The poetry and prose of H.D. set readers at stations within the living observatory of her mindwork. The poet-seer's writings offer instruments to see beyond usual powers—detail after detail shifts into new focus, words refract as lenses of a microscope, telescope, or cinema projector—three magical powers actually involved in shaping her unique blend of concrete with psychic vision.

Hilda Doolittle was born at the full of the Victorian-style quest for scientific knowledge by diligent personal observation, collection, notation and classification. Her grandfather was an authority on freshwater algae, her father a noted astronomer. To the child, these were awe-inspiring men who discovered living bodies in pondwater's green scum or kept long night watch to glean secrets of the heavens. From birth, she was influenced by these devoctions to exactitude at reading the universe, interpreting meaning that would be evoked by avid study of detail and its accurate rendition into drawing and written symbol. She absorbed the discipline of their concentrated search, and its mystery, for the myriad specific tiny plants and orbiting sky-presences were invisible to the naked eye.

The methods of these close paternal scientists may be seen to correspond with two rules of the 1913 Imagist credo: "direct treatment of the 'thing'" and "no word that does not contribute to the presentation." The making of "the perfect Imagist" begins well ahead of Imagism's innovative literary stir in London pre-World War I, and before the appearance of Ezra Pound in her life during her late teens.

The fortunate memoir by H.D.'s cousin Francis Wolle, titled A Moravian Heritage (1) offers a participatory view of Hilda Doolittle's early environment. In their two adjacent houses, six Wolle children and four young Doolittles shared household intimacies, backyard play, family events, elementary education at Moravian Parochial School, and Grandfather—the microscopist H.D. called Paplie, her mother's father, Rev. Francis Wolle. It was not until the age of sixty-four that this patriarch turned to his pioner studies in micro-botany. By the time of his death twelve years later, he had become the recognized international authority on freshwater algae, desmids and diatoms, identifying thousands of species of minute living components of the green scum that gathers on lakes and ponds. H.D.'s cousin explains, "If you will rub it off on a piece of paper, and when you get home place it under a microscope, you will find it to consist of tiny plants of a great variety of shapes and colors. These are the cryptograms."(2) H.D. tells of the wonder in her memoir The Gift:

When Papalie lifted us, one by one in turn, to kneel on the chair by his worktable, we saw that it was true what he said, we saw that there where is nothing, there is something. We saw that an empty drop of water spread out branches, bright green or vermilion, in shape like a branch of a Christmas tree or in shape like a squashed peony or in shape like a lot of little green-glass beads, strung on a thick stem.(3)

Concentrating for hours each day over his microscope, their grandfather examined drop by drop, measured and sketched each figure of a new species he saw, and "reproduced their colors in meticulously exact renderings."(4) The aging scientist published three books containing a total of 5700 figures reproduced "from the author's drawings"; in later revised editions, he added 300 more.(5) Each new species identified required creation of a name; as was commonplace in scientific nomenclature, elements of Greek or Latin were amalgamated into names that evoked specific characteristics of the organism.

The scientist's drawings show a graceful and meticulous skill which is equalled by his text. His introduction to Diatomaceae of the United Statesbrings to life the landscape and terrain of his searches in flowing montage:

The marine forms abound in the sea depths, in marshes which are flooded at high tide, in shallow inlets and the muddy bottoms underlying the sandy surface of the seashore. The fresh water forms are plentiful on the mossy stones of mountain streamlets, pools bordering rivulets, dripping rocks. [Edition of 1890]

Subtleties of color are essential to accurate identification, as: "green, then pink grading off into all the shades of purple, and finally olive, from golden green and bright tawny to black; indeed, there are few if any colors from the most gorgeous to the dullest, but are to be found among the Algae."(6) An enthusiastic appreciation.

