

Vegetable Locomotion: A Deleuzian ethics/aesthetics of traveling plants
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I take my title, “Vegetable Locomotion,” from Hollis Frampton and Marion Faller’s 1975 series by that name, a spoof on Muybridge’s “Animal Locomotion.”¹ The photographs show vegetables undergoing various actions. In the titles Frampton and Faller use the active voice: “Pumpkin emptying,” “Beets assembling,” “Zucchini squash encountering sawhorse,” “Apple advancing.” *figure 1*

Yet the titles add pathos to the vegetables’ entirely passive encounter. The joke is that vegetables don’t locomote.² Frampton and Faller’s photographs actually emphasize the vegetable’s immobility and vulnerability. Flung, broken, eviscerated, the vegetables seem to suffer, and the photographs take on a sadistic quality. Is this response entirely anthropomorphic, projecting human feelings on plant bodies, silly because plants do not feel?

Frampton criticized Muybridge’s “Animal Locomotion” series for emptying the images of everything but time: no drama, no scale, no tactility, no sense of place.³ Using the passive creatures as the subjects of “Vegetable Locomotion,” he and Faller shift attention back to the context in which movement takes place. It seems they are making a Bergsonian correction, showing that the blocs of space-time in which movement occurs are denser and more thickly connected than Muybridge’s pictures allow; that locomotion occurs in a milieu: in this case, gardening. Frampton and Faller produced the “Vegetable Locomotion” series in 1975 using “the indisposable remains of a bumper crop from their garden” in central New York State.⁴ The garden grew so well that the artists had more vegetables than they could possibly eat. So the aggression they display toward the vegetables at least partly reflects the frustration of gardeners who can tomatoes till their fingers are raw, keep discovering zucchini the size of brickbats hidden under the leaves, and are driven to deposit vegetables on their neighbors’ porches in the middle of the night. The photographs express the terror of unstoppable plant growth.

Henri Bergson wrote that a basic difference between animals and vegetables is the material of their cell walls: respectively, a “thin albuminous pellicle” and cellulose.⁵ The cellulose sheath prevents movement and protects plant from stimuli of the sort that would keep an animal awake. Plants can afford to be stoical because their cell walls are hard. “The plant is therefore unconscious,” he wrote.⁶ Bergson presumed a relationship between mobility and consciousness: “The humblest organism is conscious in proportion to its ability to move *freely*.” Furthermore, he reserved the highest state for those beings that are truly capable of responding to duration, of differentiating in unforeseeable ways.⁷ So he privileges animals over plants.

But in fact, as Bergson acknowledged and as contemporary science confirms, plants are quite active. Like nomads, plants occupy space intensively. Biologists are finding that plants, far from passive, defend themselves from attackers and communicate with other plants in a variety of inventive ways. Incidentally, much of this research is carried out on *Arabidopsis thaliana*, a small plant in the mustard family that is a model organism for research in plant genetic and molecular biology. For example, a recent paper in *Plant Physiology*, “A Plant Notices Insect Egg Deposition and Changes Its Rate of Photosynthesis,” finds that when sawflies deposit their eggs on the Scots pine, the plant emits volatile chemicals similar to turpentine. These chemicals attract a wasp that attacks the eggs.⁸ Note that the title uses an intentional verb: the plant *notices* that it is in danger and acts to defend itself.⁹

And a 2009 study in the *Journal of Chemical Ecology* reveals an operatic drama animating plant-insect relations. When butterflies mate, the male often deposits benzyl cyanide into the female butterfly’s eggs: benzyl cyanide is an anti-aphrodisiac that discourages other male butterflies from mating with the female, protecting the first male’s paternity. However, this same chemical proves to be indirectly lethal to the butterfly’s progeny. When the female deposits her eggs on the leaves of Brussels sprouts, the plant emits a chemical that attracts parasites to the eggs.¹⁰ If it were an opera, imagine the anguish of the female butterfly at losing her babies, the suicidal fecklessness of the male, and the

Machiavellian satisfaction of the Brussels sprout plant! In such ways, what Deleuze and Guattari write of nomads is entirely true of plants: for by staying in place they create an intensive relation to space.

Moreover, plants do move. This is why the concept of vegetable locomotion that inspires this paper comes not from Frampton and Faller's photographs but from Gordon Matta-Clark's drawings from the mid-1970s. The drawings imagine trees that produce new life forms at the tips of their branches, link arms or form what D+G call "reticular schemas"¹¹ to produce a slightly threatening mega-tree, and pick up their roots and dance. These plants embody a wild energy that Matta-Clark sometimes pictured on its own energy tree.

