THE METAMICT STATE

Roald Hoffmann

University of Central Florida Press

Orlando 1987 I

THE DEVIL TEACHES THERMODYNAMICS

My second law, your second law, ordains that local order, structures in space and time, be crafted in ever-so-losing contention with proximal disorder in this neat but getting messier universe. And we, in the intricate machinery of our healthy bodies and life-support systems, in the written and televised word do declare the majesty of the zoning ordinances of this Law. But oh so smart, we think that we are not things, like weeds, or rust, or plain boulders, and so invent a reason for an eternal subsidy of our perfection, or at least perfectibility, give it the names of God or the immortal soul. And while we allow the dissipations that cannot be hid, like death, and — in literary stances — even the end of love, we make the others just plain evil: anger, lust, pride — the whole lot of pimples of the spirit. Diseases need vectors, so the old call goes out for me. But the kicker is that the struts of God's stave church, those nice seven, they're such a tense and compressed support group that when they get through you're really ready to let off some magma. Faith serves up passing certitude to weak minds, recruits for the cults, and too much of her is going to play hell with that other grand invention of yours, the social contract. Boring Prudence hangs around with conservatives, and Love, love you say! Love one, leave out the others. Love them all, none will love you. I tell you, friends, love is the greatest entropy-increasing device invented by God. Love is my law's sweet man. And for God himself, well, his oneness seems too

much for natural man to love, so he comes up with Northern Irelands and Lebanons...

The argument to be made is not for your run-of-the-mill degeneracy, my stereotype. No, I want us to awake, join the imperfect universe at peace with the disorder that orders. For the cold death sets in slowly, and there is time, so much time, for the stars' light to scatter off the eddies of chance, into our minds, there to build ever more perfect loves, invisible cities, our own constellations.

TOUCHING THE SURFACE

The concrete lies in reeds, green wart head just above water.

What makes it lie still may be the abstract, a hypothesis of a thousand enzyme

factories churning bonds, pieces of a good meal, or just the notion

of satiety. It watches, this barely breathing concrete, at eye-water

level still other parts of its extended self...mosquito larvae pushing

their snouts through thick skin water, whirligigs' random skim. The abstract

weaves theories around this scene: it notes the absence of shadows

towards night, surface tension, the possibility (the abstract

is hardly ever sure) of a chemical repellant excreted by these flitting

beetles; how nice it might be to tie a fly joining essences of larva

and whirligig, the food search pattern in that skim, species

altruism, why so many eggs laid by a mosquito. The abstract

watches; the mind, easily distracted, blinks, and the bullfrog, reaching

for what one must be one with, leaps.

FLAG OF POLAND

1

We enter or have always been in this room whose corners congeal only when we look for them. An experiment is in progress, but it is uncertain if we are in control or just observers.

A woman stands quietly with me.

Before us
spotlit on a platform of gray stone,
with fossils in it,
the soft cream coil of a ptarmigan or swan.
It can barely lift its head.
From the dark rises the taut and killing
head of a red snake,
but it's also weak
and falls back on the bird's contour feathers.
I see the snake's tongue flicker
and we sense
its intent
to strike
and sink fangs into the bird's neck.

It would do so instantly, except that both are cold. But we do not feel the cold.
And now we remember, or always knew, that we or others behind some partition can tune this cold.
There is ice under the platform. The snake changes to a lizard, rears up, falls back closer to the snow goose's neck. The bird only swivels its head,

eyes on the red.
the lizard is now a lion totem
jammed into the slim snake skin.
Its claws are pressing out.
There will be blood.
The reds will clash.
I can't stop it.
The snake-lion pounces.

2

Men caught me in the rushes and cut my wings. They think innocence into my whiteness. I must play their role. But oh this quiet radiating cold penetrates the down, my skin, worse than the blizzards I hid through on my island. This cold, it is his way of making me weak and submissive. And the danger of that red weaving sting, too close to my warmth. Why do they want me killed? Let me move. It is his dream, but she looks at me. They can turn the cold off, and the snake of their Garden of Eden will kill me.

I was a red wave over roots and stones, and I took the scuttling brown vermin of the forest floor.

When I had need of them. Not in fear, like men with boots and sticks beating the bushes for me, afraid of my image within them, afraid of themselves.

But now they have forced me through some crack of time, willed me next to this life in white feathers.

Whose life — hers, theirs together?

I must reach the bird's head — the man wants me to, even if I feel no hunger.

But then he sends me the essence

of winter, to pull me back the vaguely remembered creeping in under rocks, to curl on dry leaves in my own circle of near sleep. And when I cannot resist the cold, he changes me, as he cannot change himself. A snake-lizard-lion pupa I rise to strike.

I am the silent watcher, the woman moving in and out of the shadow he creates. He makes me the perfect bystander, with the semblance of control. He doesn't let me cry, or say this experiment must end. I look good in white. I am afraid.

3

The cold slows but cannot stop the final weave and snap. Blood drops down the feathers, as little absorbed as water would be. And the bird's circle unfolds to show its feathered feet. I half wake, toss to redream that ending.

4

The snow goose wakes, it is not her dream.
She rises, fluffs herself.
There is a smell not of the tundra, which makes her move out of the light.
But the snake follows, quick, ready to jump...

5

The lion metamorphoses again, moves in. I call to the engineers in the booth

to turn on more cold, to stop him. They are slow, talk of response time. There is no time. There is too much time. The snake-lion kills me, alone, into the morning.

Shell, husk, bark, tank armor, carapace. There are softer machineries of protection:

A finger tip tracks the cream paper trim of a sheet of commemoratives each flashy,

engraved clone set patient in inner processions of perforation, inkling of a ripping

apart future. The rim: a squarish ambulatory bearing occasional

plate numbers, admonishing messages to use zip codes, the color proofs of whatever

rotogravure press spit this sheet. If not frayed in handling, the selvage

is abandoned, torn off. Turning the sheet over you see the slick trace

of a mind or machine that had hoped for more: the gumming, all the way out to the edge.

2

My taste runs to textiles. So you proffer alternative saving means: In the hem

of a Shirvan carpet, weft doubles back over the twinned warp, securing its own

return. Or, in afterthought, the body of the rug plenty supple and done, you loop

and twirl around, over and over the long edge warp thread. A binding, in toned

indigo, of survivor soul into this runner. At the short ends cotton fringes serve.