Because technology for color printing did not yet exist, the author set up a team system of hand-coloring the plates that came off letterpress in black and white. The method is engagingly described by H.D.'s cousin. After the large unfolded sheets with their thousands of drawings (by the author) printed in black and white came off the press, the tall, white-bearded Rev. Wolle mixed water color tints and painted each figure the hue of the original specimen. Six indigent female relatives were hired and trained to work with paints and brush to produce perfect copies of his key sheets, which the scientist then scrutinized for the least variations. Of special interest to readers of H.D. is the information that "next-door cousin" Hilda earned pennies by transporting the precious rolled up sheets in bundles to the women who were to tint them. The expensive sheets, covered with thousands of cryptic drawings, catalogued and named in variations of category, as "Melosira crotonensis...spiralis...sculpta..." were to be tinted exactly with the tip of a brush and carried back to the scientist-scribe who would, as the final culmination of all this effort, have them bound into a book. "The scribe," H.D. affirms in the maturity of her Trilogy, "stands second only to the Pharoah.(7)

Color identification and botanical study enters H.D.'s Sea Garden, her first volume of poetry, published 1916(8). In the poem, "Sea Gods," she seems to model the ancient Greek catalogue form almost into a naming of species:

But we bring violets

... wood violets, stream-violets,
Violets from a wet marsh.
Violets in clump from hills,
tufts with earth at the roots,
violets tugged from rocks,
blue violets, moss, cliff, river-violets,
yellow violets' gold,
burnt with a rare tint--
violets like red ash
among tufts of grass.

We bring deep-purple
bird-foot violets.

We bring the hyacinth-violet,
sweet, bare, chill to the touch--
and violets whiter than the in-rush
of your own white surf

In "Pursuit," she applies the detecting eye of a scientist observing structure for clues:

the green stems show yellow-green
where you lifted-turned the earth-side
to the light;
this and a dead leaf-spine,
split across,
show where you passed.

H.D.’s famous precision of description applies to a male torso as to a specimen: “The ridge of your breast is taut,/and under each the
shadow is sharp,/and between the clenched muscles/of your slender hips” ("The Contest"). The poems “Sea Violet” and “Sea Rose”
demand that we look closely at small things to discover beauty and endurance. Rev. Wolle describes how microscopic diatoms may
attach stalks to "stones, wood or other adjacent objects to prevent ... being swept away by currents and waves."(9)

The scientist, however, does not speak directly to the small bit of life, as does the poet:

Violet
your grasp is frail
on the edge of the sand-hill,
but you catch the light--
frost, a star edges with its fire.

In the above stanza, H.D. uncannily merges the microscope’s concentrated magnifying power, the telescope’s power to bring a star near
at hand, and a cinematic held-shot--the object shimmers though motionless within the frame.

H.D.’s father, Charles Doolittle, Professor of Astronomy and Mathematics at Lehigh University, later director of Flower Observatory
at University of Pennsylvania, directed his attention to nightly observations of the stars and to daytime mathematical calculations to elicit
the meaning of his observations. To Hilda, the astronomical markings were mysterious, cryptic signs, coded keys to heavenly
constellations. The "signs" her father wrote upon paper were not to be touched and his concentration was not to be disturbed.

In HERmione, the autobiographical roman à clef of her late adolescence (10) H.D. represents the father as biologist, but the home
atmosphere is true memory. As the father spends evenings working under a concentrated "cone of light," the mother sits effaced in the
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dark, hands busy with knitting, an occupation she could manage while sitting in shadow.

H.D. reveals in Tribute to Freud the kind of fear concomitant with the child’s powerlessness in the presence of such men, to be
cought between the double lenses of "my father’s telescope, my grandfather’s microscope. If I let go (I, this one drop, this one ego under
the microscope-telescope of Sigmund Freud) I fear to be dissolved utterly.”(11)

Her psychic solution is to reverse and internalize the scrutiny. In her art she becomes herself receiver and refractor of images/signs
to be inscribed into words. What is more, she lifts Helen--her self-identity, and her mother's first name--out of the shadows, into the
brightly lit concentration of the lens, and magnifies her. The early poem "Helen" is charged with the dynamics of a cinematic held shot;
the epic late poem Helen in Egypt includes dream and memory in the struggle for transformation, and takes us into rhythms of a motion
picture that may be replayed.(12)

The autobiographical novel HERmione, by style and content, offers insight into H.D.’s internal perceptions at the crucial chrysalis
period when she determined to fuse her identity to the vocation of poet-seer. Images break apart from the matrix, thoughts are
juxtaposed in counterpoint with outer stimuli. The brain, desperately trying to link up the welter of impressions, gives way to a period of
illness, an incubation that helps her emerge to a fuller sense of herself.