As all readers of Deleuze and Guattari know, plants travel through underground root systems: the rhizome. Their central example of the rhizome is couch grass, *Eltrygia repens*, which is considered a noxious weed in many places because it infiltrates vigorously and, given its rhizomatic character, is practically impossible to eradicate: it is opportunistic, if you can shatter the root in one place and it will grow elsewhere, it "ceaselessly establishes connections."¹² The world's "weeds" follow the traces of human intervention; they are the illegal immigrants of the plant world. Sometimes weeds adapt successfully to a new environment; when this occurred in France in the nineteenth century, the naturalized weeds are said to have become French plants.¹³ Weeds are stronger indices of human culture than any formal garden because they make opportunistic connections with the unwitting traces of human intervention in the soil. The artists Lois and Franziska Weinberger assist vegetable locomotion by encouraging an "unstructured, marginal, incidental, and anarchic pattern of growth." (his web site) *Roof Garden, City Hall, Vienna* (2005; <http://www.loisweinberger.net/>) very funny, looks like the roof hasn't been weeded. *St Polten* Weinbergers make no distinction between local and "foreign" plants in their seemingly artless gardens, which are often little more than vacant lots given an extra vegetative charge. This Garden is planted with local weeds but welcomes any plants to sprout, as the plastic pots gradually disintegrate.

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Plants travel of their own accord by attaching their seeds to animals' coats or producing tasty fruit for animals to eat and propagate their seeds in droppings. And plants migrate, of course, with human assistance. This has been going on since the dawn of agriculture, 11,000 years ago, with the migration of wheat and barley around the Fertile Crescent. More recently, 5000 years ago, bananas sailed from Papua New Guinea to South Asia, then traveled west across the Indian Ocean to Madagascar, reaching east Africa.¹⁴ Sweet potatoes, domesticated in the Andes 10,000 years ago, traveled in the 17th century with Portuguese colonists to Japan, and thence to Korea.¹⁵ The peripatetic watermelon departed central Africa around 4000 BC, reaching north Africa and central Asia, then traveled on to India around 800 AD, later to China, Europe, and, with African slaves, to the Americas.¹⁶ Traveling plants motivated wars and defined empires, as we know from the brilliant and bloody history of traffic in spices, sugar, tea, coffee, and medicinal plants—like “Peruvian bark,” a source of quinine, which was European prospectors' most valuable cash crop in the Americas the 19th century.¹⁷

Plants like to travel stowaway too. They traveled to new lands inside the guts of domesticated animals, in the mattresses colonists shook out on new soil, in the ballast water of boats, and—a recent scourge—as decorative aquarium plants that escaped. For example, the floating water plant *Salvinia molesta*, native to Brazil, became a noxious weed after it was imported as an aquarium plant. As its name suggests, *Salvinia molesta* is extremely invasive, covering entire lakes in Australia, New Zealand, and parts of North America, and robbing other plant and animal life in them of oxygen.¹⁸

Weeds of course are defined relatively to human needs, or, we could say, to the state. Valuable plants often become weeds when humans import them as animal feed, and then, with no local competitors, they become vegetable war machines, invading vast territories. Vines are especially visible war machines, as anybody knows who's seen the radical traveling capacity of kudzu, a vine of Japanese origin imported to North America as cattle feed.

Deleuze and Guattari casually ask, “The question is whether plant life in its specificity is not entirely rhizomatic,” and indeed it is. This is a good point to remember that D+G do not valorize the war machine exclusively; rather, they sought a more fair interaction between the state and the war machine. A Deleuzian ethics/aesthetics would most appreciate the lively conflict zones between the two... the inventiveness and will to life of both plants and humans, as well of course as the ecosystem of animals, insects, microorganisms etc that thrive on a lively, rhizomatic exchange.

But this is not the case now. Most cases of human-caused vegetable locomotion occur for profit reasons, sometimes for reasons of state ideology. The result may be a short-term increase in human life, but it is always a net reduction in plant life, for only certain strains are domesticated in mass farming, and others go extinct.

So it is time to ask, what is a Deleuzian ethics of vegetable locomotion?

“Deleuzian ethics” sounds like an oxymoron insofar as ethics is prescriptive. So I seek here to be mostly descriptive, of some of the ways plants have traveled in history and our times. I think Deleuze’s ethics is fundamentally his vitalism, a privileging of life and the conditions for life and a rejection of forces that curtail life. A Deleuzian ethics of vegetable locomotion privileges the rhizome (as I’ve discussed), the war machine (though as we’ve seen it can be a regressive force), the machinic phylum, the capacity for individuation, and what Deleuze and Guattari call neoevolution. Fundamentally it looks for evolution that is creative.

Bergson, in *Creative Evolution*, pointed out that we humans are more similar to animals, and plants, than we differ from them, and invites us to expand consciousness by recalling our animal and vegetable nature¹⁹ and rediscovering the modes of knowledge of earlier stages of evolution. “If, in evolving in the direction of the vertebrates in general, of man and intellect in particular, life has had to abandon by the way many elements incompatible with this particular mode or organization and consign them...to other lines of development, it is the totality of these elements that we must find again and rejoin to the intellect

proper, in order to grasp the true nature of vital activity.” If we want to really be alive we need to revitalize the intellect by reviving other species’ ways of evolving.²⁰

In short, humans are not so different from the things we think about, and that is why we are able to think (alongside) them, “to think matter.” This realization underlies Deleuze and Guattari’s concept of the machinic phylum. “The *machinic phylum*,” Deleuze and Guattari write, “is materiality, natural or artificial, and both simultaneously; it is matter in movement, in flux, in variation,” “carrying *singularities* or *haeccities* that are already like implicit forms.”²¹ So a criterion for good vegetable locomotion is that it follow the matter-flow.