3

But what if shuffling time, dirt, the intrusive heels of others act to fray

off all the throw-away hulls and wrap we built on? The true edge sharp

exposed, a threat of total unraveling. Nicks grow into crevasses, wild

stressed rips cut in and through a structure that small energies saved for a while.

MIND GRACKLES

We are circling, we are flying, beating novice wings, not in sky's jig, not in courting darts, but

g-forces gentled, plying earnest updrafts for lift. It isn't easy this flying, for something must be forced past, something molecular, and we must learn to curl our wings just right, so that which passes

passes

overwing, and part of us is always falling, and part sucked up by this fraction less of nothing streamed by, a fast pull past, a draw up to the sky. Feathered airfoils bend, the wing is wind. Flying

is a kind of balanced falling,

out of the blue-black squawk of us, into the by, a slip of deeply forked tails, a shift, askew, a swing.

ONE FOR BISHOP BERKELEY

Zoom
the lifeless stretch
to Orion, searching, scanning
all the way, then
back through where we are,
plunge
reeling out this or that measuring tape
into submicron oscillations
of enzymes' inanimate girders.
Separate 'scopes are conscripted,
micro and tele, for out
is far, and one must reach
the cavities
where the tiny structures hide.

So, in bits, we sketch in this escalator of powers of ten.

Stuck in the middle, a life of delimited sizes, child's 4 to my 16_32.

And even then one sleeve always too long. Count in the intestinal flora, a right whale, and still the sentient crowds on a few steps.

Wouldn't it make more sense to have us top the master plan? Biggest is best, not only in squashes at the 4-H Fair, and if all devolved from us, fell in threads below, ah, then we could rest, secure in our creation, we unnervous gods, and having built in a random number generator, for we'd want the small things to run occasionally counter to our plan, we'd sit and watch, on our eternal picnic, all that fuss and fun below.

Or, tiny but elemental clusters freed of doubt of our divisibility,

we would reproduce, willfully, stack, aggregate, grow effortlessly upward, the only way for us. We'd make use of the chance turns of nature for color, softnesses and shapes. In time green vines would come, climbing trellises of our own making. Nothing insecure, or uncanny, for the atoms that we are would be in all.

But in the middle is where the brain is, constrained by the skull, bound by stretched skin, few slits for the senses to flow through. So this transforming prisoner beams out, thinks: See it big the stars make them far. See it small a cell. Querying the proximate causes of its confinement, testing powers, dreaming, it strews the world with all the sizes of its creation.

NEW TRAFFIC PATTERNS AHEAD

Let me eat the crumbs off your muffin darling,
let me try
to simplify
my life. I'm tired of pavlova
and kiwi,
tongue in jelly
vermicelli
plain vanilla's what I need,
just like they show it on TV.

Let me eat the crumbs off your muffin baby,
drop deluxe
sell the tux
real cheap. I'll slip on my western gear, brass buckle,
Springsteen's
pale blue jeans
country music's in town and you've
got piles of that NEH money.

Let me eat the crumbs off your muffin honey,
no more of
Raskolnikov
He's dull; I've taken up computer science. You
know the Mac's
got sexy syntax
So let's move to Tulsa; you can teach a course on Yeats and Ammons.

II

THREE POEMS FROM JAPAN

1. Akihabara

In this quadraphonic, centibel town there is a warren of roads, of electrified covered arcades, Akihabara.

Tokyo's discount mart of electronic gear.

A babble and babel of brand names:

Teac, Sony, Yaesu

Panasonic, Nakimishi, JVC

Escalators couple the stores, stacked like amplifiers in lab racks.
Speakers, shrouded, reach to the ceiling.
Litany of buttons, controls, meters, head phones, batteries, and switches,
Hi-fi's oriental, super-occidental El Dorado:
Teac, Sony, Yaesu
Panasonic, Nakamishi, JVC

Akihabara

You are a contemptuous advertisement of our riches, with your feed-in receptacles, grounded plugs. Your life-blood, the wastrel, giver of shocks, courses in braided copper wires, in plastic sheaths. Your collapsible ears, antennae attuned to the aether. And your eyes — you have no eyes...
You have digital meters and LED displays. You have no eyes.

But what a mouth!
Muzzled with screens, but full of shriek.

Akihabara

Take your music which I, addicted, desire Take your Russian and Swedish shortwave programs, radio clandestine Zimbabwe, your news and gray weather, beaded in commercials, like cheap sushi I'm going to turn you off.

2. Bunraku

Three black-hooded manipulators, one fragile many-hued puppet.
One man moves the left hand one moves the robe, simulating invisible feet one does the rest, a lot.
In an alcove to the side the chanter bawls news of war, receives death, plots revenge.
The samisen player squats to left.

Three hooded men, one puppet.

Three move, the puppet's free

No Balinese shadow play, finger puppet or marionette.

Control's explicit, and thereby vanishes.

In the catacomb theater of my dreams you, dear lady, are a puppet too.
You bear your father's wind-creased face and his gall too.
Your husband's sex-ridden carapace supports you, your teacher's goads hold your mask in place.
But, to your lovers you are more than real.
They see beauty, elegance, wit and for the brief impassioned moment in which they are drawn near their eyes perceive no hooded movers.

3. Japanese Science

The only rickshaw I saw, hooded with brocade, had a geisha in it.

And the old tattered man who pulled it chattered incessantly.

The curtain stirred, flashing a pale painted face.

And the man's feet clapped as he dodged the cars.

To a rich man's party, no doubt.

Yes, here come the black rented limousines, white doilies on their back seats.

A red lacquer box, Kamakura ware, hides in its polished perfection the place where it opens.

No hinges, just a perfect fit.

And on the black and shiny inside field, a straw and a solitary golden cricket, imprisoned.

The man I knew in Sendai, master of his western equation-soaked trade, divided space into fundamental unit cells. He claimed, deductively, to be able to build from them the cricket's chirp and geisha's paint.

A powerful methodology, his.

But I think he just built more perfect boxes.

FROM 12,000 METERS

These are the Siberian tundra's waters:

Oxbow moons in the tangled
tributaries of the Yenisei;

And sheets of glistening lakes,
a giant carp's scales caught in the sun.

Further, lakes rounded to machined perfection.
Are they meteor craters, or
some ancient earth lord's
communion wafers?

They are covered with ice.

And it is only September!

