Chapter Title: 2 POTENTIAL LITERATURE

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2 POTENTIAL LITERATURE

The word "algorithm" is an odd neologism. Most scholars now believe that the word relates back to the word "algorism," which is in turn a corruption of the name of the Persian mathematician al-Kwārizmī from whose book, *Kitāb al-jabr wa'l-muqābala* ("Rules for Restoring and Equating"), we get the word "algebra" (Knuth 1). Throughout its varied history, the term has more or less always borne the connotation of a method for solving some problem, and, as the early slide from sibilant to aspirate would imply, that problem was most often considered mathematical in nature. During the twentieth century, however, the word "algorithm" came to be associated with computers—a step-by-step method for solving a problem using a machine. To speak of algorithms is therefore usually to speak of unerring processes and irrefragable answers.

If computational methods are to be useful in the context of literary study, however, we must consider the use of algorithms loosed from the strictures of the irrefragable and explore the possibilities of a science that can operate outside of the confines of the denotative. Historically, such ventures have been viewed with deep distrust:

> The rise of scientific logic seems, indeed, to have had the effect of pushing back the ever-encroaching forces of dialectical invention into the margins of charlatanism and mental tricks. Descartes's position was clear: he insisted on clarity against quackery. . . . In the new scientific age, rhetoric's calculating genius seemed antithetical to the search for truth. Rhetoric's technologies were too random, its underlying ethos too inauthentic and artificial to contribute to a reliable description of man and the world. (Bold 544)

The Cartesian legacy, in addition to valorizing science as the sine qua non of human inquiry, had the additional effect of validating the Athenian senate's perception of philosophy as "making the weaker argument defeat the stronger" (Plato 5). Today, "rhetoric has been shown to be at the basis of what is called scientific 'method' in all but the Cartesian sense of the word," and yet the separation of these two faculties has persisted, and the trace of this once bitter opposition maintained (Bold 544).

The reverberations of this divergence are evident in the computing humanist's ironic distrust of inventions borne of algorithmic processes. Few commentators, in fact, have been able to resist framing the movement from data to interpretation as one fraught with peril. Hugh Craig, an expert in stylometry and authorship attribution, is unusually candid in an assessment that bears the subtitle, "If You Can Tell Authors Apart, Have You Learned Anything about Them?"

> The leap from frequencies to meanings must always be a risky one. The interpreter who is tempted to speculate about the world-view or psychology of a writer, based on quantitative findings, presents an easy target for dismissive critique (Fish, 1973). On the other hand, staying within the safe confines of the statistical results themselves means that one is soon left with only banalities or tautologies. Lower-level features are easy to count but impossible to interpret in terms of style; counting images or other high-level structures brings problems of excessive intervention at the categorization stage, and thus unreliability and circularity (Van Peer, 1989). (Craig 103–4)

Thus "quantitative findings" emerge, under the cultural burden of science, as entirely opposed to the imaginative work of speculation and intervention. The age-old charges against *inventio* reemerge. Without grounding in the language game of denotation, we risk the "circular reasoning" of a discourse that grounds itself in further discourse—the "unreliability" of a claim that has nothing to recommend it but its rhetorical power to persuade. Larger debates are aliased through Craig's ingenuous observations about risk, and those debates largely ignore the conundrum he identifies. C. P. Snow's 1959 Rede Lecture, "The Two Cultures and Scientific Revolution"—often cited as having put forth the essential terms of the debate between science and the humanities—figures the dichotomy as a kind of misunderstanding. If literary intellectuals (whom Snow refers to as "natural Luddites") would learn more about science and scientists would learn more about "imaginative experience," we would not only enrich the episteme of academic culture, but we would also go further toward communicating the meaning of that culture to the larger world (23). But what to do with a scholar like Craig, who is as-

suredly not a Luddite, and who can lay claim to having both methodologies well in hand?

To the degree that algorithmic criticism tries to enter this debate, it does so by considering a third culture that is at once the product of both scientific and artistic investigation and has subtly suffused both cultures since the turn of the twentieth century. It begins with the "'pataphysics" of Alfred Jarry, and in particular with that extraordinary "neo-scientific" novel *Gestes et opinions du docteur Faustroll, pataphysicien,* in which the science of "imaginary solutions" is put forth.