In the contemporary machinic phylum, plants, animals, and metals form new rhizomes in response to human industry. As I mentioned, plants invade, carried by humans wittingly or not; they change a local ecosystem, often destroying its biodiversity. But some of the same invasive or noxious weeds in turn heal the earth of human-generated toxins: this process is called phytoremediation. The war-machine water plant *Salvinia molesta*, that we encountered above, is a hyperaccumulator of lead, chromium, and zinc. The sunflower, phytoremediates soil poisoned by chromium, copper, manganese, lead, and zinc. (source: USDA) Interestingly, Deleuze and Guattari characterize the machinic phylum as fundamentally metallurgical. “Not everything is metal, but metal is everywhere.” (411) Like the itinerant artisan D+G valorize who follows the matter-flow, African metalsmiths used to identify ores underground by the presence of plants that have a high tolerance for the metals.²²

Scientists, capitalists, and artists are interested in this process. In China, biologists are proposing to place enormous tanks of algae alongside coal factories, as the plants absorb carbon dioxide. The artist Mel Chin, in *Revival Field*, begun 1990, planted the toxic waste site Pig’s Eye Landfill, poisoned with cadmium, zinc, and lead, with plants that have a high tolerance for “heavy” metals. The plants contain such high concentrations of metals that the growers can harvest and incinerate them to get high-grade ore to pay for the process.²³

A next element in a Deleuzian ethics of traveling plants is individuation—a concept already implicit in Bergson’s radical empiricism.²⁴ Gilbert Simondon wrote, “Becoming is not the becoming of the individuated being but the becoming of the individuation of being” (quoted in Alliez, 243 n 26). Individuation is a way to think of how life force differentiates particular plants (in this case) according to entirely specific local events. It creates differentiation “on the basis of an intense pre-individual field, singularized solely through differences of intensity” (Alliez 235). Those differential relations that are most intensive, i.e. bursting with virtuality, will be actualized.

Though the thrilling and unpredictable behavior of plants beautifully exemplifies individuation—as in the metal-eating plants I just discussed—I would like to give you an example from the world of textiles. Carpets woven in the Caucasus in the seventeenth century are bursting with forms that can only be called haecceities—they are entirely singular, even when woven from a pattern. The carpets themselves are fields of intensity; indeed if you wanted to know what a place of immanence looks like I would show you a Caucasian carpet. *figure 2*

Caucasian carpets’ motifs are not resolutions but extensions of intensity, for the carpet is still not at rest, it is uncannily alive. They are omniphagic fields of becoming: dragon and other animal motifs become flowers and crystalline forms that never give up the memory of their dragon-life. The results of individuation in one carpet beg to be differentiated further, in the hands of future designers and weavers. Caucasian carpets are radically empirical, for they evidence not only existents but the virtualities from which they emerged. I’ve argued (in chapter 10 of *Enfoldment and Infinity*) that Caucasian carpets predate computer-based artificial life by several centuries. I still believe we can measure all other AL art against them.

Caucasian carpets, as well as the mercury-absorbing sunflower, also exemplify the last concept I propose for locomoting-vegetable ethics, *neoevolution*. Like the other concepts, it values a net increase in life as a whole. Neoevolution, Deleuze and Guattari write, implies that the animal (or plant) is defined not by genetic characteristics but by populations that vary from milieu to

milieu or within a milieu (1000P, 239). This concept, which follows closely from the others, allows us to respect the rhizomatic differentiations that plants undergo in human company. Like individuation, it rips away any remaining vestige of romanticism that would prefer to celebrate nature in an impossible segregation from human activity. We must be prepared for monsters, for monstrosity is not the problem; a diminishment of life is the problem. (Will return to this in end discussion of computer-based and genetically modified plant life.)

In art plants have traveled, with great liberty and inventiveness, for millennia. Their internal will to grow and change, what Aloïs Riegl termed *Kunstwollen*, is the *élan vital* of art. Deleuze on *Kunstwollen*: “une des idées de base de Riegl c’est que, l’art ça ne se définit jamais par ce qu’on peut faire mais par ce qu’on veut faire. Il y a un vouloir à la base de l’art.” –“One of Riegl’s fundamental ideas is that art is never defined by what one can do but by what one wants to do. There is a desire at the base of art.” Deleuze continues, for Riegl art is not a question of *savoir-faire* but of *vouloir-faire*.

Riegl’s *Problems of Style* demonstrated that a plant motif, the *palmette*, varied and transformed continuously from the lotus in Egyptian Old Kingdom art (c. 2500 BC) to the Greek palmette and acanthus to the Islamic arabesque. *Problems of Style* might well be subtitled “All About Vines,” for the art historian focused most meticulously the transformation of the *vine scroll*, from its first tendrilly springing in Mycenaean art of the fourteenth century BC. We can extend the vine scroll’s kudzu-like advances forward to Renaissance art (with its Islamic influences) and Baroque art, a brief mineralization in the rococo curvy shell motif (Gombrich), the whiplash line of the *Jugendstil*, and the gyrating digital plants of new-media art. That’s 4500 years of traveling plants!