FINNAIR FRAGMENT

Ice berglets, poked down
by my oil rig stick
in littala's fluted glass
fail to break the
roiled golden mirror
of jazzy bubbly, covering
a fleeting rift
of the laws of physics.
They really do like ice here...
Rise, perforated cubelets,
relent, let Archimedes
rest in peace.
Or have you, polyvowelled friends
conspired in brief white nights
to make a truly light champagne?

FROM A RISE OF LAND TO THE SEA

The water's shore-lapping signature is a random drone, picking a wet string of nature's scrapping still moments. Sun-freckled wavelets dive. Yawl rubs against buoy, teased to a sporadic dulled tinkle that rises over the wind in the lindens. The same wily actor folds the feel of the sea gently into my back, drives the clouds.

The multisensual mixing is darned good, my engineer, my director. You even provide low comedy in a pesky fly and drama in the jet swish of a swallow diving to her eaves nest that I, intruder here, obstruct.

EVA AT SKOGSHEM

In the season of content, when yellow linden surplices of scent surround a buzz of swirling bumblebees, I, pilgrim-like traverse this globe-lamp-lined path. I have been here before. Half my life ago, twenty-two years old, I walked to Löwdin's summer school. And, being early, waited by that bench, by roses midst the gravel, a weathering statue of Pan. You came into my life then. With simplest English, a smile turned in time to limpid love. It was the seed crystal of our life, it was summer too. Oh, Eva, I still see your blue and white blouse.

BICYCLING ON LIDINGÖ

This gray cycle is a step-through model; in the U.S. we'd call it a girl's bike.

A foot brake, no speeds, my son would sink it in the ground with his ten-speed derailleur contempt. Yet it rolls, or bounces, through bikeways of conscientious Swedish planning, it winds along paths of asphalt and level dirt, sun spokes falling on wayside blueberry and lingon bushes. It wheels past rust red houses with white trim, pristine bays flashing by the trees. Night sun of midsummer melds pine and birch to the yellow side of green steering the sky into a Swedish flag.

The path moving, the bicycle stands still, I think I saw a fox along that hill.

IN AN ANTIQUE SHOP IN 'S-GRAVENHAGE

I met the proprietress

by asking, as I often do,

for a Victorian jelly mold.

Plump, jangling keys, somebody's grandmother,

she came to the door. Listened, and in a voice

accented softer than a silk scarf she said:

"No, I know what you search,

but none has come my way for years.

Look around, meneer.

You may find what you desire.

I have my tea."

And swayed through a curtain.

The shop was cluttered with majolica plates, bisque one-eyed dolls lacking hair, Chinese ceramic dogs, tarnished copper coins. A wooden plane, rusted on edge. I heard her tea things clatter,

> a slight whiff of fresh tobacco added to the Victorian must.

In cases lay ivory belt buckles stamped "Souvenir de Sénégal", ladles and prints of Frisian fishermen, scrimshaw and polished beads, an infinity of cups.

> I sidestepped a dark desk, and saw two rocking chairs needing caning cradling satanic andirons.

I was ready to leave. No sound came from the back room

"Thank you, and goodbye," I said,

banging the door handle.

But a draft caught me,

billowed out the printed curtain,

propelled me to see her.

Closing the half-opened door

I went back,

(Continued, no break)

knocked on the dark frame, parted the curtain:

Neat space confined by bureaus and mirrors reflecting the source of the breeze — an open window.

On the enameled table a teacup,

half a sandwich, a tuliped vase, beige doily a cigarette on a sculptured ashtray, smoke still rising.

But nothing of her. I closed the curtain and left.

Of such moments is life. The screeches forgotten

the occasional true silences etched in.

Mysterious details my be manufactured in the telling. No matter — for me:

Mevrouw will take her amber tea with cress sandwiches, she'll wear necklaces of sea lion teeth, midst Lalique vases,

midst chiffoniers.

Then she will vanish

not into haze not into crowds

but into the receptive keep of my imagining mind.

ENTWINED

For the draft from your horn they would kill you. But on the weavers' red ground you are safe. Oaks rise

like fountains encircled by flower clumps from lost pattern books. They think you tamed...I am to teach

you music, so next I practice the organ lesson, my servant abstracted at the bellows. You hear me,

breathe in tact, you are too still. In another scene I braid a garland and you hold the standard

caparisoned, redundant in the colors of the house I must marry in. They will have me wear strict clothes

too. You watch the monkey sniff at a flower filched from my basket, you smell the morsels parakeets,

rakish hares eat. White flanks shiver, but the intent horn is steady, pointing.
"Well trained", the beaten hunters

whisper to each other; so you don't cringe as I reach my hand for the cubit-long, scribed horn, in another tapestry.

The last tapestry is unwoven:

In it, night fades the red ground and cat's eyes glare in the bush. I lie, still, wanting your unreality to enter me make me pale as the aurora, to slip past castle doors, guards, wedding feast, to pass their gray time. Come real, be me! The hares sleep.

FROM LAKE LOUISE

Darkness ascends, caught in the mountain bowl. If this mirroring lake can invert glaciers, flip moraines deftly up gravity's chute, can it deny me the loner's spring of desire, to impel my word past these cliffs to newly blinking Sirius? How else can I reach you? The intent of love travels at superluminar speed; its ray reflects, making you, two thousand miles away, you who stand in the driveway, having forgotten to turn on the garage lights, lift your eyes to meet the selfsame lord of the star-brood, my messenger.

YOUNG WHISKEY JACK

You seem to ascend straight from the turquoise lake deep below us both, up an angled straight line that threatens, for you loom larger, but do not span space. Settle in the snow that lifts itself in tiny creaks from the larch needles below. The sun warms this south exposure. I strew sunflower seeds too salty for me, worry if they may harm you, but give in to the need you have of me. You eat them all. Fly to the top of a dead tree, shift to a compromise log, then to an inch of my still boot. The seeds are gone. All is surveyed, nothing left but to explore with a sideways flick of your gray and white head this dangerous, dispensing human bulk, spread the tail feathers, peep up here, and off to the golden larches which love you but do not feed you.

TOLEDO

1

Meeting place of earth and sky... and of all those who fell here by that finely struck local steel in the hands of others - Iberians, Visigoths, Moors, Jews, Castilians, Nationalists, Republicans. I think how their souls, once loosed, would rise in unpropelled swaying, gently, knowing that gravity must not pull them down any longer, missing it. The way to nothingness is only up, but this hard blue dome of the southern sky confines. They bounce, in eerie suspension of the freedom granted, bob back up, searching for the funnel, the nexus, the passage.

