EDGAR LISSEL— BARNABY DICKER





[In the late 1820s,] N. Niépce [...] employed sheets of silver [...] covered with bitumen [...] dissolved in oil of lavender, the whole being covered with a varnish. [Once] heat[ed,] [...] the oil disappeared, and there remained a whiteish powder adhering to the sheet. This sheet thus prepared was placed in the Camera Obscura; but when withdrawn the objects were hardly visible upon it. Niépce then resorted to new means for rendering the objects more distinct[,] [...] put[ting] his sheets [...] into a mixture of oil of lavender, and oil of petroleum. How N. Niépce arrived at this discovery was not explained to us.

Anonymous, 1839²

Leaning Tower of Pisa, Skeleton

Leaf, France, 1817, Courtesy of

Dictvota dichotoma, in the young state; and in fruit, Anna Atkins,

1843, in: Photographs of British

Algae: Cyanotype Impressions

apple was still green, a little leaf got stuck to

its surface. The sun shone, the apple reddened,

but not under the little leaf. And when Eve took the apple, which was pleasant to the eyes, she

flicked off the little leaf, but she didn't notice that a beautiful pale shape of the little leaf was

created there, on the peel of the apple. Neither

did the serpent notice it. Nor did Adam. Nor

did the author of Genesis (otherwise he would

Stefan Themerson, 1983⁴

have mentioned it, and he didn't).

Sammlung Nekes



Lavender Illustration/chromolithography Copyright: QUAGGA

The technical sensitivity, responsiveness, reliability, and durability deemed satisfactory to announce and market photography by the pioneers was already set to a high baseline dictated by industrial society. Chlorophyllography, too, involves sensitivity, responsiveness, reliability, and durability, but of a more subtle order that nods towards what lies beyond and before the industrial project.



Bakterium-Selbstzeugnisse, Edgar Lissel, 1999-2001, light-sensitive cyano bacteria moving toward the light, copyright: Edgar Lissel



Purple snail Illustration / wood engraving, 1885 Copyright: QUAGGA

The first description of the "dye" that can be extracted from a leaf with ethanol-

[Over 2000 years ago,] Aristotle noted that light was necessary for the pigment of the purple snail to develop. Heinrich I. Houben, 1922⁶

1. Physautographie - Tableau de la nature même [ein Bild der Natur selbst] 2. Physautotype - Type de la nature même [Abdruck der Natur selbst] 3. Iconotauphyse - image de la nat[ure] même [Abbildung der Natur selbst] 4. Paratauphyse - Représentation de la nat[ure] même [Darstellung der Natur selbst 5. Alethophyse - Véritable nature [wahrhafte Natur] 6.Phusalethotype - Vrai type de la nature [wahrhafter Abdruck der Natur]

Niépce's list of potential names for photography, ca. 1832.3

But then, maybe the photo-sensitive powers of the Edenic apple were noticed. Perhaps the photogrammatic rule they illustrated through the reddening process was so obvious, so pervasive, so reliable that it was not recognized as conveying a specific quality, replete with potential and plasticity, quite aside to questions of communication or aesthetics.



Installation view of the exhibition Edward Steichen's Delphiniums Museum of Modern Art (MoMA), New York, June 24 to July 1, 1936. Photo: Edward Steichen. Copyright: The Museum of Modern Art, New York. Acc. n.: IN50.2 © 2018. Digital image, The Museum of Modern Art, New York / Scala, Florence



Geranium alchemilloides nature print, first half of the 18th century, courtesy of Album Images / Wissenschaftliches Kabinett Simon Weber-Unger

Ulva lactuca (Meersalat), Phycoseris smaragdina, Phycoseris gigantea, K. k. Hof- und Staatsdruckerei Wien, natur print 1855, courtesy of Album mages / Milaneum collection

The gesture of chlorophyllography always entails an irony, well put by Themerson, that playfully questions the discoverability of photographic processes. Pioneers of photography were not blind, in all their earnestness, to this zoösemiotic aspect of photographic picture-making-"physautographie," "pencil of nature," etc.; only subsequently did it dip out of view.5

Certainly, chlorophyllography requires its human actors to extract, refine, coerce, and control natural materials. But, by the same token, the natural potentialities of the chlorophyll and the ambient lightwaves impose their own limitations and restrictions.