In the first section, Hermione’s mind is pictured as “a patchwork of indefinable association” (p. 24), as "breaking up like molecules in
test tubes" (p. 31). We follow her eyes and her thoughts. "Staring with her inner vision" she focuses on an object, hoping for a yield of
meaning:

Her eyes peered up into the branches. The tulip tree made thick pad, separate leaves were outstanding, separate leaf-discs,
in shadow. Her Gart [H.D.] peered far, adjusting so to speak, some psychic lens, to follow that bird. She lost the bird, tried to
focus one leaf to hold her on to all leaves; she tried to concentrate on one frayed disc of green, pool or mirror that would
refract image. She was nothing. She must have an image no matter how fluid, how inchoate. (pp. 4-5) (Italics mine).

Her observation is biologist-exact:

Minnie was zinnia-colour, no colour of wild lilies. A zinnia was a flat vegetable sponge, sucking up sun, never giving out sun. Those lilies were the sun-self, spotted she knew like the wings of beetles. Beetle-lilies. (p. 23)

We see a sudden close-up:

A face would loom at her, freckles magnified across a drawn pale countenance. (p. 14).

Fusing astronomical to biological image, she is obsessed by a compelling need to see and hold on to whatever vision her mind presents:

...trying not to obliterate the memory of an eclipse of the sun by a huge bee (under a magnifying glass). (p. 14)

The bee image wings her on to new vision projected within her mind, and she is rewarded:

Translucence of beewing veiled the terror of protoplasmic function. (p. 14).

Here, the poet's mind has triumphed by the marvel of superimposition. Coping with a mosaic bombardment upon the senses, it is the mind which relates one part of the jumble to another.

Although _Hermione_ re-enacts events of 1907-1910, H.D. wrote the book twenty years later, at a time of enthusiastic involvement with the art of cinema. In the following excerpt, we are given a narrator's voice from the later time: (The word "conscience" confuses in this context, perhaps meaning something like "consciousness").

Precinematographic conscience didn't help Her. Later conscience would have. She would later have seen form superimposed on thought and thought making its spirals in a manner not wholly related to matter but pertaining to it and the peony petals magnified out of proportion and the people in the room shrunk to tiny insects while the teacups again would have magnified into hemispheres. (p. 60).

It is a characteristic of film form that inanimate objects take on the force of living beings, while human figures can appear as pure image or hieroglyph.

The "onlooker's" voice inserted into the narrative documents H.D.'s attitude toward her discovery of the art of film and its tremendous importance to her as a key to handling her perceptions. _Hermione_ enacts inner dynamics of H.D.'s mind in the year she felt stifled by the paucity of her options and her drastic failure to graduate from Bryn Mawr. The reader experiences tinkle and chatter of tea parties, provincial conversations, Hermione's automatic verbal responses using a trained part of her brain. For a brief period, she lets herself become engaged to George Lowndes (Ezra Pound), but he does not really see her. "You are so damned decorative," he comments as she sits by a fire. The Pound character affects her far less deeply than the young woman who becomes her intimate friend, Fayne Rabb (Frances Gregg). Their use of words is intense, each trying to "get through" the other:

Words with Fayne ... became projections of things beyond one ... prophetess faced prophetess ... two teacups making delphic pattern on a worn carpet ... and people and things all becoming like people, things seen through an opera glass ... and it was Hermione's entering new game to turn a little screw, a little handle somewhere (like Carl Gart with his microscope) and bring into focus those two eyes that were her new possession ... You put things, people under, so to speak, the lenses of the eyes of Fayne Rabb and people, things come right in geometric contour. (p. 146)

Yet Hermione does not really see her friends whole--Fayne is thought of as a pair of eyes, white hands, a snatch of conversation. George Lowndes is seen in parts--she rather dislikes his red Harlequin mouth. Somehow, Hermione/Hilda searches for focus, a lens by which she may see things and people "come right."

