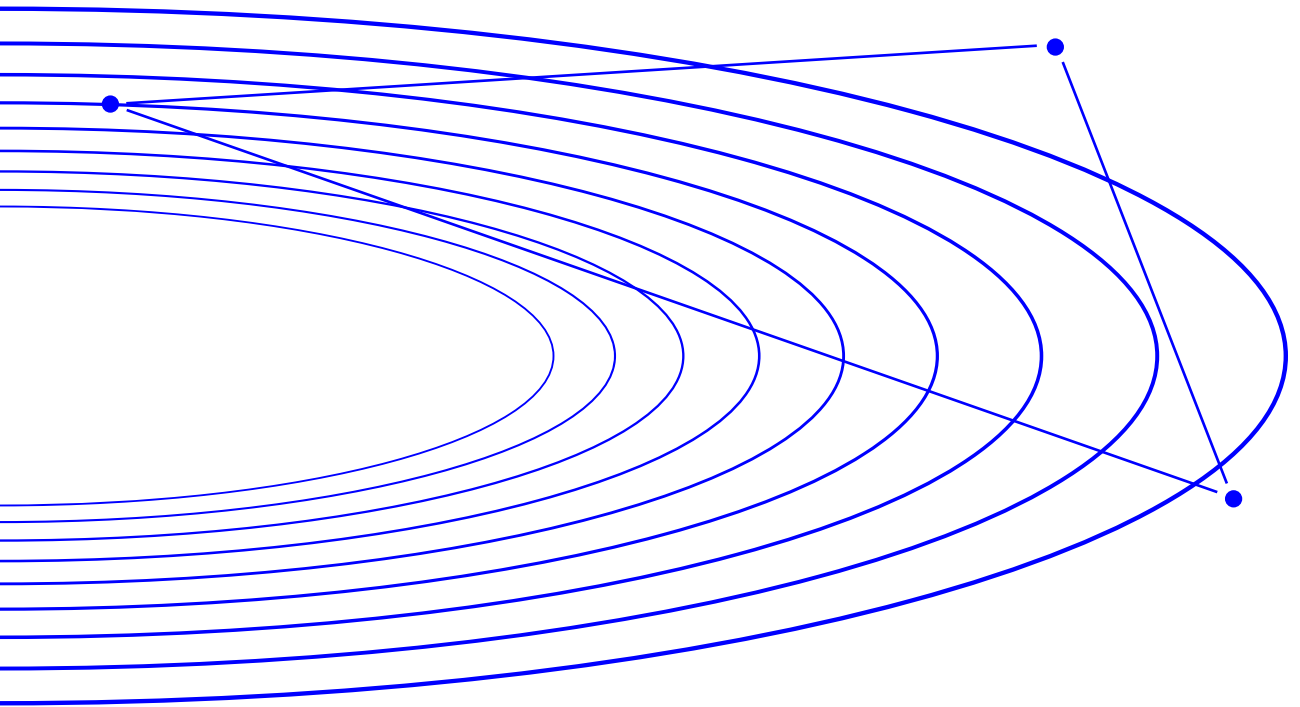
