

HUMAN-PLANT MUTUALISM IN THE INDUSTRIAL BUILT ENVIRONMENT

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If you are a poet, you will see clearly that there is a cloud floating in this sheet of paper. Without a cloud there will be no water; without water, the trees cannot grow; and without trees, you cannot make paper. So the cloud is in here. The existence of this page is dependent on the existence of a cloud. Paper and cloud are so close.¹

This is a note about the demystification of sources. Having been buried or forgotten under layers of interpretive strata, ‘the obvious’ beckons for occasional acknowledgement and recognition. Many literary, philosophical and historical efforts reside in the assemblages of pressed and inked signs on the thin surface of sheets of pulverized and reconstituted deceased arboreal and floral tissue. So, Hanh’s observation can be extended to science, as well. A scientist, as well as a poet, would be predisposed to see a cloud, and many other things, in a sheet of paper.

As a miniaturization, a book is a “cognitive artifact”²: it is an indexical distillation of thought. The transmission of human thought across continents and centuries in the form of books is a wonderful act of defiance of both space and time. But, as our eyes and fingers flow over the sequentially ordered printed signs laid upon sheets of reorganized and pressed arboreal and floral tissue, as we go through our libraries, paging through old books (and occasionally finding a pressed leaf or flower from a past moment of

(1) Thich Nhat Hanh, *The Miracle of Mindfulness* (New York: Beacon, 1987), 45.

(2) Keven Birth, *Objects of Time* (New York: Palgrave Macmillan, 2012), 6.

reading in a park or in the woods), when we consider the role played by plants and trees throughout time in intellectual development and discourse, the distinction between ‘artifact’ (an object made by human beings) and ‘ecofact’ (an object not made by human beings but having cultural significance nonetheless) becomes blurred. As William Cronon has observed in *Nature’s Metropolis*, “only the sun produces.”³ All terrestrial organisms share commonality in their work towards reconstituting and reforming this primary energy source, and because of this, they engage in shared effort, albeit towards different goals and objectives. In a conference in Montreal, “Deindustrialization and Its Aftermath” (Concordia University, May 1-4, 2014), I could have heard a pin drop when I suggested that we should extend the appellation of ‘working class’ to other species, but the suggestion makes sense when we think of the role that plants and trees play in the entire substance of human civilization. Even chlorophyll is now recruited into the project of energy production. The ramifications for archaeology is that, perhaps when we look at something like a ‘piece of wood,’ on a site, or a ‘piece of paper’ in the archive, we could broaden our scope of interpretive possibilities, to extend beyond utility or function towards an acknowledgement of the mutualistic interdependence of life forms. Archaeological investigations generally begin with the moment of procurement or harvesting of a particular material object, if they even bother extending that far back. I could, therefore, serve to perpetuate the tradition of mystification by simply stating that, ever since the invention of paper by Ts’ai Lun in A.D. 105 (initially a mixture of tree bark, old cloth and hemp),⁴ scholarly and academic discussions have been printed on

(3) William Cronon, *Nature’s Metropolis* (New York: W.W. Norton, 1991) 150.

(4) Dard Hunter, *Papermaking: The History and Technique of an Ancient Craft* (New York: Dover, 1978 [1943]), 50.

paper. But I feel the need to momentarily express a bit of indebtedness to the trees that, in their demise, became a “natural resource,” thereby extending the chaîne-opératoire further back in time, and outward in space, into a brief moment of struggling, fluttering arboreal life. The sense of camaraderie and companionship that develops between a carpenter and a tree is not simply romantic: both entities share comparable space within the inked pages of account books during the early years of industrialization: board feet and man days are counted as commensurate entities. A kind of empathetic parity arises.

Just as with the body of a carpenter, the primary function of a plant’s tissue, is, after all, to live, and it these properties—devoted solely to the act of living—that are in turn, translated into use by human beings. In its form and structure, the substance of paper has provided the archive of civilization and non-civilization more than simply a remarkably durable surface upon which to reside, but in its regularity, uniformity and bondedness, it imparts upon text-delivered thought the illusion of coherence. In libraries and archives throughout the world, billions of strands of reconstituted plant tissue tie together strands of thought through molecular bonds. This is not to absolve the present writer of his struggle and obligation to formulate a coherent narrative; i.e. ‘putting words to paper’ is not enough, but it should be noted that many books and papers, as “cognitive artifacts,” impart a sense of order and integration simply through the formal and material properties of their presentation. It is the burden of the writer to simply do justice to the molecular bonds within the substance of paper.