Faustroll is by any measure a baffling and inscrutable work. Its conventional status as the ur-text of Absurdism might indeed tempt us to seek no meaning in it beyond the philosophical implications of its emphatic rejection of realistic portrayals and narrative forms. It describes a journey, but one that takes the main character "from Paris to Paris by Sea" (Jarry 177); characters die, but only "provisionally"; there are dialogues, but one character is incapable of saying anything other than "Ha ha"; there are epistolary passages, but the letters are delivered telepathically; proofs are offered, but they establish God as "the tangential point between zero and infinity" (256). In the context of this beguiling tale, the declaration of a new science would seem, at best, satirical. This view, however, obscures the seriousness of the intellectual provocation that lies at the center of *Faustroll:* the illumination of a philosophical point of intersection between scientific and imaginative endeavor.

More than three-quarters of the novel is framed as a dunning letter written by Rene-Isidore Panmuphle, bailiff. We are to understand, though the sense of this context is quickly obscured, that most of the novel is a narrative appended to a "summons Pursuant to Article 819," duly sealed as an "official paper" of a law court:

> I, the undersigned, Rene-Isidore Panmuphle, Bailiff attached to the Civil Court of First Instance of the Department of Seine, in session at Paris, residing in said City, 37, rue Pavee, Do hereby summon in the name of the LAW and of JUSTICE, Monsieur Faustroll, doctor, tenant of various premises dependent upon the house aforementioned, residing at Paris, 100 bis, rue Richer, and having proceeded to the aforementioned house, bearing upon its exterior the number 100, and having rung, knocked, and called the aforementioned variously and successively, no person having opened the door to us, and the next door neighbors declaring to us that this is indeed the residence of said M. Faustroll. (Jarry 182)[1]

Faustroll thus begins in the realm of the denotative—nearly two pages of introductory clauses appended to the phrase "he shall be constrained thereto" (182). With such legalese, Jarry illustrates the poverty that language assumes

when strained to the breaking point of an unattainable precision. Immediately following this farcical attempt to constrain the possibilities of language, Panmuphle discovers in Faustroll's apartment twenty-seven "equivalent books" ranging from Coleridge's *The Rime of the Ancient Mariner* to *The Gospel According to St. Luke* (in Greek). The language of restriction gives way to a vision of language so permeated with possibility that one may argue (as Jarry does) that texts as apparently disparate as those enumerated might be recast as versions of the same underlying narrative.

The journey that ensues is not so much from place to place as from text to text—or, more accurately, a journey from place to place where the places are Jarry's transformations of textual/imaginative space into geographical space (Stillman, *Alfred Jarry* 22). Such swings, from the imaginative possibilities of the literal to the literal possibilities of the imaginative, characterize the general movement of the novel. In the midst of these surreal imaginings, however, Faustroll breaks in with a moment of extreme clarity—the enunciation of the new science of 'pataphysics:

> definition. 'Pataphysics is the science of imaginary solutions, which symbolically attributes the properties of objects, described by their virtuality, to their lineaments.
>
> Contemporary science is founded upon the principle of induction: most people have seen a certain phenomenon precede or follow some other phenomenon most often, and conclude therefrom that it will ever be thus. Apart from other considerations, this is true only in the majority of cases, depends upon the point of view, and is codified only for convenience—if that! Instead of formulating the law of the fall of a body toward a center, how far more apposite would be the law of the ascension of a vacuum toward a periphery, a vacuum being considered a unit of non-density, a hypothesis far less arbitrary than the choice of a concrete unit of positive density such as water? (Jarry 193)

At its most fundamental level, 'pataphysics is the apotheosis of perspectivalism—a mode, not of inquiry, but of *being,* which refuses to see the relativity of perspective as a barrier to knowledge. For Jarry, the fact that "Questions always define in advance the regime of their answers" opens up the possibility of an epistemology utterly freed from the confines of the denotative (Bök 28).

For Jarry, science requires the process of ascribing the lineaments of perspectival vision to the virtuality of imaginative vision. Without such anarchic vision, the scientist becomes inured to the possibilities of exception—a victim of common consent and habit: "Universal assent is already a quite miraculous and incomprehensible prejudice. Why should anyone claim that the shape of a watch is round—a manifestly false proposition—since it appears in profile

as a narrow rectangular construction, elliptic on three sides; and why the devil should one only have noticed its shape at the moment of looking at the time?" (193). If scientific knowledge is borne of 'pataphysical seeings, those seeings likewise aspire to a different epistemological category—not the metaphysical light under which science operates, but "that which is superinduced upon metaphysics, whether within or beyond the latter's limitations, extending as far beyond metaphysics as the latter extends beyond physics" (192). In contrast to metaphysical understanding, 'pataphysical understanding cannot be contradicted or superseded by alternative visions. As Christian Bök describes it, 'pataphysics bespeaks "not the terrorism of unified theories but the anarchism of ramified theories . . . a savoir-faire economy (whose Lucretian arbitration requires that nomad science bracket the truth of a defunct concept as either dormant or defiant)" (25).