Riegl’s concept of *Kunstwollen* emphasizes a will to form that is more powerful and more inventive than material means, artistic intention, or *zeitgeist*. Deleuze embraced it. I quote from one of his lectures: “Une des idées de base de Riegl c’est que, l’art ça ne se définit jamais par ce qu’on peut faire mais par ce qu’on veut faire. Il y a un vouloir à la base de l’art.”²⁵ Art is not defined by what one can do but by what one desires to do. Moreover, as Deleuze notes, Riegl

was not interested in art that imitates nature, but art that corrects nature, spiritualizes nature, or recreates nature.

Riegl noted that ornamental motifs become more and less abstract or representational in the course of their travels; in later Greek art it reached an apogee of lyrical abstraction (185-186). A funny thing happened when the vine scroll twined into fifth-century Greek art: It incorporated a plant that is definitely not a vine, the acanthus, which we know from Corinthian columns, becoming a hybrid plant, the “acanthus scroll.” At the same time the vine scroll lifted up from a relatively abstract line into naturalistic, three-dimensional sculpture. *figure 3*

Here Riegl was at pains to argue that the Greeks did not copy the actual acanthus plant.²⁶ Acanthus was an appreciated weed—it grew outside the formal garden of Pliny the Younger, contrasting picturesquely, Pliny remarked with satisfaction, to the regularity of the sculpted boxwood²⁷—but still a weed. At the National Museum of Syria in Damascus you can see the stony acanthus alongside its vigorous living counterpart—so vigorous that the museum gardeners whack it down regularly. *figure 4*

Kunstwollen is inspired by an internal life, not slavish imitation. Deleuze picks up this point with relish. “D’un point de vue reproduction de la nature, comprenez que c’est très important, c’est quoi l’acanthé? C’est une mauvaise herbe. Comment est-ce qu’on va foutre dans les temples de la mauvaise herbe ?”²⁸ What the fuck are you going to do in the temple of a weed?

Not imitation but modulation. In the same lecture, Deleuze discusses Simondon’s concept of modulation as one of the ways form may be created. Form may be created from outside, as articulation, or from inside, as modulation, which implies an internal energy and continual variation. So the form is the actualization of a continually varying internal energy.²⁹ In light of this concept we can understand *Kunstwollen*, and also *élan vital* both as terms for internal modulation.³⁰

The Greeks combined acanthus and vines in all kinds of serpentine motifs, and the acanthus scroll with its odd celery-like tendrils traveled as far as

India and China. However, the plants remained naturalistic, and stubbornly three-dimensional.

But the palmette continued to travel in Islamic art. Where the Greeks deprived the vine scroll of its free-moving qualities, in order to remake it figurative, in Islamic art it found a new liberty.

Riegl did not know about it when he wrote *Problems of Style*, but the Islamic tendencies toward abstraction, flow, and infinite growth culminated in a style that arose in Samarra, Iraq, in a flurry of building construction in the mid-ninth century. A curvilinear, abstract form that is both linear and sculptural, the "beveled style" seems to struggle to find a resting place between plant and geometry. *figure 5* Art historians have often identified the beveled style as the beginning of something new, something typically Islamic. While still a plant, it gave rise to forms that were dynamic, infinite, and open-ended, growing with the flat plane of the surface. I argue (book) that both abstract line and haptic space originate in this flowing ornament, which seems constantly to shift between figure and ground, line and surface. As Christine Buci-Glucksman notes, the arabesque is a plant-based calculus.³¹ It is Leibniz's mathematical transformation, the infinitely variable curve, drawn not from geometry but from the life force of the vine.

Moreover, the beveled style, which became what we call the arabesque, has a radical antinaturalism that prefigures artificial life. As Riegl noted with astonishment, in the arabesque the vine scroll, rather than terminating in a bud, abandons its mimicry of real plants to sprout at any point whatsoever, which can then and grow in any direction. This makes possible what Riegl called the principle of infinite rapport. It is the origin, in stone and stucco, of nonorganic and artificial life. (Riegl pointed out that it is impossible in nature for a new stem to grow from a flower, which is the principle of infinite rapport. Ernst Gombrich believed he found an exception in the arum lily, but even looking at his reproduction in *The Sense of Order* you can tell the arum lily is no freak of nature in which a stem grows from a flower but just a floral spike springing from a bract.) Freed from naturalism, vegetal motifs become capable of algorithmic

transformations and self-organization. The Islamic arabesque is a self-organizing system that incorporate feedback, such as the decisions of a sculptor or carpet designer on how best to fill space.³² As I noted before, the arabesque undergoes more radical transformations in Caucasian carpets; it becomes-animal, becomes-mineral, as in the plants that morph into animals or crystals in Caucasian carpets.

There is much more to say on traveling plant motifs. The arabesque travels to Europe in Renaissance, and some centuries later becomes the founding motif of modern art (Matisse, Klee) and its confounding of figure and ground.³³ Traveling plants do away with the figure! I assert that these traveling plant motifs are not just lifelike, they are life, because they are emergent systems that change and grow, their internal energy generating variations in response to external conditions. Plant-based art, especially when it is released from representation, seems to have as much capacity for individuation and creative evolution as plants do.

In our time, many plant motifs arise from calculations. Much computer art operates in a seemingly plantlike way, using recursive and feedback-responsive algorithms and also algorithms for artificial life. A-life algorithms give rise to forms or activities that cannot be predicted from its component parts. Digital plant forms sprout and twine all around us. But are they alive, in the way biological plants are, and in the way the traveling plants of analog art are?