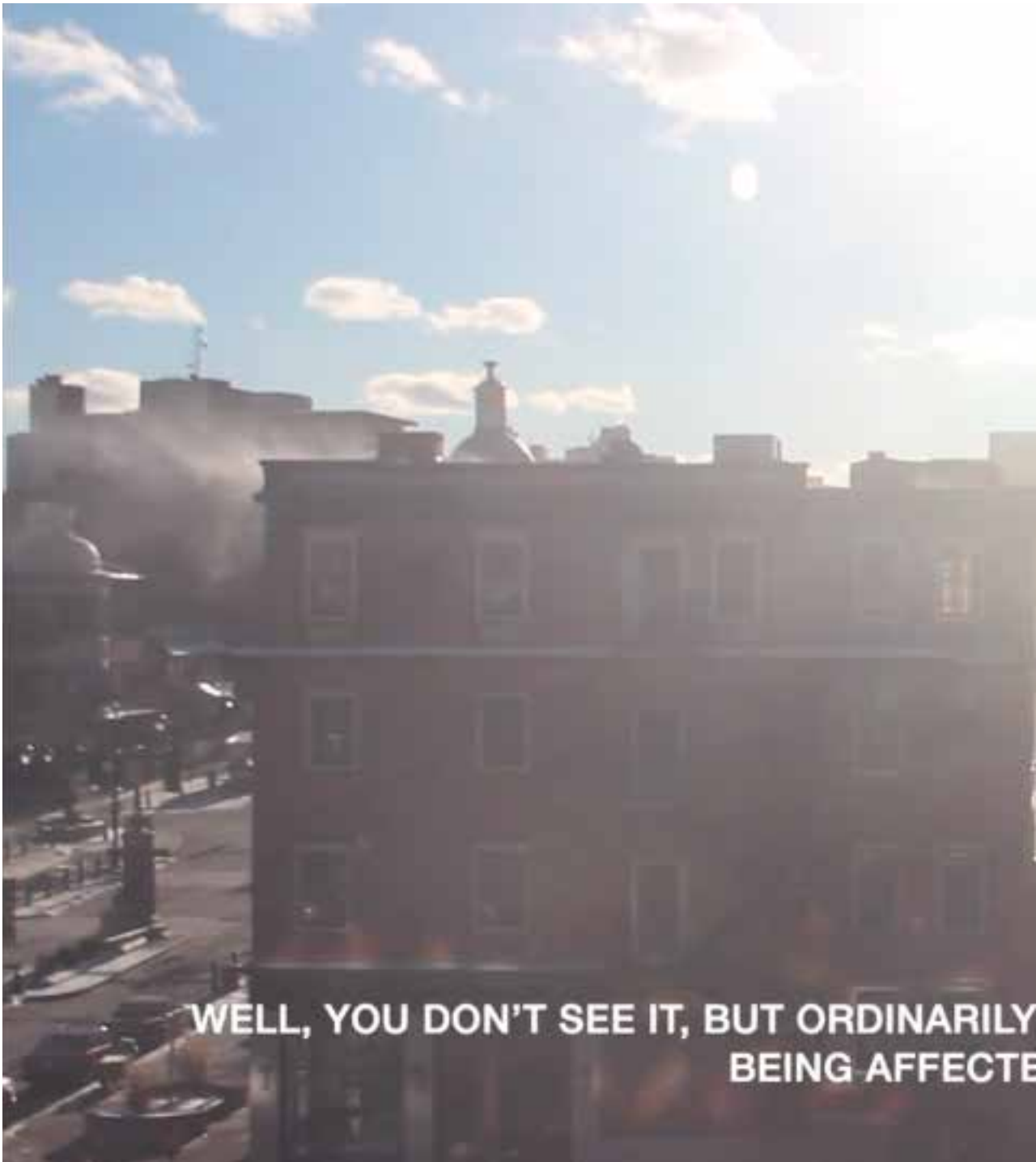