Inez: ...I wish we’d had some flowers to welcome you with.

Estelle: Flowers? Yes. I loved flowers. Only they’d

fade so quickly here, wouldn't they?⁵

If we are to look to Western philosophy for some kind of precedent for understanding plants in their relation to mass-industrialization, we will have difficulty in finding classical references that are even willing to ascribe to them the status of fully living beings.⁶ However, we might find some guidance in existential thought as it emerged in Europe after World War II. Marder's term "vegetal existentiality"⁷ and Morton's "coexistentialism"⁸ allude to philosophical themes of alienation initiated by Kierkegaard and furthered by Sartre, Camus and others. I would assert that, in spite of the prevailing tyrannies of instrumentalism (use) or nominalism (categorization) that dominates our relationship with plants, a kind of mutualism nevertheless endures between plants and humans within industrial settings. When referring to their place of work, factory workers often make reference to 'the plant,' and although it is generally assumed that they are not talking about a vascular biological life form as plants are generally understood, there is a shared meaning in the idea of rootedness, groundedness, having a location and a place on the earth. While this appropriation of the term 'plant' for a site of industrial activity may serve to naturalize its presence, this shared use of the word also offers insight into how there might be kind of existential parity, even perhaps a kind of "species androgyny"⁹ between plants and humans. The simple motion of a solitary leaf fluttering in the wind is enough to conjure a strong attachment. This

(5) Jean-Paul Sartre, *No Exit and Three Other Plays* (New York: Vintage, 1955), 11.

(6) Matthew Hall, *Plants as Persons* (Albany: State University of New York Press, 2011).

(7) Michael Marder, *Plant-Thinking: A Philosophy of Vegetal Life* (New York: Columbia University Press, 2013), 91.

(8) Timothy Morton, *The Ecological Thought* (Cambridge, MA: Harvard University Press), 52.

(9) Eduardo Vivieros de Castro, *Cosmological Perspectivism in Amazonia and Elsewhere* (Hau Masterclass Series: Cambridge, 2012), 75.

is acknowledged by Emerson, who wrote in *Nature* in 1836: “The greatest delight which the fields and woods minister is the suggestion of an occult relation between man and vegetable...They nod to me, and I to them.”¹⁰

The bleak, barren decimation of the industrial landscape and the abjection of its participants is a well worn path in literature, art and film. In terms of explanation, this particular event has justifiably been approached agonistically, through class-struggle and conflict, and yet I would argue that an examination of the mutually intertwined lives of humans and plants also offers valuable insights. Within the pages of an early industrial newspaper, printed and distributed for the first major factory operation in the United States—The Lowell Offering—there is a fascinating account of a hint of human-plant mutualistic expression. An observer of the factory noted that, in 1840, there were hundreds of potted plants and flowers scattered throughout the mill complex (an image we tend to reserve for contemporary artist studios). This information adds a touch of color to the conventional picture, conditioned by years of looking at black and white photographs, as well as the aforementioned descriptive passages that seem to portray a viewscape devoid of all color and life. The motives and purpose behind the incorporation of plant and flower forms into the varied components of the mill site is open for speculation (probably to ease the workers’ transition from the countryside), but it was an activity of interest not only to the workers but also the managers of the factory. The author of the article in goes on to state:

The Superintendents manifest a lively interest in this matter; and some of them have furnished large numbers of plants and flowers, with instructions to

(10) Emerson, as quoted in Barbara Novak, *Nature and Culture: American Landscape and Painting, 1825-1875* (Oxford: Oxford University Press, 1980), 104.

the Overseers to furnish every facility of the girls for the cultivation thereof; and several proprietors have displayed commendable liberality in sending floral contributions, in rich variety, to ornament the mills.¹¹

After relating what was visible in the mills, the author continues, offering a celebratory suggestion: “Let every room be generously supplied,” referring to spaces of production as well as habitation. This account is corroborated by a prose-poem penned by Lucy Larcom, a worker at Lowell during this time period. Both accounts attest to the close ideological relationship that existed between early industrial planning and the utopian imagination of the time. Oddly entitled *An Idyl of Work*, Larcom’s poem is replete with sensory impressions of this new industrial setting. In one passage, Larcom relates an event where a group of mill girls are briefly observed by some inspectors who momentarily enter their work space:

Here Esther, Eleanor, and Isabel
Worked in a sunlit corner, side by side,
That looked down towards the river.
Eleanor’s plants, -
Roses, and one great oleander-tree,-
Blooming against the panes, intensified
The whiteness of her face.¹²

Forgotten partners in the factory process; a rose, an oleander tree, the presence of these species alludes to the existence of a certain kind of “species androgyny” in the most improbable of all places, the industrial textile mill.