For a pretty, and pretty disturbing, example, I turn to the work of Jennifer Steinkamp, who makes immersive environments populated with computer-animated floral forms. Her *Florence Nightingale* (2010), installation at Cedars-Sinai Medical Center, is based on flowers used in healing, including St. John's wort (depression), chamomile (nervousness), foxglove (heart problems), tobacco, and jimsonweed and oleander (both poisons). Blown by a slow algorithmic breeze, the plants twitch and gyrate with an uncanny inner life.

<http://jsteinkamp.com/quicktime/html/florence.html>

Steinkamp's computer-generated works are closed systems. Other examples are more lifelike because they use genetic algorithms, which transform

in response to the milieu, such as the interventions of a user. Erwin Driessens and Maria Verstappen's interactive artwork *E-Volved Cultures*, 2008, which they call an "image-breeding machine," imitates biological evolution: changes come about when a user touches the screen in some way: the image first looks like a primordial soup, then evolves like a high-speed film of lichen growing on a rock, then continues to differentiate in relatively unpredictable ways.

So is e-life life? Is the world in which code is written and executed a machinic phylum? Do genetic algorithms evolve creatively? Bergson's statement that "A manufactured thing delineates exactly the form of the work of manufacturing it" (CE 104) seems to apply to software, insofar as it is written in a top-down manner with the intention to produce particular effects. By contrast, self-organization, or what he called the organizing act, an emergent kind of production, "has something explosive about it," Bergson wrote.

I leave it as question for now.

Speaking of explosive, sometimes blowing up plants is the best action in response to their indentured situation. Annette Wehrmann's *Floral Blastings* targets decorative plants stuck in public settings. We know they won't be allowed to live on or bear offspring, that their purpose is just a short-term prettification for capitalist or ideological settings. So why not blow them up now and put them out of their misery? *figure 6*

A Deleuzian ethics of traveling plants also thinks about plant migration due to human interventions, not only agriculture and exportation, which I discussed, but also breeding, climate change, and genetic engineering. Again, the distinction between natural and artificial inducements to change doesn't hold up, for many of plants' adaptations respond to human action. Maybe human-assisted biodiversity is like sculpting, building, other adaptations of the natural environment, no problem. When it makes a new kind of life, that's fine. Where there is a problem is when the sum of biodiversity is diminished. We've seen this is often the result when invasive plants introduced by humans alter a local habitat

and diminish the variety of species. We know it to be the case when markets privilege a single variety of a given plant, e.g. corn, and others become extinct.

The complex science of genetic engineering requires careful study with a lot of scientific knowledge before we can pronounce on the inevitable outcome of genetic modification. In a Deleuzian spirit of celebrating new connections, I am excited about GM proposals, such as one to borrow plants' highly efficient transfer of light energy as an alternative energy source. In the initial stages of photosynthesis, plants process the sun's energy with almost no loss, because pigment molecules have overlapping quantum states, meaning there is a coherent transfer of the energy of excited electrons. It would be great to harness this for photoelectric cells.³⁴ And maybe genetic engineering could return us biological creatures to the primordial soup in which there were no separate species, just a community of cells sharing their genetic information." I think of that soupy golden age as motivated by a genetic *kunstwollen*, a desire to grow and transform, as form traveled freely among organisms without regard for their nature. Deleuze and Guattari certainly valorized the creativity of the primordial soup. But if there were no species, there would be no Deleuze conferences, ha ha.

And seriously, genetic engineering most likely produces a net loss of life. For this dim view I look to the artist Ron Benner, whose work focuses on extinctions and mutations of plants. His *Papaya Vector* documents the effects of GM papayas in Thailand. The genetically modified papaya, invented in 1996, contains a gene from the ring spot virus that makes it resistant to that virus. But this traveling plant becomes a vector for a lot of other problems: it short-circuits the effects of traditional papaya-based medicine, making people vulnerable to diseases; it contaminates non-GM papaya trees; and it thus threatens the market for papayas and the livelihood of farmers. So I doubt GM creativity meets the creative-evolution test. blank For sure genetically modified plants are rhizomes in the short term, and they certainly behave like war machines. But as top-down modifications they deprive a plant of the capacity for individuation. It would take more study at the levels of chemistry and physics, but I don't think GM operates

at the level of the machinic phylum. For even by focusing on coded genes it ignores the uncoded but meaningful fragments alongside it.³⁵ The value of so-called junk DNA, those traces of other creatures lying dormant in our genes—isn't this exactly what Bergson presaged when he said (repeating quote),

If, in evolving in the direction of the vertebrates in general, of man and intellect in particular, life has had to abandon by the way many elements incompatible with this particular mode of organization and consign them...to other lines of development, it is the totality of these elements that we must find again and rejoin to the intellect proper, in order to grasp the true nature of vital activity?³⁶