INTERCALARY EVENT



KATIE BULLOCK
ROBERT HORTON
JOCELYNE PRINCE
SEAN SALSTROM



Video still from *An Instance Will Do*, Katie Bullock, 2020.



**YOU CAN SEE SOMETHING THAT IS
ED BY IT-**

EXCERPT FROM:

How to Do Words (with Things)

Inference, Reference, and Difference
in Aesthetic and Scientific Practices

(Intercalary: Katie Bullock, Bob Horton,
Jocelyne Prince, Sean Salstrom)

Thomas Zumner

Notes

INFERENCE

Inference is an inherent part of observation, whether scientific or aesthetic. In logic, an *inference* is a process of deriving logical conclusions from premises known or assumed to be true. The term derives from the Latin, and means to “bring in.” An *inference* is said to be valid if it’s based upon sound evidence and the conclusion follows logically from the premises. *Inferences* are steps in reasoning, moving from such premises to logical consequences; etymologically, the word *infer* means to “carry forward” as well as “to bring in.” Inference is traditionally divided into *deduction* and *induction*, a distinction that extends back at least to Aristotle (circa 300 BCE). *Deduction* is an inference deriving logical conclusions from premises known or



Intercalary Study Lamp, Jocelyne Prince, 2020. Blown glass, whitewash, grease pencil, rubber, metal. 28 × 38 × 26 inches

assumed to be true; the laws of valid inference are a topic studied in logic. *Induction* is an inference from particular premises to a universal conclusion; “inductive inference” is an inference based on probability, and usually starts from specific information and then infers the more general principle. A third type of inference is sometimes distinguished, notably by Charles Sanders Peirce, who coined the term *abduction* to denote a type of non-deductive inference, distinguishing abduction from other, more conventional formulations of induction. While one might strain to refine a coherent picture of Peirce’s notion of abduction, it is undeniably a form, despite certain ambiguities, of inference. An inference, therefore, is a process of drawing conclusions based on evidence; on the basis of such evidence, or a “premise,” one infers a conclusion.

EVIDENCE

So, what is evidence? Again, an etymological approach, while not always completely definitive, is often still quite useful. In Middle English, via Old French, the term is derived from the Latin *evidentia*, *evident*, meaning ‘obvious to the eye or mind;’ ‘perceptible, clear, apparent,’ from *e-* (out, away) + *videre* (to see). *e-* is a *privativum*, a negating or abstracting particle, and modifies the word *videre/to see*, bearing the meaning “taken, or drawn from, the visible or apparent,” so that we may attain the meaning “to see out of, by drawing from.” The sense of evidence is bound up with, inex-



Newton's Observations, Jocelyne Prince, 2020. Found lenses, prisms, copies of pages from *White's Almanac*, high-speed digital photographs, photo transparency of Newton's observation, display case, dimensions variable

trically embedded in, processes of observation, and strongly inflected by the visible. As such, *evidence* may be considered a form of abstraction, rather than an immediate perception, and regardless of its deep embedding in grammar, it is profoundly artifactual, a construct standing for/in place of a primary perception as an indexical marker. Timothy Williamson makes a persuasive argument that evidence is precisely what is known, an argument that considers *a priori* that evidence and knowledge are one and the same. While there is indeed a substantive and true identity-claim embodied in this notion, questions also arise: why do we need a concept of evidence at all? What is the purpose of evidence? How and when is it used? To what end? Evidence allows us to draw conclusions



Moby Dick: Cored and Submerged in a Meter of Water, Sean Salstrom, 2019-2020.
Water, plate glass, blown glass, cast glass, rope, book, aluminum. 36 × 12 × 12 inches



Oriels (29 views), Jocelyne Prince, 2018-2020. Blown glass
(inclusions of staples, graphite, mica, silver, soda ash, amber), painted wood, variable dimensions

8. As a noun, *evidence* refers to the available body of facts or information indicating whether a belief or proposition is true or valid, or to signs or indications of something. As a transitive verb, *evidence* means to be or show evidence of. See: *The Concise Oxford Dictionary of English Etymology*, Hoad, T.F., ed. [Oxford: Oxford University Press], based on the *Oxford Dictionary of English Etymology*, the principal authority on the origin and development of English words. There are other relevant etymological treatments, including Walter Skeat, Eric Partridge, etc.

9. All of the definitions in the following text are from the entry on 'abstraction' in *The Compact Edition of The Oxford English Dictionary, Complete Text Reproduced Micrographically, Volume 1, A–O* (Oxford: Oxford University Press, 1971; 23rd Printing, 1984), pp. 42–43. The initial definition of abstraction, and the list of subsequent definitions compiled, are a citation, derived and slightly edited.