2

This is the one. Crimped by the bend of the Tagus and clay-baking sun, the sun which pries open canyons, heats brown hills, the rocks upon hills, goats wandering in the brush. The eye makes a small trespass to a pin-prick pattern of distant olives, dissolve to fields, mauve rocks breaking through the same difficulty tillable earth. To the west a live strip of green, river darkening life.

3

The way up is the town: gray and red stone and plaster, boulders bracing this mountain of shards and earthly offal, walls upon crumbling walls, tiled patios in narrowing streets. Hung between the poles of the Alcazar and the Cathedral, the city mounts to meet a sky that spreads, cloudlessly focussed by this crag of a settlement. Toledo hard lessons on how the solid meets the light.

4

The Cretan, Domenikos Theotokopoulos, came late here, after Visigoths and Arabs. His Venetian apprenticeship done, he paints saints, the descent from the cross, commissioned protraits of cardinals. And in a church, friends mourning the Count of Orgaz, in their lace-fringed tunics, in brocade, fine court dress. Above... the swirl of robes of saints, converging to sweep us up to a still unseen third world. But not with ease; we see long bodies stretching to leave earth, keeping their elongation of excess desire even as they bend to help others raise themselves. To the light above! Their sinews, bone, hard and soft trappings of robes and body tensed in too much light: El Greco felt the nexus and stayed in the city. He also painted it in a storm.

5

The Primacy of Spain: the glittering eagle of a lectern, candles and the tinkle of hidden nuns can't dispel the spacy murkiness of this Cathedral.

But the chancel! Pierced by light, a high passage to the sky, ascendant, fringed by figures of a rich tribe.

We are in a well, under impossible ice. They must see us, these ornate angels, patriarchs of the Transparente.

They fish for us. One even lowers a lamp in outstretched hands. Who is holding him? To the light their flaming grace pulls us on up.

Their temple gone, the speech of the Jews to the one God rose in unprepossessing synagogues of brick and plaster. In El Transito the lattice work lace of alabaster, Mudejar arches rise near the roof. Below, darkness, only two circumambulating strips of golden Hebrew. I make out words - the root of praise, names of the Lord, blessings. This is the fortress of perfect letters, built by those who came with the Moors, healed and studied and wrote love poems in Arabic, and, in the year that Their Catholic Monarchs felled the last Muslim kingdom of Granada, in the year when Columbus brought back from La Isla Española the gold for a monstrance, in that year of their Lord, the Jews who did not convert were forced on another upward, sideways, dispersing journey — to the Rhine, to the other Galicia.

7

So the past is mustered by the town; to tell what it was to live and be expelled, leaving bones to replenish olive fields; to praise indifferent gods, in black and white, in darknesses whose need is to be pierced by figured shafts; with sounds, the true sheen of cut; to paint the stretched thigh of God. These lopsided passions the earth incites and the city

stands brazed and rising.

Ш

MEN AND MOLECULES

Cantilevered methyl groups, battered in endless anharmonic motion. A molecule swims, dispersing its functionality, scattering its reactive centers.

Not every collision, not every punctilious trajectory by which billiard-ball complexes arrive at their calculable meeting places leads to reaction.

Most encounters end in a harmless sideways swipe. An exchange of momentum, a mere deflection.

And so it is for us. The hard knock must be just right. The eyes need lock, and glimmers of intent penetrate.

The setting counts.

A soft brush of mohair or touch of hand.
A perfumed breeze.

Men (and women) are not as different from molecules as they think.

DECEPTIVELY LIKE A SOLID

The conference is on Glass, in Montreal. Wintry light declines to penetrate windows, and soon will be lit glass-enclosed glows so that we may talk, talk into the night (fortified by bottled mineral waters), of the metric of order trespassing on prevailing chaos that gives this warder of our warmed up air, clinker, its viscous, transparent strength.

The beginning was, is silica, this peon stuff of the earth, in quartz,

cristoballite, coesite, stishovite. Pristine marching bands of atoms

(surpassing the names we give them) build crystalline lattices from chains, rings, of Si

alternating with oxygen, each silicon tetrahedrally coordinated

by O's, each oxygen ion, so different from the life-giving, inflaming

diatomic gas, joining two silicons; on to rings in diamondoid

perfection in cristoballite; helical O-Si-O chains in quartz, handed in

coiling, mirror images of each other, hard, ionic SiO₂.

There must be reasons for such perfection — time lent to the earth: then lava

flowed, the air blew thicker, still no compound or simple eye to fret defect

into the ur-liquid from which silica crystallized. But in time we did come, handy, set

to garner sand, limestone, soda ash, to break the still witness of silica. Heat

disrupts. Not the warmth of Alabama midsummer evenings, not your hand

but formless wonder of prolonged fire, the blast of air drawn in, controlled fire

storms. Sand, which is silica, melts. To a liquid, where order is local

but not long-range. Atoms wander from their places, bonds break, tetrahedra

in a tizzy, juxtapose, chains tilt, bump and stretch — Jaggerwalky. The restive structures

in microscopic turmoil meld to gross flow, bubbling eddies of the melt.

Peace in crystal meshes, peace in hot yellow flux. But the gloved men who hold the ladles get nervy volcanoes on their minds. So - tilt, pour... douse, so quench, freeze in that micro lurch. Glass forms, and who would have thought it clear?

We posit that the chanced, in its innards so upset, ought not be transparent. Light scattered from entangled polymer blocks, adventitious dirt, owes it to us - oh, we see it so clearly - to lose its way, come awash in black or at least in the muddy browns of spring run-off, another flux.

But light's submicroscopic tap dance is done in place. The crossed fields shimmer, resonant, they plink electron orbits of O and Si. Atoms matter, their neighbors less, the tangle of the locked-in liquid irrelevant in the birthing of color, or lack of it.

Optical fibers Crystal Palace
The Worshipful Company of Glass Sellers

recycled Millefiori prone to shattering Prince Rupert's drops Chartres, Rouen, Amiens float

Pyrex Vycor glass wool

network modifiers the Palomar mirror

smoked for viewing eclipses thermos

lead glass microcrack etched with hydrofluoric acid spun frustration bull's eyes annealed borosilicate softening point

High winds on Etna or Kilauea spin off the surface of a lava lake thin fibers. Pele's hair.
The Goddesses' hair,

here black.