(11) Benita Eisler, *The Lowell Offering* (New York: Harper Colophon), 66.(2)
Keven Birth, *Objects of Time* (New York: Palgrave Macmillan, 2012), 6
(12) Lucy Larcom, *An Idyl of Work* (Westport, CT: Greenwood Press, 1970 [1875]), 81.

But after a moment's reflection, the problem becomes not how to find human-plant mutualism in the industrial built environment, but rather how to think of industrialization at all without contemplating human beings' complex relationships with plant forms. Clothing, bedding, food, myriad forms of pain management, pharmaceuticals of all kinds, homes, structures, all of these aspects of the industrialized experience are derived from plants.

Within this context—the capacity for plants to offer a kind of consistent presence and solace throughout the prolonged mistake of industrialization—we can see an enduring human-plant relationship. *Ironweed*, a bleak novel describing urban life around Albany, New York, in the early 1900's, is prefaced with a definition of a particular species of flower (Asteraceae) with a vibrant blue blossom, characterizing it as distinguishable by its “toughness.” Grounded in historical industrial settings (some of which might be familiar to any visitor to the area), the novel follows the life of an individual slowly decimated by hardship after tragedy after loss. Many of these events are industrial in nature—a train crash, a clashing mob of strikers and scabs, a building fire—and yet within the novel there is the curious persistence of and identification with plants, trees, grass, and most prevalent of all, weeds. In a touching passage, the main character, Frances Phelan, looks down upon the grave of his infant son who died when he let him slip from his grasp. Imagining the child in the grave, Kennedy writes:

He could speak with any resident adult in any language, but more notable was his ability to understand the chattering squirrels and chipmunks, the silent signals of the ants and beetles, and the slithy semaphores of the slugs and worms that moved above and through the earth. He could read

the waning flow of energy in the leaves and berries as they fell from the box elder above him.¹³

As I explore the wooded hills of Rosendale, New York, I frequently stop at an unmarked graveyard located above an old mine entrance. The interred are mostly children who died in the early to mid 1800's, most no more than a year old. The ground cover surrounding the graveyard is myrtle, or *vinca minor*, an evergreen ground cover which was brought to North America, and was planted in cemeteries. Even to this day, the presence of myrtle is a clue to the nearby presence of a space of eternal rest. It is towards this purpose, rest, sleep, and interiority, that plants offer us their final gift.

In the simple phrase “making a bed” we have an example of this, for the origin of the phrase is quite literal: early European accounts attest to the fact that one would ‘make’ a bed by stuffing a sack with straw,¹⁴ the leftover stalks of different crops of grain. The act of sleep brings human interiority to its fullest expression, and this historical example shows that its relationship to plant life is literal as well as metaphorical. The vegetative, internal experience has parallels in waking life, particularly in industrial history. Numerous accounts of factory workers attest to the need for workers to ‘go inside themselves’ in order to endure the repetitive mandates of industrial routine, as a strategy of survival.

Weber attributes the origin of internal loneliness to the advent of Calvinism, which leaves the burden of ascertaining the soul's eternal fate to the individual. It is this internal struggle, manifested by the need to prove salvation

(13) William Kennedy, *Ironweed* (New York: Viking Penguin, 1984 [1979]), 17.

(14) Lawrence Wright, *Warm and Snug: A History of the Bed* (Phoenix Mill: Sutton, 2004 [1962]), 18.

to oneself and others through external acts, which, Weber contends, led to the development of industrialism.¹⁵ In this sense, plants, in their quiet, serene internalism, provide a kind of companionship and solace for industrialized persons. They buffered and eased our transition into industrial life, perhaps they can lead us back out.

(15) Max Weber, *The Protestant Ethic and the Spirit of Capitalism* (Mineola: Dover, 2003 [1905]).