-(ethyl alcohol) and decomposes when exposed to light can be found in the writings of Heinrich Friedrich Link. See instructions on page 133.

The autogenic qualities of light-sensitive materials are fascinating; not least because their effects can be controlled, shaped. Perhaps, then, the deeper fascination is the troubled reconciliation between autogenic nature and human agency.

top Screenshots from a video documentary by Barbara Eisner-B., 2017

Photos (if not indicated otherwise): Edgar Lissel, 2018 Copyright: Edgar Lissel Once the cycles of nature are admitted into the material conditions of communication, variability, ephemerality, and contingency loom into significance. Moreover, this situation emphasizes that the material terms and contents of communication are not fixed. This we are familiar with at the conceptual and social levels of usage. And we are equally aware of the entropic potential of decay. But the idea that material signs and symbols actually change state—that decay can belong to a message rather than undermine it—is less easily grasbed.



of communicative possibilities: These are contact prints-chlorophyllogrammes-of well-defined shapes or forms. But this equally-

The proposition does not reside with an authored body of work, but with a process, a tentative, provisional (sub-)medium; a sharing of possibility, potentiality.



To work with a most basic photographic process, to force this "medium" so associated with modernity, industry, precision, and high resolution back to a primeval state, is a thrilling proposition. When the now-traditional material trappings of photography are stripped back, what remains of it philosophical promise? What changes? What service are such prints put to? Which aesthetic, pictorial tropes will endure? Which will be replaced?



top, center Levin Lissel, 2018

bottom Aurelia Bartussek and Barnaby Dicker, 2018 126

The human process actualizes semiotic processes that it did not make and that it did not shape. Our cultural codes, no matter how sophisticated and multivalued, are what they are by riding on the back of [...] self-recording nature. Robert S. Corrington, 1994⁷



My hand rests over a tray filled with chlorophyll. It protects a specific area from the light. After more than three hours you can clearly distinguish the contrast between the still bright green and the now bleached out, brown chlorophyll. Physical presence, the extreme duration of the individual's involvement, plays a central role in the participative imaging process.

> Myself Edgar Lissel, 2005–2008 Imprint of my own skin bacteria cultures in agar solution Copyright: Edgar Lissel

For Corrington, we must be "unrelenting in [our] drive to overcome the privileging of the human standpoint" and, in its place, "honor [...] the ways in which nature encompasses and enables the human process."⁸ Chlorophyllography may be seen to lean away from a limited *anthroposemiosis* towards an expansive *zoösemiosis*.

Cave of El Castillo, Puente Viesgo Paintings, ca. 40,000 BCE Photo: Pedro Saura





We have developed [...] effector images for each of the functions which we perform with the objects in our specific Umwelt [or environ

[or environment]. Th[ese] effector image[s] [or functional images] we inevitably fuse so closely with the receptor image[s] [or perceptual-

23 September 2018. The wind animates a tussle between summer and autumn. Both seasons are visible in the juxtapositions of different trees, but also, too, on individual branches. The green vitality of summer clashes with the desiccating shift to autumn. This leafy tussle reminds us of the ever-cycling encounter between the sun's rays and the trees.





Time, which frames all happening, seems to us to be the only objectively stable thing in contrast to the colorful change of its contents, and now we see that the subject sways the time of his own world. Iakob von Uexküll, 1957¹⁰



—images] furnished by our sense organs, that in the process the objects acquire a new quality, which convey their meaning to us,

Chlorophyllography is an abstractive process in which plant photo-sensitivity is reconfigured. This mirrors the way humans consider ideal shapes; perfect circles, spheres, cubes, and cones. Garden design has a history of staging the clash between natural botanical forms and distribution and human ideals of shape and order. Bushes grown along perfect lines, trimmed into perfect pyramids or cones.

With the future of current photographic norms in question on environmental grounds, processes such as chlorophyllography do not only offer a tonic, but also different communicative modalities. These are not foreclosed, but rather must be encouraged in and by upcoming generations. What new formats might gain in currency? How might they attract meaning?—less in any final/fading image, but rather in terms of practice, process, and rationale.