The influence of Ezra Pound upon H.D.'s formulation of herself as a poet and as Imagist has generally been assumed as axiom; he could not, however, have been indifferent to her unique sytle of seeing/phrasing. It is clear from _Hermione_ that the young Hilda who attracted him was gifted with a powerfully active mind open to fascinating details of their shared universe. It was never easy for H.D. to extract her sense of self independent of a male figure she feared might reduce or magnify parts of her personality. Looking at her father, Hermione thinks, "Gart is too terribly in me ... Screw of light that had always been there, burning incandescent in the room" (p. 80). She resents the dissective defining paths of science, associated with the male figures: "I am tired of things that make molecule pattern and people and things all becoming like people, things seen through an opera glass ..." (p. 30).

The thing that was is not. (p. 212)
Timelessness has been made visible. Her consciousness has escaped the clamp of the double lens. Nature itself offers visual enactment of the mind's marvelous ability to superimpose, dissolve image into another. This magical moment of quiet epiphany carries cinematic richness. She does not have to re-screw the psychic lens but simply see, absorb, become.

In nature, such moments must be given; art must strive to construct the moment that becomes another. Hermione believes the aim of science is to sort out, catalogue details. But "art was what science wasn't. Art was the discriminating and selecting and bringing odd distorted images into right perspective" (p. 139). For a while, she breaks down with the effort of forcing herself to refract bits and pieces of the jumble until final resolution, symbolized by an unbroken landscape of snow. "Her feet were pencils tracing a path ... across a space of immaculate clarity, leaving her wavering hieroglyph as upon white parchment" (pp. 223-224). Again, nature helps her to signify.

As in the repeated motif of Helen in Egypt, "She herself is the writing." Because HERmione is neither diary of its events nor a frank memoir, the portrayal of the young woman's mind is necessarily overlaid by the outlook of the narrator of twenty years later. The cited reference to "precinematographic conscience" clearly marks the older voice. During the late 1920's, H.D. played an active role as one of a group of enthusiastic cineastes centered in Territet, Switzerland where her close friends Kenneth Macpherson and Bryher (then married) edited the avant-garde film magazine Close Up.

Macpherson cast his friends in his experimental films Wing Beat and the ambitious Borderline which starred Paul Robeson and featured H.D. in a leading dramatic part. From 1927 to 1930, H.D. published in Close Up eleven film reviews (of films now classic such as G. W. Pabst's Joyless Street, Carl Dreyer's Passion of Joan of Arc, The Student of Prague with Conrad Veidt) and two poems titled "Projector." An essay on Borderline (39 pages) was published as a separate pamphlet.

In a questionnaire interview published May 1929, H.D. tells of her delight in filmmaking. "The work has been enchanting, never anything such fun and I myself have learned to use the small projector and spend literally hours alone here in my apartment, making the mountains and village streets and my own acquaintances reel past me in light and light and light ... I feel like a cat playing with webs and webs of silver."

Through film art, H.D. experienced another moment of epiphany. She tells of this in her appreciation of Garbo in Joyless Street,(14) and weaves the key incident into Bid Me To Live, the roman à clef of her life during World War I. In the novel, she responds to a "silver goddess," image of pure abstraction--beauty. Of Garbo, she says, "'Chance' led me one day to worship." She writes of "Greta Garbo ... trailing with frail, very young feet [compare Hermione in the snow] through perhaps the most astonishingly lovely film I have ever seen, 'Joyless Street.'" The shimmering image of the woman becomes, in some way, clear to the psychic lens of herself. "Greta Garbo, as I first saw her, gave me a clue, a new angle, and a new sense of elation." The inner vision she saw and put into words in her early poem "Helen," shining with "the lustre of olives ... and the white hands," now fills the screen and gazes back to her. Helen is pure light, but made visible, no longer invisible as the star by day. This was, for H.D., "my first real revelation of the real art of the cinema."