Bök correctly intuits the continuities between Jarry's critique and the anarchic science of Feyerabend:

> Feyerabend argues that, for science to progress, the nomic truth of the *as is* must induce an escape to the ludic space of an *as if*: *"we need a dreamworld in order to discover the features of the real world . . . which may actually be just another dream world"* (Feyerabend 32). . . . 'Pataphysics dramatizes this principle of Feyerabend by arguing that however obsolete or indiscreet any theory might at first appear, every theory has the potential to improve knowledge in some way. Just as biodiversity can make an ecology more adaptable, so can dilettantism make an episteme more versatile. The process of science must learn to place its defunct concepts into a kind of suspended animation that preserves them for the millenary reverie of an imaginary science. The truth diverges through many truths, inducing sophisms of dissent, novelty, and paradox: "given any rule . . . for science, there are always circumstances when it is advisable not only to ignore the rule, but to adopt its opposite" (Feyerabend 32). (Bök 25)

The narrative of *Faustroll* is everywhere sustained by the sophisms of dissent, novelty, and paradox. It is inscrutable and anti-realistic because, as Linda Klieger Stillman has observed, "the imaginary hypothesis replaces the known or the probable and insinuates itself into the order of things as reality. The texts' constantly shifting perspectives establish the possible, rather than the probable, as credible" (*Alfred Jarry* 16).

All of this might seem beside the point—an artistic reverie unallied with the practical concerns of experimental science. But the same insinuations that characterize the imaginative lucubrations of 'pataphysics likewise capture a genre and method of inquiry that has come to characterize modern scientific inquiry. Beginning in the nineteenth century, the nomic drive of scientific

speculation began sowing the seeds of a revolutionary cosmology populated with particles smaller than the *atomos,* universes alternative (and supplementary) to our own, and peculiar convergences between energy and matter. In the light of such marvels, we witness modern science turning to narrative—not merely as a way to explain complex phenomena, but as a methodology for exploring the meaning and implication of phenomena. While Jarry was formulating his new science, the scientist-turned-philosopher Ernst Mach was coining the term "thought experiment" to describe these new meditations.[2]

For Kuhn, the thought experiment was "one of the essential analytic tools which are deployed during crisis and which then help to promote basic conceptual reform" (263). The most famous examples of the genre demonstrate the radical difference between such experiments and the attendant genres of illustration and exemplar. Maxwell's demon does not illustrate the Second Law of Thermodynamics, but instead attempts to imagine a universe in which the law cannot hold. Schrödinger's cat likewise provides not an example of the principle of superposition in quantum mechanics, but an instance in which the principle appears flatly absurd. In both cases, the narrative amounts to an impossible fantasy constructed for the purpose of divining the possibilities of the real. In a sense, thought experiment is the hyperbolic extreme of reductio ad absurdam—the 'pataphysical expansion of reality to the point of absurdity, which, like the ancient *reductio,* has truth as its ultimate object. Jarry's awareness of the narrative possibilities of such experiments are everywhere apparent in *Faustroll.* It is not at all fortuitous that Lucretius, the source from which Jarry borrowed some of the important terminology of 'pataphysics (e.g., *clinamen),* is likewise the source of one of the earliest and most elegant instances of thought experiment in Western science. More convincing still, however, are the ways in which the use of scientific narrative provides the framework for so much of Faustroll's journey.