The slow fading of a chlorophyllographic print generates a duration for the statement(s) it temporarily preserves as well as those it embodies. The slow fading elegantly echoes the comparably rapid initial exposure that "cures" the fresh light-sensitive solution.

Accepting the principle of evolution, we can observe that nature has developed a wide range of photo-sensitive substances; each of which contribute in different ways not only to their immediate organisms or environments but also to nature as a whole. Silver-based photographic processes rely on non-renewable, finite materials, which are impressive for not only their versatility but also their ability to alchemically fossilize, to lock-up, their photo-sensitivity. Chlorophyll, more limited in terms of photo-sensitivity, if taken in direct comparison with silver, has a hugely shorter shelf-life. If silver speaks to geological time, chlorophyll speaks to lunar and seasonal time.

ind which we shall briefly term the functional tone. If an object is used in different ways, it may possess several effector images, which then lend different tones to the same perceptual image. Jakob von Uexküll, 1957⁹

Ascribing to humans the "discovery" of natural affordances—here, the photo-sensitivity of the natural world—can only be of limited value. Analysis of the workings of nature is, of course, always potentially welcome. But this must not be confused with the *a priori*—archaically prior—existence of such affordances and, indeed, their recognition by humanity. Chlorophyllography could well have been in use by humans for thousands of years...

From a letter by Sir Robin Greenwood to Mrs Mary Somerville, dated 1 May 1839:11

Dear Mary,

I write to you with news of an intriguing footnote to our history of experiments concerning the light-sensitive wonders of nature. During my recent sojourn in France, I was introduced to the botanist M. Turpin by a mutual acquaintance. M. Turpin mentioned the existence of some novel Medieval manuscripts held in the *Archives nationales de l'industrie rurale*, Nevers. Being in the region, I reasoned to visit the archive and consult the manuscripts M. Turpin had brought to my attention.

There, I lighted upon a Medieval compendium on Classical Botany lacking title and author. It contains a letter from Pliny the Elder which I copy out here in full, without adornments. The original was, of course, given in Latin. The only hindrance in its reproduction here thus lies in my own command of that language. I preface Pliny's letter by noting that it appears in the Medieval compendium amid an account of the great Roman natural philosopher's botanical studies. I wager the letter is as unknown to yourself and other scholars, as it was for me when I chanced upon it.

To Rectina, wise and beautiful,

As you know, I am currently stationed at the very edge of the Empire. It is truly so. On foot I can pass beyond the signs of our civilisation – such as we have been able to import them – and on horse, very soon leave behind even local villages and dwellings. The campaigns of three years ago have brought great placidity to the province, and, now, save for the occasional unwanted attentions of isolated groups of savages otherwise wedded to mountain caves and the like, we enjoy peace here.

In my duties I must record the region in all its variety. It is this task, more than any other, that takes me to the absolute edge of the Empire and, excluding my own presence, even beyond it. These trips are usually topographic, ethnographic and, on occasion, diplomatic – in an unimaginably rustic way. These concerns do not, however, preclude more sensitive studies into the flora and fauna of the land. It is with a particular botanical point of interest in mind that I am spurred on to write to you as it recalls to me a long discussion we had in your lush garden several summers past regarding

So would be the case with the foliage used in chlorophyllography... No longer ornamental in a garden or vase, no longer edible, no longer simply *there*, as reminder of nature-as-backdrop to the human theatre. The commodification of DIY activities therefore appears to obscure certain "tones" and to strip back experimentation and pre-determine process.

the relationship between plants and the sun. In one of the friendly native outposts, I met a curious old man, versed in Latin that he must have picked up many years earlier as it had become heavily corrupted. This fellow told me of a most extraordinary plant abundant in a single nearby place that is greatly esteemed and closely guarded by a tribe who make special use of it. So important is this plant to this people that it shapes all aspects of their society.

The plant was described to me as being highly and uniquely light-sensitive. Different to other plants which must be vigorously crushed and made more liquid so as to extract their light-sensitive matter, this rare plant, which I am told resembles *aloe*, offers such a serum readily after one simply cuts off one of its stalk-like leaves.

In possession of this serum the tribe who guard it have adopted many novel uses for it. The number, diversity and extent of the uses the tribe find for the sun-plant suggests ancestral habits begun long before even the great Greek age.