MOON'S MOONLETS GONE

A satellite going round a planet has a lower and an upper region of stability. Below a certain altitude (called the Roche limit) a satellite, due to the strong tidal forces of the parent body, is torn to bits. Above a certain distance, the gravitational force of the parent body is so weak that any perturbation due to another object can jettison it from its stable orbit.

--Science Age (Bombay) 1, 79 (1983)

1

Out there at apogee, it's just a tumbling to pass time in darkness. The hauling in is by something too distant to mark

if it is hot or cold, planet or satellite. It's a weak tie, too; the orbit's eccentric, visitors, though few, come and go. There

is time to feel their draw, increment to fade. In the fly-by, an exchange of angular momentum so the next swing

out is further. A hazardous orbit glance provides escape velocity, but one doesn't know what one will be captured by.

2

Closer in, those body tides, pulls on the solid...We're not talking of flesh but what tugs true at earth. Not just moon's

hold on water, the scribbling of runes in flotsam and seaweed, not the diurnal loading and unloading, what timed

John Cabot's sail (at Avonmouth the spring tide is 40 feet). The moon does her own thing, but what we are after is the strong

craft that put a bulge on Mercury, that makes a lady of the night keep her face on us

as we roll. A might inverse square slow

haul of the round and massive on what comes near. Density matters. In the obsessive limit we elongate the seemingly solid

smaller, and when the coherent forces are beat, at Roche's limit, a couple radii, the body — body that was one — gives.

3

But then what of those cones, stout bullets, prong-like things sprouting antennas, solar cell wings, in metal thongs (aesthetics

and aerodynamics don't matter up there), what of those beeping artifacts we send up with a flame, a sensor and hope?

Well within the limit, they don't break. The earth yanks, the same silent pull. Nothing gives. For a clever brood has welded in

strict joints, struts, tightened bolts. We're good at holding things together. For a while — other fiery frictions wait below.

4

When troubles we get in...and out. Saturn's rings, a ranging orbit's gambit. Best to sit still, but momentum

and gravity won't let you — there is push and pull. Going's on, forever, not pained by people unable to solve

explicitly, the three-body problem.

NEXT SLIDE, PLEASE

there was no question that the reaction worked but transient colors were seen in the slurry of sodium methoxide in dichloromethane and we got a whole lot of products for which we can't sort out the kinetics the next slide will show the most important part very rapidly within two minutes and I forgot to say on further warming we get in fact the ketone you can't read it on the slides but I refer to the structure you saw before the low temperature infrared spectrum as I say gives very direct evidence so does the NMR we calculated it throwing away the geminal coupling which is of course wrong there is a difference of 0.9 parts per million and it is a singlet and sharp which means two things either you're doing this NMR in excess methoxide and it's exchanging or I would hazard a guess that certainly in these nucleophilic conditions there could well be an alternative path to the enone you see there it's difficult to see you could monitor this quite well in the infrared I'm sorry in the NMR my time is up I see well this is a brief summary of our work not all of which I've had time to go into as much detail as I wanted today.

NAPKIN ENGINEERING

Imagine that we were not such soft flesh that splits on rusted bolts and splinters but something harder, that takes a sheen. And that the lymphs, puses, chaotic

fluids that course down metastasis freeways, or in just messy plumbing double-park residues at every bend, that all the viscosity bled out. Imagine,

a better us, not some tinkerer-in-slimemolds' body building exercise, but something engineered to last: In shiny 304 stainless steel, or vacuum melt bar

stock, a complex of traps, chambers, pumped down manifolds (no hardened arteries here; at 10⁻¹⁰ torr a molecule can travel a mile before side-swiping another). This

is the efficient concept, a two-piece clamped body design, crevice-free butt welds to reduce the risk of contamination, flanged fittings, easier than nuts in tight

situations. Signals come through charged mosaic membranes, there is bell-mouthing for our beam and ion needs, to feed those long cool laser jets coursing past gray pump

shrouds, passing, chilled vanes, in dog leg throttling curves' control; control, the computers know it well. Energies need in and out, through cooled orifice plates, reduced nipples. Custom

penetrations can be drilled on demand. Mounting? In any position. Who needs fantasy, this high on high vacuum. The mechanism, self-lubricating bronze (continued, with stanza break)
nut of chips in the bonnet, can gate
the flux in a six-way cube cross, walk
the dog, hang the man. A speck of rust?
Imagine that! Abrade, ion gun at the ready.
Sputter up, sputter down - it's matter, thrust.

- With thanks to the exhibitors of equipment at the 32nd National Symposium of the American Vacuum Society, Houston, November 1985

SEARCHERS AND DECIDERS

We begin by sampling, selectively the excrescences of Nature's richesse then willfully tune in on the coded beat

of her tinkerer's drum. To bind in the force of a differential equation, to model, reduce...ah, that is power,

control, and

in the end

not too difficult,

for some of us,

smart kids, have learned our lessons well.

The patterns pulse on, to be revealed to careful listeners in Osaka and Heidelberg, as well as Ithaca.

So there we are, uncharismatic heroes of the myth of progress oh how we love to preen

before each other, in the finery of our jargon, the intricacies we trace in seeming chaos.

But the world has invented other most needed players of the game, shepherds of men and goods,

slaughterers, advocates and fighters. They who choose the time to heal or kill, compress

our knowledge to power their tools.

Our tools.

They manage, in good will

and once

in a while

drop bombs

and kill sweet lakes too.

And if we think they rule the world unwisely, I vouch we'd do no better.

Some of the searchers have qualms: Are we then at fault, for having in our precision of the electrons'

perky dance in alloy lattices loosed into the world the ken of beams, sheets, tank wheels with which they weld

the world's doom? We posit, for that is all we opt to do, that those tunes and pirouettes of mind

and matter might have been allowed to lie unformed, unmined and we the better for it.

But no, no. The ur-secrets of Nature don't lie there passively. They grow into our minds like dandelions,

they strangle us with their imminence and we in turn are Nature's garden tool for their unveiling.

They will not be concealed. And so...the feeders and the sellers, the priests and governors, have

cast us players in a tragedy. In holy madness fed by the weed of what we learn, we learn, deprived of choice, the things that my harm us. It is our pain to know, to know, the dewy glimmer

of the snake

fernshoot,

as it unfurls, unhid.

to consume us.

TO WHAT END

On prolix days
I, diseased by infinity,
trundle fractions to their limit,
add a half to one, then a third, a fourth, a fifth...
the pesky, counterintuitive
divergence of it all.