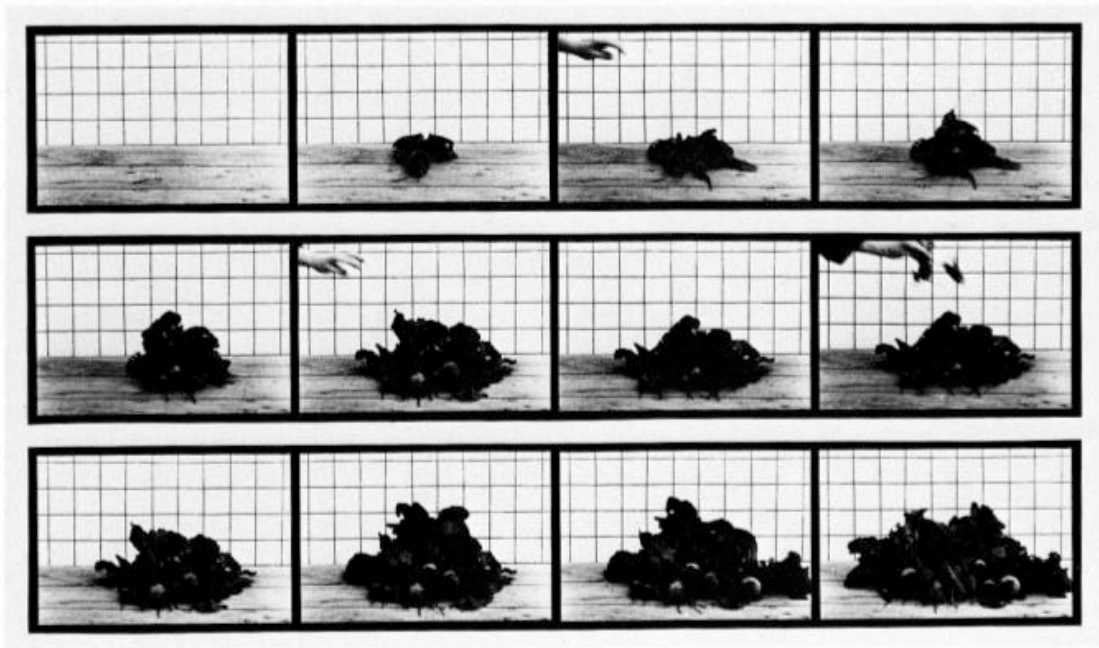
Bergson suggests in *Creative Evolution* that we learn from our evolutionary heritage. Deleuze and Guattari, benefiting from more recent science, point out that we have no choice, for creatures develop in a non-evolutionary way when fragments of genetic information are communicated among species, for example by viruses.³⁷ Deleuze and Guattari invite humans to be weed-like and to celebrate “Drunkenness as a triumphant irruption of the plant in us,” an interconnected receptivity. We would like to become more plantlike, and let plants keep on being plants, instead of all becoming more like code. The question of whether computer-generated and genetically modified plants are any good rests not on the difference between organic and inorganic, nor between natural and man-made, but whether the outcome is creative. Meaning, not foreseen and planned for. Meaning, we must be prepared for monsters in “the becoming of our interdependent species.”³⁸

What people see as Deleuze and Guattari's romanticism results from their privileging of forces that struggle against containment. Yet they write that the romantic artist “risks sinking too deeply into the earth.”³⁹ It's suicide to idealize nature separate from human involvement—suicidal and at the same time oddly privileging the human. We see a vegetable romanticism in traditional English and Japanese gardens that, in symbolic rebellion against constraining social force elsewhere, are planned to seem wild, or wilder than wild. It's a human projection on plant life, a paradoxical longing for the freedom of the vegetable. A true

becoming-vegetable puts aside anthropocentric desire. To conclude I give as example this description by Gerhard Meier of a modest garden planted by the artists Fischli and Weiss:

Upon entering the garden over the small wooden bridge past the romantic animal figures, certain viewers better-informed in matters of art will at first perhaps fail to perceive a garden at all but will see an exhibition object, an installation or something else resembling a work of art instead. These viewers should then, as the artists imagine it, be shown along a way that will take them to where they see “nothing but” a garden, to a place where their consciousness finally reaches ground level, where the lettuce grows, from which point the other “more abundant” world may perhaps become visible.⁴⁰

Figures



28n. 668. *Beets assembling* [var. "Detroit Dark Red"], from *Sixteen Studies from VEGETABLE LOCOMOTION*, 1975
black and white photograph, 11 x 14

Figure 1. Hollis Frampton and Marion Faller, from *Sixteen Studies from Vegetable Locomotion* (1975)