Many critics have attempted to catalog the numerous texts that inspire Faustroll's odyssey.[3] Much of the novel, in fact, may be conceived as Jarry's 'pataphysical transformation of existing works. Coincident with these literary journeys, however, is a set of important late-century scientific texts culled from the writings of Lord Kelvin, William Crookes, and Charles Vernon Boys—writings that, unlike the literary exemplars, permeate the entire structure of *Faustroll.*[4] Faustroll's sieve, which floats upon the water despite being perforated with holes, comes more or less directly from Boys's *Soap Bubbles: Their Colours and the Forces Which Mould Them* (1890):

> I have a small sieve made of wire gauze sufficiently coarse to allow a common pin to be put through any of the holes. There are moreover about eleven thou-

sand of these holes in the bottom of the sieve. . . . Dip the sieve in hot paraf-
fin, shake to knock out of the holes. . . . Water goes through only if forced . . .
therefore, it has an elastic skin which requires force to stretch. If now I shake
the water off the sieve I can set it to float on water, because its weight is not
sufficient to stretch the skin of the water through all the holes. You see that it
is quite possible to go to sea in a sieve—that is, if the sieve is large enough and
the water is not too rough. (Boys, qtd. in Stillman, "Physics" 90)

Thus Jarry uses the science of Boys to explore the realistic possibilities of a
nonsense poem (Lear's "The Jumblies") (Lear 71–74).

One of the most impressive passages in *Faustroll* is an imaginative fantasia
on a theme drawn from a speech given by William Crookes and published in
Presidential Addresses to the Society for Psychical Research 1882–1911. There,
Crookes proposes to address "those who not only take too terrestrial a view,
but who deny the plausibility—nay, the possibility—of the existence of an
unseen world at all . . . the world of the infinitely little" (qtd. in Stillman, *Alfred
Jarry* 85). Crookes proposed that we imagine a homunculus perched on a cab-
bage leaf. For this creature, the molecular forces that govern surface tension
and elasticity "occur amidst a burst of sound and light" (Stillman, "Physics"
85), thus enabling us to apprehend these forces more clearly. Faustroll, true
to form, wishes to experience this radical change in perspective firsthand:

For this purpose he chose the substance which is normally liquid, colorless,
incompressible and horizontal in small quantities; having a curved surface,
blue in depth and with edges that tend to ebb and flow when it is stretched;
which Aristotle terms heavy, like earth; the enemy of fire and renascent from
it when decomposed explosively; which vaporizes at a hundred degrees, a tem-
perature determined by this fact, and in a solid state floats upon itself—water,
of course! And having shrunk along the length of a cabbage leaf, paying no
attention to his fellow mites or the magnified aspect of his surroundings, until
he encountered the Water.

This was a globe, twice his size, through whose transparency the outlines
of the universe appeared to him gigantically enlarged, whilst his own image,
reflected dimly by the leaves' foil was magnified to his original size. He gave the
orb a light rap, as if knocking on a door: the deracinated eye of malleable glass
"adapted itself" like a living eye, became presbyopic, lengthened itself along
its horizontal diameter into an ovoid myopia, repulsed Faustroll by means of
this elastic inertia and became spherical once more.

The doctor, taking small steps, rolled the crystal globe, with some consider-
able difficulty, toward a neighboring globe, slipping on the rails of the cabbage-
leaf's veins; coming together, the two spheres sucked each other in, tapering
in the process, until suddenly a new globe of twice the size rocked placidly in
front of Faustroll.

> With the tip of his boot the doctor kicked out at this unexpected development of the elements: an explosion, formidable in its fragmentation and noise, rang out following the projection all around of new and minute spheres, dry and hard as diamonds, that rolled to and fro all along the green arena, each one drawing along beneath it the image of the tangential point of the universe, distorting it according to the sphere's projection and magnifying its fabulous center. (Jarry 194–95)

This extraordinary passage is more philosophy of science than science fiction. The defamiliarization proposed by the alternative vision of science—the presbyopia and myopia of 'pataphysical exception—leads to an imaginative vision in which the "fabulous center" of the object is magnified. Crookes uses the figure to explain; Jarry, to enact the imaginative facility that led to the original insight.

Imaginative use of the tools of science characterizes nearly all the movements that claim 'pataphysics as its patrimony. If Jarry's work anticipates the age of Heisenberg, Oulipo—perhaps the grandest and most enduring of the 'pataphysical descendants—represents a refraction of the age of Gödel. Oulipo, indeed, might be said to do with (and for) mathematics and structural linguistics what Jarry did with physics: use the terms of its vision in order to seek not denotative truth, but imaginative insight.