. . . how to understand abstraction: to draw away (at first, like its Latin original, a participle and adjective): drawn, derived, extracted; withdrawn, drawn away, removed, separated—even secretly, therefore: to 'secret'—sometimes to purloin. [withdrawn from: contemplation, matter, embodiment, practice, or particular exemplars]. . . and so, subtlety, as a withdrawing from the actual, the concrete, the commonplace. . . or, in a more common sense, not knowing what (one) they (might) say / after the appearance of . . . or, as, with numbers, those which have no denomination annexed into them; a compendium, one thing "drawn from others" a smaller quantity containing the virtue or power of a greater [that is to say: the virtual or the potential of a greater/exterior/other]. An image, of cast shadows, captured in a trace, an image whose arrestment secures the index of capture as a claim to truth or to the verisimilitude of what has (after all) passed away, of what we might say (with some risk) continues to pass away (as if what is gone persists in that negative interval, as if the presumed continuity of its passage grounds such absence as the very promise of recall). A potentiality that also informs and inflects the evidentiary. A state of being withdrawn: in this sense all images are abstract.

By citing the configuration of references on abstraction in this manner in relation to various problems of a philosophical, scientific, or of an aesthetic nature, the intention was to initiate a consideration of the complex and intertwined relations of scientific and aesthetic practices; it is also a re-inscription of one text within another text, an attempt to draw upon the manner in which an authority common to both, comes into place to expand, dilate, or delimit the field of reference, or to establish a hierarchy of significations via the same gesture. See also Thomas Zimmer, "Within and Without Recourse: Leslie Thornton," an unpublished manuscript/lecture (2010); Thomas Zimmer, "Remarks on Certain Affinities

in the course of enquiry; evidence allows us to infer that a theory is true, or, in legal proceedings, to know that a defendant is innocent or guilty. Consequently, *evidence* is sought and is used for the purpose of making *inferences*. While, for the most part, this sets aside or fails to address the aspect of constructedness in the discernment of evidence, it also foregrounds the complicities between inference and the evidentiary. The term 'evidence' is most naturally used in the context of being 'evidence for' some proposition (or sometimes 'evidence against,' and other cognates). The significance of evidence for the task of inference suggests, via Williamson, that we have a concept of evidence in order to characterize certain propositions functionally. To put it in general terms, the concept of evidence serves to characterize propositions in terms of their role in inference. Once again, from an etymological perspective, since *circa* 1300 the term *evidence* indicates "*appearance from which inferences may be drawn.*" As such, *evidence* thereby serves as a material or "outward sign," "indication," or "ground for belief."⁸ That is its nominative form; in its verbal formulation, *to evidence* means "to show clearly, to prove, to bring into appearance;" in its adjectival form, *e-* or *ex-* + *videntem* means "plainly seen or perceived, manifest, obvious."

Since the employment and apprehension of inferential method is inherent in scientific as well as aesthetic practices, and, constitutes, to an extent, a common ground between them, it is important to explore some of the complicities and resistances,

affinities and differences in the scientific and aesthetic artifacts that come into being and take place as a consequence of such practices.

ABSTRACTION

Events, phenomena, objects, processes, are evidentiary: as such they are not immediate perceptions, but cognitive abstractions, and therefore *artifactual*. Evidence is abstracted and constructed. Things look like other things, they are embodied in the transience of each other's meaning, tethered by semblance to a field of common associations. One recognizes representations based on the resemblance of the depicted image to something, or to something like, or something 'drawn from,'⁹ something that one has already seen. The mediation between novel experience and previously apprehended sensory stimuli occurs by reflex, through a mimetic faculty that 'retrieves' significant data from the chaotic external sensorium almost before one knows it. In a sense, raw data is already abstract, at the outset, in the very moment of capture or apprehension, and when one's semantic memory fails to locate a precise equivalent to a given stimulus, it reflexively forces that equivalence. It is in this manner that faces are found in clouds, figures in stones,¹⁰ meadows in the accretion of blots¹¹. A compelling pictoriality may be found even within the depths of etymology, as any careful reader of Francis Ponge discovers. *Le Parti Pris des Choses*¹² wrests the images of

and Differences Between Aesthetic and Scientific Practices," *Artnodes* (2020) [http://artnodes.uoc.edu].