I sunder line segments into smaller ones, carving out in each interval a crisp crevasse of nothingness for another, in-between to fall, wedged secure by its neighbors only until my next partition stroke.

There is no lasting togetherness for numbers.

In extension and intrusion
I look for the frozen moment
of reaching the end
(which is not an end)
to which all may be added,
and all is unchanged.

On such days I play in endless poker games where the stakes rise exponentially, follow the horizons on every sphere, and walk down railroad tracks to prevent them from meeting.

But infinities are only theoretical and terminate in the limit of the solitary I.

47

COMPLAINTS AGAINST THE BODY, AND ITS REPLY

I'm not old, but I know
a new joint will shift
into hurting gear every
winter — shoulder, knee, ankle —
will it be hip's turn next?
And when the acute pain
is done, traces, twinges return —
my body's private showing
of this feelie tape, newsreel
of my past and future
crimes against it.

I hate my body when it fails me. I think "This year I will run three miles up Snyder Hill Rd. again" and then a cartilage is torn ignominiously, raking leaves, a false mole hole step. And every footfall thereafter a pain-focus. Of course I run on it, addict, and it gets worse. "This year I will ride again. Maybe work up to polo." Under my mind's touch the mare's flank ripples with chestnut power, but all I can do is to drink in the stable smell.

I know I mistreat it.
I tear off toe nails when
I'm nervous, stopping
only at blood. Then I'm
impatient with their healing.
And don't stand me next
to the paté and shrimp
at receptions, because
I don't have your willpower
to move. I root there like
any pig. I eat and drink
in binges, sentenced to

measure out my fun by the aftertaste of Rolaids and the level of the antacid bottle.

I am angry with my body. Trivial pains, you say, but I'm sure age has more failures of marrow, sphincter, artery to loose than you or I wish, clinically, to imagine.

So what does the defendant say to all that?

Bodies are bodies, an endless rhythm of biochemical cycles nudged into perfection, binding effortlessly the vital component of the air with the feed, the water, churning them, chopping a bond here, never too many, until the molecular puzzle pieces are sufficiently small, right to be built up by noninfernal machinery, assembled into the microscopic servants and messengers of the organism — enzymes, hormones, the stuff of genes, the machine itself. Proteins — transparent as in the marvelous eye lens, or red as hemoglobin. In colors, shapes, degrees of softness and hardness, their small actions multiply to extend the muscle, to give the heart valve the motive power to open as it must, and, eventually, in coordination to walk, stumble, and to recover from that stumbling; to think, ever so simply, to remember poems and equations and Emil Nolde's landscapes, the traces of love and God, even to forget the body that is around and with this brain...

So the body says: gurgle, thump-thump. And when I think I am angry with my body I mean: my mind is angry with itself. Which will not do. Only outsiders can be blamed. We choose, unfailingly, those whom we love most.

IV

ADMISSION PRICE

1

A push from the wild side, is that what's needed?
To make plain words facet

being, skim to soar, to counterpoint world's inner and outer, or just to carry a tune?

To do all that - must one run, not walk, those razorback ridges in and out of the fogs

of the sane? In the dips or off barely hid edge - soul mire, paranoia, smashed

bottles, whiffs of real opium, seduction's rip pull. Giving in, or lashing out (either way)

a spiral of darkening mind coils to spring, free poets in their youth. They sing,

yes say to life, in jerky march to the alcoholic, twin barrel shotgun, sleeping pill altar

of the savage god. And we can't get their tune out of our mind.

2

Or, if not that death direct then a kind of stretching of a scream around sharp

corners. Must it be that? Inside, the carom of un-

dissipated anger, caress

worn down, caring tough.
Worms, an upwelling of memory
to forced swallow of innards

and gristle, and milk scum. Or worse: a child that wasn't. Then things must out, it is time:

a pass through the crooked neuron funnel that sublimes a change of form, a change

into words, transmitted, transmutes. A shearing of desire.

In search of other gates:

I listen to:firecrackers for St. John's Eve,
cows astray in the almond
and olive groves: Mallorca.

I remember, in another place: the dead
goose a pleasing dog dragged
around us as we walked.

I think I remember: mother, sinking in
the clay, carrying me across the
the wet fields. It is still far

to the Russian lines.

I see: you, as you lecture, one foot out of shoe, rubbing the other.

I think (too much): of spin glass, spun, the signature of spins that can't be flipped, frustration frozen in, memory.

But all that is looking glass empathy.
Doubt,
the surrogate demon, whispers
this will not do
not today

NIGHTMARE

The steamed-up bathroom mirror resists wiping with her terry towel. It will not reflect her face. She persists, and her determined, expert strokes clear it suddenly. Uncovering a forest path, across which stranded waves of brown pine needles guide a horned advent of snails after rain. She has to run — feels/hears the home-wrecking squash. She freezes. A slimy snail begins to crawl up her other leg. And as she raises her eyes, the fox, black band across his tan ears, quietly moves off not in his smooth regal canter, but like a cat that he isn't, bounding away. She cannot run. She cannot stand still, and wakes to soft rain on her roof window.

TRANSEUNT

Seemingly substanceless air through which the yellowing afternoon light passes; chancily moving air that gambles with gravity to make the chestnuts knock-knock to the ground; you would seem to deny the cluttering of this aether by semipermanent contrails of causality, control and intent, the untended weft of events, past and imperfect reaching, filling the quad with mind's eye harpoon glances at girls' legs, the substance of their tee shirt legends, balls thrown hard then, frisbees floating yesterday crisscross lines of running, arms outstretched to meet him, knotted lines of evasion, robins' low down worm hole lines intertwining with now dormant angers' spherical firework bursts. What was empty is full of frayed ribbons. And someone else holds the scissors, the broom, and reaches for the cleansing flame.

IF ANGER

If anger dissipates then into what? On a beach red flotsam jabbed by a stick,

underfoot the crunch of hermit crab shells, stones skipped with malice, for the splash.

Only a corporal of entropy?

This iron and jade phoenix, ascending on the sooty trace of mind's fire, wings a claim to the contrathermodynamic. So —

If anger accrues
then from where?
The thicket of trip fuses —
traffic, unbalanced accounts,

a slippery cold "Yes, if you think it best."

Accelerator pedal to the floor. Bleak sulk.

The stars go out once in a while it's no big deal.