For Oulipo, that imaginative meaning arises at the intersection of *potentiality* and *constraint.* The former represents the most obvious continuity with 'pataphysics. For Jacques Bens (one of the founding members of the group), it is one of the features that place the Oulipo within the context of a modernity entirely distinct from the idle formalism of past movements: "And now, if one begins to consider that potentiality, more than a technique of composition, is a certain way of conceiving the literary object, it would perhaps be allowed that the idea of potentiality opens into a perfectly authentic modern realism. Since reality never reveals more than a part of its totality, it thereby justifies a thousand interpretations, significations, and solutions, all equally probable" (Bens, qtd. in Thomas 20).[5] Oulipo thus approaches the literary work as Jarry approaches the watch face—as an object rife with exceptions, brimming with paths not taken and possibilities unexplored.

The earliest works of the Oulipo tended to dramatize this notion by illustrating the combinatorial properties of literary forms. Raymond Queneau's *Cent Mille Milliards de Poems* (*100,000,000,000,000 Poems*), generally considered the inaugural work of the group, consists of a sequence of ten sonnets (each a coherent work) arranged in such a way that one may interchange lines from each of the different sonnets to create a new sonnet.[6] The mathematical properties of the book—which are no less astonishing for being easy to

explain—are a major discursive element of the work. If there are ten pos-
sibilities for the first line, and any one of those lines may be followed by one
of ten additional lines, it follows that the number of possible combinations
is 10×10 (or $10^2 = 100$). Since that number will increase by a factor of ten
with each additional line, a fourteen-line poem becomes, in its potential state,
the Cartesian product of its sets: i.e., 10^{14} (100 trillion) possibilities. Queneau
determined that a person reading the book twenty-four hours a day would
need 190,258,751 years to finish it (Mathews and Brotchie 14).

In the midst of this combinatorial explosion, however, lies the rigid con-
straint of form. As one critic has noted, "The sonnets are executed with a fine
attention to detail, and in a manner which implicitly valorizes the process,
as well as the product; in a word, they are craftsmanlike" (Motte, "Raymond
Queneau" 201). The craftsmanship of each poem, moreover, extends to the
concinnity necessary for facilitating combination with the other poems. The
result is "a smoothly-functional machine for the production and dissemina-
tion of literature" (203)—literature that declares its potentiality not in spite
of, but because of the constraints imposed.

Here is the second sonnet in Stanley Chapman's translation of the work:

> The wild horse champs the Parthenon's top frieze
> Since Elgin left his nostrils in the stone
> The Turks said just take anything you please
> And loudly sang off-key without a tone
> O Parthenon you hold the charger's strings
> The North Wind bites into his architrave
> Th'outrageous Thames a troubled arrow slings
> To break a rule Britannia's might might waive
> Platonic Greece was not so talentless
> A piercing wit would sprightliest horses flog
> Socrates watched his hemlock effervesce
> *Their* sculptors did *our* best our hulks they clog
> With marble souvenirs then fill a slum
> For Europe's glory while Fate's harpies strum.
>
> (Mathews and Brotchie 17)

Here is a poem (of my own, and perhaps also Queneau's, creation) using that
poem and the other nine from the sequence:

> The wild horse champs the Parthenon's top frieze
> His nasal ecstasy beats best Cologne
> He bent right down and well what did he seize
> The thumb- and finger-prints of Al Capone

How it surprised us pale grey underlings
When flame a form to wrath ancestral gave
Proud death quite il-le-gi-ti-mate-ly stings
Etruscan words which Greece and Rome engrave
Poetic license needs no strain or stress
With gravity at gravity's great cog
Watching manure and compost coalesce
Their sculptors did *our* best our hulks they clog
With marble souvenirs then fill a slum
A wise loaf always knows its humblest crumb

One does not so much write a Queneauian sonnet as implement one using the formal constraints of the work. Though one might create a poem using random selections, the physical arrangement discourages this approach. Jacque Bens, in fact, considered avoidance of randomness a defining characteristic of the group: "The members of the Oulipo have never hidden their abhorrence of the aleatory, of bogus fortunetellers and penny-ante lotteries" (qtd. in Motte, *Oulipo* 17). Rather, one consciously and deliberately looks for interesting combinations of lines and poetic effects. In building my sonnet, I found myself unable to resist the urge to make the wild horse of the Elgin marbles seize "the thumb- and finger-prints of Al Capone." I was similarly delighted at how "pale grey underlings," though taken from a completely different poem, seemed to harmonize with the marble motif; likewise "Greece and Rome" with the Parthenon, "manure" with horses, and "nasal ecstasy" with the image of a horse champing at the bit. One has the clear sense of having discovered something with these combinations—of having liberated certain energies in the work—while at the same time having beat Queneau at his own game.