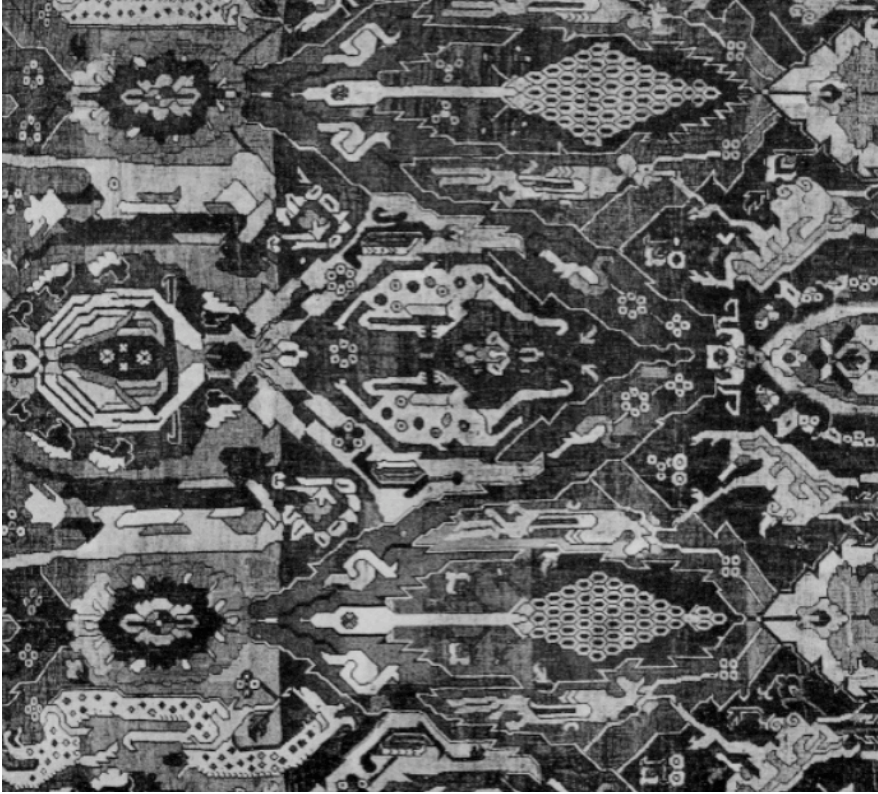


Figure 2. Detail of a carpet, Caucasus, 18th C, from Kurt Erdmann, *Oriental Carpets: An Essay on Their History*, trans. Charles Grant Ellis (New York: Universe Books, 1960)



Fig. 113. Ornament from the necking of the columns in the north porch of the Erechtheion in Athens.

Figure 3. Acanthus scroll. From Riegl, *Problems of Style*.



Figure 4. Acanthus, whacked but thriving, National Museum of Syria, Damascus. Photo by Laura Marks.



Figure 5. Detail of “Third Samarra Style” or “Beveled style,” stucco wall ornament, ninth century, Samarra, Iraq. Pergamonmuseum, Berlin. Photo by Laura Marks.



Figure 6. Annette Wehrmann, *Blumensprengung* (Flower blasting, Hamburg, 1996), from Barbara Nemitz, *Trans/plant*.

¹ See movie at <http://hollisframpton.org.uk/ssfv1.htm>

² Indeed the verb *to plant* means to stick something in the ground—though the Latin root of the noun *plant* means a sprout or graft, something that is going to grow. In Arabic the noun’s meaning of rootedness is clearer, for the word for plant is *nasiba*, something that is stuck in the ground.

³ “About all that is left, in each case, is an archetypal fragment of living action, potentially subject to the incessant reiteration that is one of the most familiar and intolerable features of our dreams.” *Ibid.*; quote is from Hollis Frampton, “Eadweard Muybridge: Fragments of a Tesseract,” *Artforum* 11:7 (March 1973): 50.

⁴ “Sixteen Studies from Vegetable Locomotion, 1975, with Marion Faller,” in *Hollis Frampton: Recollections/Recreations*, ed. Bruce Jenkins and Susan Krane (Buffalo/Cambridge, MA: Albright Knox Art Gallery and MIT Press, 1984), 76.

⁵ Henri Bergson, *Creative Evolution*, trans. Arthur Mitchell (original publication Henry Holt and Company, 1911; reprint, Mineola, NY: Dover, 1998), 120. This is one of the reasons the fungi are not plants: their cell walls, like those of lobsters and cockroaches, are made of chitin.

⁶ *Ibid.*, 120-124.

⁷ *Ibid.*, 42.

⁸ Roland Schröder, Manfred Forstreuter, and Monika Hilker, “A Plant Notices Insect Egg Deposition and Changes Its Rate of Photosynthesis,” *Plant Physiology* 138:1 (May 2005): 470-477.

⁹ A similar study finds that when larvae of the fall armyworm eat the leaves of the cowpea, their oral secretions stimulate the plant to produce phytohormones that emit volatile chemicals that attract the armyworm's natural predators. It seems that in the vegetable world, the enemy of my enemy is my friend.

© Eric A. Schmelz, Sherry LeClere, Mark J. Carroll, Hans T. Alborn and Peter E.A. Teal, "Cowpea Chloroplastic ATP Synthase Is the Source of Multiple Plant Defense Elicitors during Insect Herbivory," *Plant Physiology* 144 (2007):793-805.

¹⁰ Nina Fatouros, Foteini G. Pashalidou, Wilma V. Aponte Cordero, Joop J.A. van Loon, Roland Mumm, Marcel Dicke, Monika Hilker, and Martinus E. Huigens, "Anti-aphrodisiac Compounds of Male Butterflies Increase the Risk of Egg Parasitoid Attack by Inducing Plant Synomone Production," *Journal of Chemical Ecology* 35:11 (November 2009): 1373-1381.

¹¹ D+G, *A Thousand Plateaus*, 519n5.

¹² "Introduction: Rhizome," *ibid.*, 7.