H.D. writes about cinema almost as an evangelist: "A perfect medium has at last been granted us. Let us be worthy of it. ... Light is our friend and our god." The two poems titled "Projector"(15) address light drawn through the projector's lens as pure divine beneficent essence:

light reasserts
his power
reclaims the lost;
in a new blaze of splendour
calls the host
to reassemble
and to readjust
all severings
and differings of thought,
all strife and strident bickering
and rest;
O fair and blest,
he strides forth young and pitiful and strong.
...
light
who is god
and song. (Collected Poems, pp. 349-350)

The hypnotic attraction of cinema has so thoroughly permeated the expectations of our present day percept that we forget the art is barely a half century old. H.D. is ecstatic with the wonder of her own responses. "Projector" concludes:

worn
dusty feet
sink in soft drift of pine
needles
and anodyne
of balm and fir and myrtle-trees
and cones
drift across weary brows
and the sea-foam
marks the sea-path
where no sea ever comes;
islands arise where never islands were,
crowned with the sacred palm
or odorous cedar;
waves sparkle and delight
the weary eyes
that never saw the sun fall in the sea
nor the bright Pleiads rise. (Collected Poems, p. 352)

Halfway through the poem titled "Projector II," persona voice changes to that of the god himself addressing the "neophyte":

You are myself being free
...

Your souls upon the screen
live lives that might have been,
live lives that ever are;
...

we raise a living thing
we draw it to the screen
of light on light on light;
...

the moment makes you great,
evoe makes you taste
pure ecstasy;
the snake
crawls from his leafy nest,
so you,
you to my breast
I call your spirit here,
I light you like a star,
I hail you as a child,
I claim you as a lover. (Collected Poems, pp. 357-359)

By its magic the projector functions as god and as parent and as lover. Her soul, her spirit transforms from image to image to different place, different time: "tomorrow/you are other."

In her laudatory discussion of Macpherson's film Borderline, H.D. writes, "Art and life ... drama and music ... epic song and lyric rhythm, dance and the matter of science here again [italics mine] take hands, twine in sisterly embrace before their one God, here electrically incarnated, LIGHT."[16] To call forth this god-miracle, H.D. knew, required a hard-working alliance of creative genius with machine. She shows Kenneth Macpherson as a young auteur director. Besides holding the "renowned" Debevre camera and directing an "elaborate series" of lights, "he writes a script which he meticulously illustrates with a series of some 1,000 pen sketches." She counts 910 "captions" or descriptions of each carefully composed shot. Her account recalls two other men; Macpherson's painstaking intensity seems equal to the precise, tireless concentrations of the microscopist Rev. Francis Wolle and the astronomer, Professor Charles Doolittle.

There is another correlation among the three occupations. Most impressive to H.D.--and the capitalization for emphasis is her own--is that Macpherson directs from behind the camera, "facing his models, not eye to eye, as is the case of the usual director but THROUGH THE LENSE [sic]." The visual portrayal finally put before us has been discovered through the lens, not by the naked eye. The cinema shot is a representation of his skill and assiduous attention, no less than a drawing of a microorganism or the radiant pattern of a star. But the filmmaker's drive is "creative impulse" (again, emphasis is H.D.'s). "The cinema-camera is a renaissance miracle or a Greek incarnation, it is monster compound ... of steel and fibre and final miracle, that delicate crystal lense" (p. 14).

Through this miracle machine, the inner eye could portray the actualities of mindwork. This, for H.D., is the culmination--"film is the art of dream portrayal"--the shimmer of significance, the "something beyond something" she sought to receive and project into words. The child Hilda in The Gift discovers the process of her thought: "you saw what was there, you knew that something was reminded of something. That something remembered something" (p. 72). Hermione resolves that her vocation will be to "put things into visible language." Dream-image is a thing no less real than a star invisible by day or an unsuspected swirl of micro-botanic life. In H.D.'s work with Sigmund Freud, dreams and memories were examined as things, her associations accorded the status of realities. The mind ignores linear measure, slides time forward, backward. Thoughts rise or fall in spirals of recognition. The grammar of cinema operates only in the present tense. Past becomes the scene we see now as flashback. Memory becomes the field, the person, the room, we are visually absorbing now.