Queneau's unusual sonnet sequence bears an obvious resemblance to the Dadaist technique of cutting up poems and reassembling them into new formations, but there is little of the anti-art rhetoric of Tzara in Queneau's work. Tzara's poems seek to destroy; Queneau's to create. The Surrealists, echoing mythologies both of the Muse and of the artist as a conduit of "musical" energy and truthfulness, tended to stress the inspirational aspect of poetic creation. The Oulipians, by contrast, emphasize the original sense of poiesis as a "making" or "building." For Queneau, who sought to renounce his earlier affiliations with Breton and the Surrealists, "La littérateur est l'artiste et l'artiste est artisan" (Queneau 95). Constraint, which might at first seem to oppose the exuberant perspectivalism of potentiality, reveals itself in the work of the Oulipo as the condition under which perspective shifts and potential emerges. The constraints of form—like the strictures of scientific and mathematical

reasoning—alter one's vision and expose the explosive potentiality of the subject and of subjectivity. Without such alterations, writing cannot break out of its conventions. "Often, the Oulipo proposes [its constraints] freely to other writers who are, one imagines, beached, blocked, brutalized by the false prophets of genius and inspiration" (Motte, "Raymond Queneau" 203).

Few Oulipian works illustrate the liberation of constraint as well as Walter Abish's *Alphabetical Africa* (1974), which uses a series of seemingly impossible strictures to construct a coherent prose narrative.[7] The first chapter permits only the use of words that begin with the letter "a"; the second with the letters "a" or "b"; the third with "a," "b," or "c"; and so on until the full range of letters have been employed, at which point the process reverses itself. The novel begins, "Ages ago, Alex, Allen and Alva arrived at Antibes, and Alva allowing all, allowing anyone, against Alex's admonition, against Allen's angry assertion: another African amusement." (1). Chapter 2 begins, "Before African adjournment, Alex, Allen and Alva arrive at Antibes, beginning a big bash, as August brings back a buoyancy, a belief, Ahh, and believing all buy books about Angolan basins and about Burundi bathhouses." (3). Anthony Schirato, who sees in Abish's work both a comic parody and a critique of Western imperialism, adroitly isolates the ways in which the constraints of the novel's form impel the novelty of its revolution: "Angolan attacks, Dogon destructions, and Eritrean erasures occur precisely because the alphabetical rules within which the text operates preclude much opportunity for anything but largely undifferentiated and often repetitious descriptions. African anthills are attacked in the first 'A' chapter; Angolans can be bombed in chapter 'B' and suffer death in chapter 'D,' but until chapter 'S,' they, of course, cannot suffer at all" (135). The intelligibility of Abish's text—which, as Schirato demonstrates, extends to the richness of political metaphor—is not a fortuitous accident of its form, but a direct result of its constraints. As Jarry asks (of the objects of reality) what infinite smallness would entail, so Abish's text asks what narrative might emerge from a text in which no one can "die" until chapter 4 or "suffer" until chapter 19.

In the earlier chapters of the work, the emergence of convincing narrative from these strictures is perhaps the foremost feature, but the most astonishing chapter of all is surely the twenty-sixth, where the author allows himself the full use of the alphabet:

> Zambia helps fill our zoos, and our doubts, and our extra-wide screens as we sit back. Each year we zigzag between the cages, prodding the alligators, the antelopes, the giant ants, just to see them move about a bit, just to make our life more authentic, help us recapture the fantasy we had while watching the

wide-screen spectacular with rock Hudson on horseback, or the African Queen zapping Panda the wild leopard. I stayed in Africa for a few weeks. Took the tours. Met a few people. (Abish 64)

It is almost impossible to read this paragraph, after the previous twenty-five chapters, without an awareness of the first letters of the words—of the rich liberation of writing. It is perhaps the only passage in all of English prose that is notable for the *absence* of alliteration (if that is even the right term for the effect).