10. Caillois, Roger, *L'Écriture des pierres*, [Paris and Geneva: Flammarion/Skira] 1970; Caillois, Roger, *The Writing of Stones*, trans., Barbara Bray [Charlottesville: University Press of Virginia] 1985.

11. The reference is to Alexander Cozens, who, in his treatise of 1785, entitled *New Method of Assisting the Invention in Drawing Original Compositions of Landscape*, makes reference to a well-known passage by Leonardo Da Vinci in the *Treatise on Painting*:

If you look upon an old wall covered with dirt, or the odd appearance of some streaked stones, you may discover several things like landscapes, battles, clouds, uncommon attitudes, humorous faces, draperies, &c. Out of this confused mass of objects, the mind will be furnished with abundance of designs and subjects perfectly new.

Cozens does this in order to set forth the idea that an improvement has been made on Leonardo's suggestion of "a new method of assisting the invention." He proposed a refinement of the faculty of recognition, which for Leonardo was tempered by chance discovery and fortuity, by developing a method of (visual) invention through the production of artifice. One no longer had to depend upon the aleatory, on random occurrences sought in crumbling architecture or the fleeting impressions inspired by infelicities of light or shadow, but that one might produce such "rude forms" artificially, with a minimal degree of conscious design. The system introduced in the *New Method* involved procedures for the composition of landscapes based on the use of randomly produced artificial ink-blots. This made an allowance for a complex interplay between imitation and invention, method, chance, and design. Cozens considered that the greater part of attention requisite to the act of drawing must be applied to the whole, that is, to the general design of the composition, and to this alone, so that the subordinate parts—the material marks and happy accidents—are left to the casual and unthinking motion of the hand or brush. The distinction between the marks, stains or blots which one might chance upon, and those that one might indifferently render, is therefore negligible to the process of recognition. This early method implies an almost syntactic compiling of lines, blots, stains, splashes carried out in a variety of media — ink or carbon, pigment, dust, sugar, cotton, thread— which prefigures modern disputations on abstraction, materiality and invention in contemporary aesthetic practices. See also: Jean-Claude Lebensztejn, "In Black and White," in *Calligram. Essays in New Art History from France*, Norman Bryson, ed., [Cambridge: Cambridge University Press] 1988, for a sustained discussion of Cozens and the implications of his work for contemporary aesthetic theory.

12. See: Ponge, Francis, *Le parti pris des choses*, [Paris: Poésie Gallimard] (1967). *Le parti pris des choses* is a collection of 32 short to medium-length prose poems published in 1942. *Le parti pris des choses* may be translated into English as *The Way of Things*, *The Way Things Are*, or *The Nature of Things*. There is, perhaps, an echo of T. Lucretius Carus, *de rerum natura* (commonly rendered into English as *The Nature of Things*), though Ponge's texts are more related to phenomenology, or to literary works such as certain texts by writers associated with Oulipo (Ouvroir de littérature potentielle), or certain literary critics associated with the journal *Tel Quel*. See also Lucretius, *On the Nature of the Universe: A New Verse Translation* by Sir Ronald Melville [Oxford: The Clarendon Press] (1997).