When childhood is left behind, the tribe's young are painted completely with the green serum. Their backs are not exposed to the sun, while upon their front, various hand-sized shapes carved in bark are held to their skin. This means that the sun cannot touch these covered areas, like it does where the skin is exposed. After a day, the shapes are removed and the body retains their outline. The effect is rather like we have seen on the bodies of some Celts, but less permanent.

An excellent use of the serum is made in the storing of records. Again, using bark symbols, certain tribesmen record trade and entitlements, and other such official matters, by laying them on large dried leaves that have been covered with the serum. This way, as many copies can be made as are needed, without occupying a scribe. The validity of these documents and contracts last as long as the markings are legible. These records are kept in dedicated huts without windows.

The old man has given me a detailed description of where to find the plant and the tribe. I intend to visit that region at the first possible opportunity.

Loyally, Pliny



After the method described by Heinrich Friedrich Link in his *Grundlehren der Anatomie und Physiologie der Pflanzen*.¹³ Illustrations by Lion & Bee, Imme Leonardi













 "...A green tincture..." is taken from Heinrich Friedrich Link, Grundlehren der Anatomie und Physiologie der Pflanzen (Göttingen: Danckwerts, 1807), p. 36.

2. Anonymous, "The Daguerreotype," *Galignani's Messenger*, no. 7620, morning edition, (August 20, 1839), n.p., reproduced at: http://www.daguerreotypearchive.org/texts/N8390015_DAGUERREOTYPE_GALIGNANI_1839-08-20.pdf. (accessed on Feb. 23, 2019) This anonymous piece paraphrases François Arago's lecture on the Daguerreotype of the previous day. For the full French text of Arago's lecture and its German translation, see: [François] Arago "Le Daguerréotype," in *Comptes rendus hebdomadaires des séances de l'Académie des sciences*, Second Semestre (1839), pp. 254–257; and [François] Arago, "das Daguerréotype," in *Annalen der Chemie und Pharmacie*, vol. 31–32 (Heidelberg: C.F. Winter, 1839), pp. 220 and 229. Niépce had refined his method involving lavender oil by 1827. See: Stulik, Dusan, Art Kaplan, and Herant Khanjian, "The first scientific investigation of Niépce's images from UK and US collections: Image layer and image formation," *The Imaging Science Journal* no. 61, 8 (November 2013): pp. 602–628.

- See: Aaron Scharf, Pioneers of Photography: An Album of Pictures and Words (New York: Abrams, 1976), p. 39.
- Stefan Themerson, *The Urge to Create Visions* (Amsterdam: Gaberbocchus and De Harmonie, 1983), p. 59.

- See: Scharf, Pioneers of Photography, p. 39; Geoffrey Batchen, Burning with Desire: The Conception of Photography (Cambridge, MA: MIT Press, 1999), pp. 62–69, 177–183.
- Cf. Heinrich J. Houben and Theodor Weyl, *Methoden der Organischen Chemie*, vol. II, 2nd ed. (Leipzig, Thieme Verlag, 1922), p. 913. Translated for this publication.
 Robert S. Corrington, *Ecstatic Naturalism: Signs of the World* (Bloomington, Indianapolis: Indiana University Press, 1994), p. 180.

8. Ibid., pp. 180–181.

 Jakob von Uexküll, "A stroll through the worlds of animals and men: A picture book of invisible worlds," in *Instinctive Behavior: The Development of a Modern Concept*, ed. Claire H. Schiller (Madison: International Universities Press, 1957), p. 48.

10. Ibid., p. 13.

- Reproduced in H. Oakes, Your Garden Laboratory (Bromyard: Gardeners' Press, 1918).
- 12. See: Malin Fabbri, Anthotypes: Explore the darkroom in your garden and make photographs using plants (Stockholm: AlternativePhotography.com, 2012); Museum of the History of Science, "Herschel's Phytotypes (Vegetable Photographs)," http:// www.mhs.ox.ac.uk/collections/imu-search-page/narratives/?irn=5533&index=0 (accessed on Nov. 19, 2018).
- 13. Link, Grundlehren, pp. 36-37.

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