reproduction.

Thus reproduction—mechanical or digital—is the source and vehicle for a work’s “aura.” A spectator’s encounter with a “famous” work as an object is distinctly different than their encounter with an unknown work because it is the wide dissemination of that work through reproduction that creates the particular experience: cultural tourism is based on this idea of encounters with originals whose “aura” is a function of their being widely reproduced. The more fully a work is disseminated, the greater its “aura.” Andy Warhol’s persona, and his construction of superstars who are “famous for being famous”\(^8\) demonstrates the transient, contingent nature of this conception of “aura,” its socially-constructed nature, and its reliance upon (digital) reproduction for existence.

The semiotic/instrumental immortality enshrined as the aura of the digital reifies an ideology where the work of “genius” (literally) “lives forever” within the simultaneous frameworks of DRM and digital reproduction. The ownership of ideas is coupled with the specific material form those ideas take within digital technology. This semiotic immortality becomes instrumental immortality in the realm of digital code executed autonomously by machines: this is the “aura of the digital.” The cultural drive to shift all production to this immaterial basis—the information economy—reflects how the ideology of automation enables the expansion of the digital aura.

The aura of the digital signals the digital is the site of a specific reification dramatizing an underlying conflict between production and consumption: the emergence dramatized as digital capitalism—that is, between the accumulation of capital and its expenditure. By enabling the fantasy of accumulation without consumption, digital technology be-

comes an ideological force reifying the conflict between the limits imposed on the value of capital via expenditure and inflation, and the demand implicit in the capitalist ideology of escalating value. The reciprocity between production and consumption is necessary for the accumulation of wealth (capital) to be anything other than an economic pathology. The lacuna that accumulated wealth presents is one where inflation appears as the necessary corrective—devaluing the accumulated capital in order to maintain the circulation necessary to maintain the dialectic of production and consumption: when capital collects, its value must diminish. The aura of the digital upsets this dialectic by reifying only one side of the construction—the illusion of production of capital without its necessary consumption. The aura of the digital is thus a symptom of the structure of pathological capitalist ideology becoming realized as digital capitalism—a fantasy based upon digital technology without regard for the illusory nature of these transfers, or the reality of the expenditures required in the creation of the digital itself.

Digital technology, its development, deployment, production and access all demand a large expenditure of capital both to create and to maintain. The aura of the digital separates the results from its technological foundation—the illusion of value created without expenditure: a pathological capitalist ideology that demands the valorization of social action it enables through the ideology of automation, coupled with the implementation of controls over digital technology (DRM) as it aspires towards the state of information and assumes the “aura of information” is coincident with the aura of the digital and digital capitalism.

Even though the origins of the “aura of information” reside in the technical parameters of the digital, its role in the capitalist ideology-fantasy of wealth accumulation renders its conception of the digital not only fundamentally flawed, it is also a formulation that supports the disenfranchisement of human agency by the ideology of automation and its transformation into an immaterial commodity separate from concerns with social reproduction. By naturalizing the concen-
tration of capital, the aura of information transforms digital technology into a magical resource that can be used without consumption or diminishment.

The initial effect of this magical resource appeared as the “dot.com bubble” at the end of the 20th century when the internet first emerged as a popular, commercially exploitable medium. This initial bubble was quickly followed by a larger one with an even more explicitly immaterial basis—the 2008 Housing Bubble. These collapses were inevitable since the values they produced depended upon the exploitation of the production without consumption fantasy. The shift in emphasis towards various forms of “DRM” began even before these controls were implemented by technology itself in the form of technology patents, copyright-based registrations and “subscriptions” to software etc., an initial phase seamlessly moving into technological DRM. The (re-)emergence of “walled-gardens” around proprietary hardware-software combinations affirms those connections between the aura of the digital and the aura of information needed to justify capitalist impositions of controls (DRM) over intellectual property and the technical valorization of social activity they accompany. Otherwise, the aura of the digital threatens the status quo because the illusion of profit without expenditure suggests the possibility that the digital could realize a situation where capitalism itself ceases to exist.

Thus, the aura of the digital is Janus-like, suggesting a magical production without consumption, reifying this fundamental ideology as digital capitalism, at the same time as it implies an elision of capitalism itself. However, all these suggestions proceed from an illusion based in a refusal to acknowledge the real expenditures required in the creation, production, maintenance, and access to the digital technologies and the materials made available through those technologies which make these ideological fantasies possible. In this regard, the ‘aura of the digital’ can be identified with a pathological myopia: it is implicit in the anti-capitalist fantasy of an “end of scarcity” abolishing capitalism, and for the capitalist ideology reified within the illusion of production with-
out consumption. Each belief is therefore an ideological fantasy reified as instrumentality: a product of each denying the actual physicality, and therefore the expenditures and costs, of digital technology.
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