¹³ Chandra Mukerji, "Dominion, Demonstration, and Domination: Religious Doctrine, Territorial Politics, and French Plant Collection," in *Colonial Botany: Science, Commerce, and Politics in the Early Modern World*, ed. Lorna Schiebinger and Claudia Swan (Philadelphia: University of Pennsylvania Press, 2005), 30.

¹⁴ Kenneth Kiple, *A Movable Feast: Ten Millennia of Food Globalization* (Cambridge University Press, 2007), 37.

¹⁵ *Ibid.*, 129, 147.

¹⁶ *Ibid.*, 58.

¹⁷ Londa Scheibinger, "Prospecting for Drugs: European Naturalists in the West Indies," in *Colonial Botany*, 119.

¹⁸ Wikipedia, July 5, 2010.

¹⁹ "The line of evolution that ends in man is not the only one. On other paths, divergent from it, other forms of consciousness have been developed," which, Bergson writes, are not as free from constraint as the human "but which, none the less, also express something that is immanent and essential to the evolutionary movement. Suppose these other forms of consciousness brought together and amalgamated with intellect: would not the result be a consciousness as wide as life?" Bergson, *Creative Evolution*, xxii.

²⁰ Bergson, *Creative Evolution* (Dover, 1998), 56.

²¹ *A Thousand Plateaus*, 409.

²² Mel Chin, in Barbara Nemitz, *Trans/plant: Living Vegetation in Contemporary Art* (Stuttgart: Hatje Cantz, 2000), 40.

²³ *Ibid.*

²⁴ as in *Creative Evolution* where Bergson wrote, "At the root of life there is an effort to engraft on to the necessity of physical forces the largest possible amount of *indetermination*." (CE, 127)

²⁵ Deleuze, "La peinture et la question des concepts," lecture, May 12, 1981, transcription Cécile Lathuilliere, <http://www.univ-paris8.fr/deleuze>; my translation.

²⁶ “The search for ‘new’ ornaments among natural flora is really a product of the most modern artistic sensibility,” Riegl noted interestingly, “reflecting to a certain extent the contemporary artistic dilemma.” Aloïs Riegl, *Problems of Style*, 207)

²⁷ “Having passed through these manifold winding alleys, the path resumes a straight course, and at the same time divides into several tracks, separated by box hedges. In one place you have a little meadow; in another the box is interposed in groups, and cut into a thousand different forms; sometimes into letters expressing the name of the master, or again that of the artificer; whilst here and there little obelisks rise intermixed alternately with apple-trees, when on a sudden, in the midst of this elegant regularity, you are surprised with an imitation of the negligent beauties of rural nature; in the centre of which lies a spot surrounded with a knot of dwarf plane-trees. Beyond these are interspersed clumps of the smooth and twining acanthus; then come a variety of figures and names cut in box.” Quoted in Marie Luise Schroeter Gothein, *A History of Garden Art*, ed. Walter P. Wright, trans. Mrs. Archer-Hind (New York : Hacker Art Books, 1966).

²⁸ Deleuze lecture, “La peinture et la question des concepts”; my translation.

²⁹ Ibid.

³⁰ Ibid.

³¹ Christine Buci-Glucksmann, “Vers un stylistique ornementale: Riegl et Worringer,” in *Philosophie de l'ornement: d'Orient en Occident* (Paris: Galilée, 2008).

³² Self-referential systems are limited in their capacity to create new elements, for, as Luhmann notes, “such a system can only be influenced from the outside to the extent that the external perturbation is coded as “information” in the system’s own predefined terms.” Quoted in Steven Shaviro, “Interstitial Life: Subtractive Vitalism in Whitehead and Deleuze,” *Deleuze Studies* 4:1 (March 2010 ?). A system accepts as information only those elements it is prepared for; the rest is noise. However, handmade art has a fairly large margin for novelty: if a new element inspires the weaver or painter, s/he can incorporate it. (ref Simondon)

³³ See *Ornament and Abstraction*, ed. Marcus Bröderlin (Basel: Fondation Beyeler, 2001) and Laura U. Marks, *Enfoldment and Infinity: An Islamic Genealogy of New Media Art*, chapter 4.

³⁴ James Herman, response to Freeman Dyson, “Our Biotech Future,” *New York Review of Books*, July 19, 2007.

³⁵ See for example Elizabeth Svoboda, “Scientists Sort Through ‘Junk’ to Unravel a Genetic Mystery,” *The New York Times*, Health section, February 7, 2006.

³⁶ Bergson, *Creative Evolution*, 56. And I suspect that changes resulting from climate change can only diminish diversity. Research suggests plants suffer from increases in temperature and salinity.

³⁷ 1000P, 519n5, referring to the work of Benveniste and Todaro.

³⁸ To quote Katrin Thiele, “‘Difference in Itself’ in Contemporary Feminisms,” talk at “Connect, Continue, Create,” the Third Annual Deleuze Studies conference, University of Amsterdam, July 13, 2010, referring to Donna Haraway.

³⁹ 1000P, 339.

⁴⁰ Gerhard Meier, "*Das dunkle Fest des Lebens, Amrainer Gespräche* (Cologne/Basle 1995), trans. John S. Southard, cited in Nemitz, *Trans/plant*, 52. I cut off the quote, however, at the point where it becomes utterly arboreal: "the one with transparent horizons that encircle a garden on whose axis stands the Tree of Life."