SUDAN FRINGE, 1985

People,
what were people,
lodged under trees, in tents,
from helicopters that pass timely
as the evening news, from
above, people,
fixed sand grains
blown into pitted limestone
nodules left by that older sea,
now reclaiming, diurnal
in kindling sand,
wind of another surge.

Rahel,

the dusted glisten of your distended belly pulses too quickly. Stretch marks; your children doze, minds still play at play, drag sticks through caked dirt, scratch for roots, allium; scatter to canyons, picking up tuft headdresses of dried grass soon snatched from them for the fire. The live, expectant blades were scouted out by imploded goats, all ribs, as intent as the escarpment that rises to dissect a dune.

Rahel

tries to stand,
the children's shirt rags
need scrubbing
with sand
to abrade
salt, dirt, grease,
the stiffening sense
of what the desert night
may bear away

and down and in.

MODERN JOB

In Jerusalem the Lord waits, in his temple, in the rubble of the earth. Buried for centuries, watered by his people's tears, cordoned off from his sacrifice, the spirit waits.

In Auschwitz the trees flower, swaying, under the dome of his sky. Nourished, fertilized by the ashes and bones of believers, beneficiary of the holocaust, His greenery flowers.

In Hebron his folk pray — side by side, the sons of Jacob and Ishmael. compartmented, divided by the wounds of their martyrs, intransigent in their grief, His minions pray.

Let him wait.

In the gene-lines of our poor people
let the strand of the messiah be denatured, lost and unduplicated.
He was silent in our need.

Now let him wait.

DOPPELGÄNGER

The black and white photo's point is Rosa, twenty, in her first trench coat. Rosa in Vienna, 1935, and she beams, up on life, bundled in this coat, standing

a discreet space away from this largerthan-life male nude of intersecting planes, metallic softs, all shiny black. He turns to the side, this monument to youth or (black

forgiven) a hint of Aryan art. This representation Rosa graces, for she is beautiful and her briefcase is stuffed with Mann and general relativity.

Time frame shift. Fifty years pass, the print with scalloped edges is pressed on a visitor from Vienna. Here she was happy, and the statue, does it stand?

The photograph — is it an affidavit to having lived, or...a matte, prefigured death? A precipitated moment that was past just as it was, light

that bounded free now herded by lens and focal plane shutter to silver halide graininess. Light fixed, making dark, inversion fitting imprisonment.

Then the printing bulb's glare, on to another deception as we are made to see white where there are no silver grains. Space killed by flatness and time — well

a marker is set at t=0, cleaving the slow curve of before and after. Vienna cropped to a woman and a statue; but the earth moved, and people in brown shirts,

who were people, lift arms by the statue and load trains bearing Rosas past barbed wires to camps where no one needs cameras.

TOPAZ, GOMEZ ET CIE.

The insouciance of the crowd made her tremble. In faceted glasses champagne sparkled and flowed. Garnets flashed in the dark, and fandangos of light played with velvet gloves.

They were introduced, applauded.

Topaz, Gomez et Cie.

She sang, she danced, he played.

The grin on his face was affixed with cement, yet broken here and there in sweat and pimples. The spotlight caught him, but it could not arrest the trembling strings.

Topaz, Gomez et Cie.

Turbot and crayfish, tortes piled on high. Swirling voices, a song and then castanets, breaking through the waterfall of polite conversation Clicks on a parquet floor, chairs scraping The crowd gathers, unwillingly.

Topaz, Gomez et Cie.

The dancer sang of abandoned love, of tents sprawled in the hot sun.
Her many-colored skirts rose in waves, her back arched, in line with the stars.
Lost love, dangerous love, vendetta, and death.
Topaz, Gomez et Cie.

Few heard her. No one saw him. The elegant guests were there to coo and admire the opulent spread, To toast the bored bride, to ask who was not yet dead. The entertainment was bought through an agency. "Ah yes, they will be different. They will provide fun, ambience, a touch of the south. Let us take them, they're better than a dance band, and a string quartet doesn't quite fit the occasion.

How much? Oh, that's fine. Laura will set a place for them in the kitchen."

AUTUMN ENTELECHIES

1

The fever is past
but I feel fragile.
Like the Egyptian glass bottle of iridescent green,
pasted together, but showing the cracks.
Like the Nabatean beads, peeling away sharp,
onion-like, but corroded layers.
Like the old Coptic textile fragment, tattered
and fading in all but its yellow and red.
I feel fragile.
My pieces are all there,
but they are held by weak ties.
My head feels the draft.

Protect me from the wind.

Arrange me and I will come to life again.

2

Mount me in the same museum case.

These are the days when the clouds descend on our town. You see them coming from our side. The town is processed by their passage, piecemeal fabricated, pressed into existence. Tree trunks made to be lost in the camouflage of fall now just before the fog. That yellow house wasn't there before! The glen's cleft protrudes. A two dimensional curtain focuses a plane by obliterating the background. Then, against your mind's ever-conservative wish to freeze that scene, while you scan it changes.

3

Things have such difficulty in becoming...The restless blackbirds in the trees there, what makes them so? Too easy for the toolmaker in me to zoom in, dissect, and in the end (or at least where I choose to stop) adduce — neat molecules, restive, stochastically colliding to fabricate the biochemical tinkerer's tool kit, with it to assemble, in sublime bondage to the anarchy that drives, things — as simply laid out as microscopic barbs on feathers, even what is built into the chatter of obscured birds.

But that will not do. A purpose must be externally organized; here the hunter's gun, shot scattering, reverberations — afeared, in cawing disarray, they assail the space newly cleared by the leaves, are strewn to the sky... only, in sweet time to wheel into the flock that we demand them to be.

EARLY SEEN

Sound-mixer morning, knows what to do with gutter drip, chickadees' steep high-low whistle dialog, silences that need be and doves' distanter coo to blue.

Autodidact morning, grays mastered, tries for green and there fails to hide the jag, skew hung tilt of the apple tree branch, a weighty curve that split, not cleanly in last night's storm.

BRING ON GENE KELLY

We know that each one is different, that the patenters have daydreamt new ways to make us press here, slide

up there, trained us to doubt if their creation will act out its internal logic. This mechanism will work,

the metal tubes rise, ribs elbow out radially, raising a dome to the droopy sky, from which

it drips but doesn't pour yet but soon, soon - click. The sail, which was not meant

to be a sail is in place.