13. As Giorgio Agamben points out, the play between the lexical and syntactico-grammatical elements in the *Hypnerotomachia Poliphili* produces "an effect of immobility and almost pictorial rigidity." It is also this very sort of material play that the work's illustrations mirror and multiply. See: G. Agamben, "The Dream of Language," in *The End of the Poem. Studies in Poetics*, Daniel Heller-Roazen, trans., [Stanford: Stanford University Press] 1999. See also, related discussions about the relations between material elements of visual images and language in Gerard Genette, *Paratexts: Thresholds of Interpretation*, Jane E. Lewin, trans., [Cambridge: Cambridge University Press] 1997; *Invisible Colors. A Visual History of Titles*, John C. Welchman, [New Haven: Yale University Press] 1997; Lucien Dällenbach, *Le récit spéculaire: Essai sur la mise en abyme*, [Paris:Éditions de Seuil] 1977; Francesco Colonna, *Hypnerotomachia Poliphili*, 2 vols., Giovanni Pozzi, Lucia A. Ciapponi, eds., [Padua: Editrice Antenore] 1968, rev. 1980; and for a very strange effect, see the translation into English of Francesco Colonna, *Hypnerotomachia Poliphili*, by Joscelyn Godwin, trans., [New York: Thames & Hudson] 1999.

the simplest things from the palimpsest of language, inducing the apparition of familiarity to "give up its ghosts," revealing, revealing in, the strange spectrality which is common to both language and images. A similar spectrality haunts the etymologies of the *Hypnerotomachia Poliphili*¹³, languages which are both indeterminate and determining, within which sense moves, darkly, as if covered by an obscuring skein, beneath the surface, the play of words at making pictures produces striking resonances. Roger Caillois has written an entire book of descriptions of depictions,¹⁴ of images found in the unthinking accretions of stones and minerals, fractures and erosions, images retrieved from mute stones, finding themselves in an idiotic—that is, solitary and singular—poetics. Silent images wrought from stone into language, a mesh or network of associations, this looks like that, memory and resemblance.

At the same time, things, objects, artifacts, are much stranger, penetrate far deeper, and appear in more unexpected places, than we might think.

The words *object*, *objectus*, *objet*, *Gegenstand*, *oggetto*, *voorwerp*, all share the root meaning of 'throwing before,' a 'putting against,' or 'opposite,' as 'opposing.' In the English verb 'to object,' the oppositional, even accusatory sense of the word is still vivid. In an extended sense, objects throw themselves in front of us, smite the senses, thrust themselves into our consciousness. They are neither subtle, nor evanescent,

nor hidden. Neither effort, nor ingenuity, nor instruments are required to detect them. They do not need to be discovered or investigated. They possess the self-evidence of a slap in the face.

–Lorraine Daston¹⁵

An object, as Daston, points out, occludes, interrupts, ‘gets in the way’ of our actions and perceptions; this is clear in the etymology of its various cognates, all having to do with the obstinacy of objects, their proclivity to persist in their obdurate presence. Aesthetic works address spectacle and spectator alike, via objects and images, in order to affect, intervene in, and even transform apprehension, sense and meaning. While their initial circumstances are material and technical, and their method is pragmatic, the most effecting significance of aesthetic artifacts lies in the mediation and transformation of the cognitive ‘eye’ of an audience. Scientific practices are no less visual, but the pictoriality of their artifacts and depictions address other tasks, other knowledge formations.

The operational procedures through which an object—as evidentiary, referential, or in relation to scientific discourse—becomes an artifact, or the manner in which an artwork is secured, its significations rendered stable, are variable over time and also radically contingent, subject to localized principles, methodologies, abstractions, generalizations, or habits. There is often a common ground, to differing extent. There is, too, a curious affin-

14. See: Roger Caillois, *L'Écriture des pierres*, [Paris and Geneva: Flammarion/Skira] 1970. Description: ‘setting forth in words,’ ‘making a picture of,’ a ‘copy,’ ‘to register or portray,’ ‘a graphic account, a scene’; Depiction: ‘a representation or portrayal,’ ‘a figure,’ ‘to image,’ ‘to portray in words,’ ‘a picture or graphic description.’ These definitions come from *The Compact Edition of the Oxford English Dictionary*, Volume 1, A-O [Oxford: Oxford University Press] 1971. One might be only a bit more fanciful and suggest, with some latitude, that the prefix ‘de’ in both terms operates as a form of negation, a *privativum*, that negates or deprives, so that to de-write has the sense of to un-write, so as to form a picture, and to de-pict, to un-picture, might suggest a similar recursion to language. In any case, as Louis Marin suggests, language and image are often coextensive, and deeply co-permeable, “embedded in each other to an uncertain degree.”