Queneau's work demonstrates the generative qualities of form; Abish's, the performative qualities of that generation. Together, the two procedures represent a large category of Oulipian forms. There is, however, a third type that represents the most obvious literary analogue to computer-assisted criticism—namely, poetry generated by purely algorithmic processes. One of the most famous of these is the so-called Mathews algorithm, which remaps the data structure of a set of linguistic units (letters of words, lines of poems, paragraphs of novels) into a two-dimensional tabular array. We might begin with four four-letter words arranged like so:[8]

        T   I   N   E
        S   A   L   E
        M   A   L   E
        V   I   N   E
    (tine, sale, male, vine)

The characters in each row are then shifted $n - 1$ places to the left, and new words are formed by reading the letters downward in the columns (beginning with the initial letter from the previous row):

        T   I   N   E
        A   L   E   **S**
        L   E   **M**   A
        E   **V**   I   N
    (tale, vile, mine, sane)

Next, the words are shifted to the right in the same manner and the results read upward:

        T   I   N   E
        E   **S**   A   L
        L   E   **M**   A
        I   N   E   **V**
    (tile, sine, mane, vale)

These maneuvers thus create a serendipitous morphology—an instantiation of the phonemic potentiality of ordinary words.

The same procedure may be undertaken with tables formed from words, phrases, sentences, or any other identifiable linguistic unit. Here is an example of a poem formed from a table of quatrains and couplets taken from Shakespeare, Herbert, Jonson, and Donne:

> Farewell! thou art too dear for my possessing,
> And like enough thou know'st thy estimate:
> The charter of thy worth gives thee releasing,
> My bonds in thee are all determinate,
> While mortal love doth all the title gain!
> Which sliding with invention, they together
> Bear all the sway, possessing heart and brain
> (Thy workmanship) and give thee share in neither.
> But now thy work is done, if they that view
> The several figures languish in suspense
> to judge which passion's false, and which is true,
> Between the doubtful sway of reason and sense;
> That thou remember them, some claim as debt;
> I think it mercy if thou wilt forget.
>
> (Motte, *Oulipo* 134)

For Mathews, the notion of potentiality in literature consists in the realization that alternative textualities "lie in wait to subvert and perhaps surpass" the original formation (126). "The fine surface unity that a piece of writing proposes is belied and beleaguered; behind it, in the realm of potentiality, a dialectic has emerged" (126). The algorithm therefore represents "a new means of tracking down this otherness hidden in language (and, perhaps, in what language talks about)" (126). Form, in other words, is both a means of poetic communication and an enunciation of possible procedures for analyzing that communication.

On the one hand, the hybrid sonnet is a work of poetic artifice—a new poem created, like all poems, from previous instances of language. Yet this same act has the effect of highlighting certain formal dimensions of the poem that we usually associate with critical observation. We might expect an artful nonsense to emerge; instead, we get a poem that, if not perfectly coherent, is at least mimicking the aural dimension of sensefulness. As a critical work, the new poem makes obvious a long-standing critical intuition about sonnet form—namely, that the form itself has a rhetorical structure that is almost independent of the words themselves, insofar as the form raises expectations

that may condition us to pursue particular patterns of sense making. We expect a sonnet to "turn," to engage in a certain call-and-response pattern between octave and sestet, perhaps to resolve with an ironic (or witty, or playful) couplet. Those expectations compel us to create sense even from lines that literally have nothing to do with one another. The hybrid poem is therefore not just a hybrid of various sonnets, but, with the addition of the algorithm, a hybrid between poetical and critical acts. It is not entirely cogent to call the poem "an interpretation," if we also intend that term to signify language acts like the paragraph above this one. At the same time, the algorithmic manipulation that produced the text would seem to problematize our desire to consider it a purely poetical or creative act, if we also intend that term to signify language acts like the original sonnets that make up the new formation.

'Pataphysics, Oulipian constraint, and the tradition of thought experiment all gesture toward a critical vanishing point at which the distinctions between art, criticism, and science dissolve. At the practical level, these distinctions remain firm: Jarry's lucubrations are not science, just as Crooke's fantasias are not those of an artist. Yet the artist and the scientist both endeavor to place the phenomenal world into some alternative formation that will facilitate a new seeing. Computation, particularly as it inserts itself into fields like bioinformatics or computational physics, manifests itself in much the same way as it does (naturally, almost inexorably) in the work of the Oulipo—as something both new and old, provocative and stabilizing, threatening and comforting. The computer revolutionizes, not because it proposes an alternative to the basic hermeneutical procedure, but because it reimagines that procedure at new scales, with new speeds, and among new sets of conditions. It is for this reason that one can even dare to imagine such procedures taking hold in a field like literary criticism.