H.D. was excited and challenged by the Soviet film Turksib (1929), a masterwork of its era on the unlikely subject of building a railway between Turkestan and Siberia. Her review in Close Up describes "the making of an engine, perfect in nuance of superimposition, drawing-board traceries, abstraction of T-square and ruler and numerical statistics."[17] Again, she experiences a moment of epiphany: '"Thought,' one wanted to shout aloud, 'is here for the first time adequately projected.' ... These are not images made artificially but thought itself, seen for the first time, in actual progression."

Helen in Egypt meets the challenge of representing in poetry the mind's work as it views, absorbs, reacts and causes in turn further action, question, conclusion by reliving of memories, dreams, waking dreams. To achieve her art, she concentrates light through the lens of her inner vision, frame by frame. In the book's structure of prose introductions to each poetic sequence, we hear the interpretive
part of the mind, the onlooker examining the shifts in focus presented by the lens of the persona's consciousness, the poetic stanzas. The book's imagery is predominantly visual; at times, the sun's fire is drawn as by a lens: "the blazing focus/of the sun-blade, the ember" (p. 205). H.D. never forgot the childhood incident relived in *Tribute to Freud* of her brother igniting fire by focussing sun rays through a magnifying glass.

There is danger in drawing the rays of meaning or prophecy to convergence through the lens of oneself, but our fiery sun is itself a manifestation of "something beyond something." In a poem published 1937, she claims the courage of her vision: "I saw/that Star by day ... I shot past heaven's centrifugal heaven/to find/the ultimate Sun that makes our own sun blind."(18)

In her poetic process, H.D. fuses her creative visionary drive with the unflinching examinative view of her scientist father and grandfather. During the time she was "involved with pictures," she moved eagerly into widening realizations of her artistic strengths. From Switzerland in 1929, H.D. answered the question, "What is your attitude toward art today?"

She said, "There has never, I am certain, been a more vibrant, a more exciting era for the pure artist, to anyone who wants to make something ... out of Chaos."(19) Writers of that era applying stream of consciousness technique to enact the mind's rapid intake of chaotic awareness may have prefigured leaps of thought in science. A new discipline of physics declares its very name Chaos as it aims to chart patterns that may be predictable in arhythmias of sky, earth and human heartbeat.(20) Hilda Doolittle's exquisite vision of time engraving new symbols on visible markings of the past superimposes luminous as film upon present scientific thought into patterns of our future. "I fear," she wrote, "the being caught in any one set formula or set of circumstances." By restless sharpening her self as visionary instrument, she prophesies healing of rifts between science and art.

Notes and References

6. As quoted in *A Moravian Heritage* (1884 volume), p. 24; probably from a revised edition, as this quotation does not appear in the edition listed above.
9. Introduction to *Diatomaceae*.
15. Published in *Close Up*, July and October 1927; included in *Collected Poems 1912-1944*.
The microcosms not readily available to the naked eye are vast landscapes yet to be fully charted by scientific study. So, in the spirit of believing that even intestinal parasites can be entrancing under a microscope (see below), these photographs were all curated from our own vast landscape of vivid macro imagery focused on the beauty in nature and biology. Scroll on to see 8 of our favorite macro photographs, then head on over to our featured lightbox, Macro Menagerie for more close-ups of the seemingly alien terrain found in our own bodies and backyards.

Tomatito | Extreme closeup of co

In common use, the naked eye includes eyes aided by ordinary glasses (spectacles) or contact lenses because these are designed to give a person average vision rather than to artificially magnify the image being viewed. When something is able to be seen with the naked eye it can be seen without any optical instruments. Examples Of Use. Criminals often leave behind trace evidence that is too small to be seen with the naked eye. This is why police collect seemingly ordinary and mundane objects from crime scenes. Some of the planets, like Mercury, Venus, Mars, Jupiter, and Saturn, can be seen Magic Lens. By Denis Forkas Kostromitin · Updated about 6 months ago. All images in this album are reproduced at various magnifications (up to ten times the size of originals). The pieces from which the details were taken are referenced/linked in descriptions. I hope you will enjoy the magic occurring beyond the naked eye as much as I do.