15. Daston, Lorraine, “Introduction: The Coming into Being of Scientific Objects,” in *Biographies of Scientific Objects*, Lorraine Daston, ed., [Chicago: University of Chicago Press] (1999).

16. Thinkers such as Gilbert Simondon, Bernard Stiegler, Horst Bredekamp, Bruno Latour, Hans-Jörg Rheinberger, Lorraine Daston and Peter Galison address how and why an object or phenomenon becomes the subject of scientific inquiry; why certain objects remain provocative, while others fade away or disappear, and why some objects inexplicably return as a focus of research long after they have been abandoned. How do objects acquire authority, exercise truth-claims, or serve as evidence? Scientific objects are both real and historical, and, as such, profoundly artifactual, becoming more *real*, more *true*, as they become increasingly entangled in complex webs of cultural significance, material practices, and theoretical derivations. The consideration of objects and artifacts as evidentiary, bound up with inferential reasoning, imbricated with the formation of scientific knowledge, is crucial to contemporary philosophical discussions, including questions of knowledge, technics, images, and methodology. See: Daston, Lorraine, ed., *Science in the Archives: Pasts, Presents, Futures* [Chicago: University of Chicago Press]

(2017); Daston, Lorraine, Elizabeth Lunbeck, *Histories of Scientific Observation* [Chicago: University of Chicago Press] (2011); Daston, Lorraine, Peter Galison, *Objectivity* [New York: Zone Books] (2007); Galison, Peter, *How Experiments End* [Chicago: University of Chicago Press] (1987); Galison, Peter *Image and logic: a material culture of micro-physics* [Chicago: University of Chicago Press] (1997); Bredekamp, Horst, ed., *Das Technische Bild. Kompendium zu einer Stilgeschichte wissenschaftlicher Bilder*, Berlin (Akademie) 2008/ Bredekamp, Horst, Vera Dunkel, Birgit Schneider, eds., *The Technical Image. A History of Styles in Scientific Imagery* [Chicago: University of Chicago Press] (2015); Bredekamp, Horst, *Image Acts. A Systematic Approach to Visual Agency*, [Berlin/Boston: de Gruyter] (2017); Latour, Bruno, *An Inquiry into Modes of Existence: an Anthropology of the Moderns*, trans., Catherine Porter [Cambridge, MA: Harvard University Press] (2013); Latour, Bruno, *We Have Never Been Modern*, trans., Catherine Porter [Cambridge, MA: Harvard University Press] (1993); Simondon, Gilbert, *On the Mode of Existence of Technical Objects* [Minneapolis: Univocal Publishing] (2016); Stiegler, Bernard, *Technics and Time, 1: The Fault of Epimetheus* (Stanford: Stanford University Press] (1998); Stiegler, Bernard, *Acting Out* [Stanford: Stanford University Press] (2009); Stiegler, Bernard, *Technics and Time, 2: Disorientation* [Stanford: Stanford University Press] (2009); Stiegler, Bernard, *Technics and Time, 3: Cinematic Time and the Question of Malaise* (Stanford: Stanford University Press] (2010); Rheinberger, Hans-Jörg, *On Historicizing Epistemology: An Essay* [Stanford: Stanford University Press] (2010); Rheinberger, Hans-Jörg, *An Epistemology of the Concrete: Twentieth-century Histories of Life*. [Durham: Duke University Press] (2010); Beshty, Walid, ed., *Picture Industry: A Provisional History of the Technical Image (1844–2018)* [JRP | Ringier] (2018). There is a substantial secondary literature.

ity in the dispositional logic between the design of an experiment, the composition of an artwork, the configuration of documentation and the taxonomies and exercises of an archive.¹⁶



Foam Moon Study, Katie Bullock, 2019. Graphite on vellum paper, 9.5 × 9.5 inches