Taut, quasi-waterproof fabric
to deflect the drippings from God's tail.

One umbrella, soft rain, riddle song: Can two walk under and not touch, the first brush of skin demanding more?

One umbrella, hard rain, ragged tune. A couple, whose coat sleeves are charged to repel with the recall of love doused by this or that rain, by many rains.

Parasol, parapluie

Men swinging it up to their shoulder, playing war tip-tapping the ground. Macho... but only if it's folded.

Parapluie, parasol

Your push button release mechanism doesn't work today, boy.

Focusing lens for the wind's

rush, which shoves this fabric and metal contraption its way.

More than one hand can take, and the other has a heavy briefcase. Bends and creaks.

And always the risk of inversion, mangled spokes calling up the textbooks of the ski-town doctor.

It's easy to forget that parachutes can't fly up.

At their worst in crowds creating protocols of tilting and stretching as our

apparent volume increases. At the least we're supposed to stay dry. But as if

the waters' cycle were changed by man, as if rain rose from rivers, sewers and gutters,

my pants legs still get wet.

ALLURE OF THE TEPID

Dare a love that's static, free of high and fast discharges, ups, blue downs, auction hammers, spending binges and gossips's ammo.

We're not all screaming for love bite.

Dare just wavelets, dare equilibrium — hot water bottles, faded photos, the said amiably repeated. Then we'll swing, but only in a hammock, and mount the curve of slow volition, to memory of tea dancing, a Russian coin to wish on.

THREE JAPANESE EDO PERIOD POTS

Bowl 1

Witness to old fire, you beg to be picked up and returned to human hands.
And turned...
my controlled combustion pressing warm life into your creamy glaze which, once viscously boiling in 1629 congealed into pocked perfection.

Bowl 2

Lead-glazed raku, black, not just dark but no less comely. And the sheen of the night kiln's fire is in your smooth parts, in your rough. then...a cleft through which the unglazed clay, your solid soul emerges.

Bowl 3

Three bands - mauve, gray, mauve. In balanced contention the caught but rising matte gray conspires with the pot's rough rim to ride me over the edge, where I see the green froth of ceremonial tea.

All three

You are not a circle, but its end, the genteel force that makes us turn, turn, turn in echo of your creation.

In flows of glaze, crackles ceramic, dimples, burrs, ridges and scratches, the way ash fell, textural evidence to chance.

Cultivated - I see heaps of shards - imperfection, to reveal to refractory man the perfection sought in the potter's mind.

And now placed into my hands. So few things in this world were really meant to be held...

Before ever again I call a rough object imperfect I will remember Koetsu's bowls.

TO ALEXANDER ZHOLKOVSKY, IN EXILE IN LOS ANGELES

Pre-post-structuralist Alik wheels away from USC in the morn, his sandals meld with the pedals, this street rolls his bicycle, steel shines on spokes. Bearded Alik, in search of nude beaches. Down to the sea, except it's not down but straight, the hills in the distance already hazy in the purple-brown translucence of photochemical smog. The sun is warm on his back, dyeing away Ithaca winters. Alik in unrainy Southern California and he doesn't drive.

Cycle on, Pasternakian friend.
Cycle on, Alik, only thirty miles to the nearest beach.
They say the sands of Venice are pearly
and auburn girls crowd fabled Malibu.
If you long to see the surf of sainted Monica
do not be deterred, Alik
by the tar pits of La Brea
the muffler shops of Sepulveda Blvd.
Stop at the Church of the Spirit of Holy Monetarism,
detour for a semiotic analysis of El Segundo's
taco shop signs.
There is no Penelope waiting at home...

Oh, Alik, have the Angeleno lotus-eaters sated you with their buckthorn weed? Buy yourself some chaps, with deerskin fringes to blow in the wind as you ride, and come home, Alik.

THE DIFFERENCE BETWEEN ART AND SCIENCE

for Jorge Calado

From this Munch painting of someone pained on a bridge,

hands held to ears, the observer could scrape an orange

micron speck. He could mount it on a slide, fine-tune

the fast beams that circle under parking lots and football

fields, prodded on by magnets' handless shove, focus, for that

is his craft, the probe particles (fancy calibrated stones)

to jarring graphed impact in the paint. The search

is for the force of the scream. But the particles' pry is

too strong - they shock loose the paint molecules, in sound

demonstration of the uncertainty principle. The painting hangs;

Norwegian sky and harbor pick up the scream, beam

it into the observer's skull. There, echoing, effect change.

71 COSMETIC COMPANY BUYS EISENHOWER COLLEGE

Much of this material is taken from the November 1983 issue of "Cosmetics and Toiletries".

Prettying our bodies, we mask the poor times. The paint is for the mirror, that pert twodimensional mock-up of a self already uplifted. Then the blues slough away, love comes, one of several rises - well, why not luxuriate and embellish? The investment committee's report on the beauty care industry, recessionproof, smelled good. Approved. They hired away the Vice-President for Finance of Colgate-Palmolive, three vets fresh out of Cornell, a covey of formulators and perfumers who mixed their first fragrance chords at Helene Curtis. Eisenhower College came cheaply - the science labs, gym and kitchen, empty three years, now watched incubators, the limited color wheels of lip glosses and pomades, burbling pumps, centrifuges and magnetic stirrers. White coat heaven.

The new lab head read poetry which taught him, he said, we must imitate nature. "How near," here he shuffled his technical meeting notes, "how near my ladies', our customers', longed-for purple nails, polish flake- and chipproof, how near those nails did resemble the pier pilings to which the marine mussel Mytilus edilus adheres!" Out of a million years good habit it oozes, ever so effortlessly, a protein with Ala-Lys-Pro-Ser-Tyr-Hyp-Hyp-Thr-

(

72

DOPA-Lys sequences, stuttered seventy-five times (a reading loop or lapse in the genetic code?) in this polyphenolic protein. To bind, bind, never to release in its salty lifetime. The mussels' secret is nearly out, we only need fiddle with the sequence a touch, then engineer our own private reserve E. coli strains to pour out freight car lots. The undercoating of the century is on its way.

One of the rehired buildingsand-grounds people brought us Aunt Brenda's recipe for rashes, poison ivy, the rolling, falling kid itches of summers. She would cook up some oatmeal and spread it on the skin. Marketing pointed out that drugstores do not like to sell old oatmeal, and so our formulators, sequestered in their converted kitchen until our patent position is secure, boil up steamy steel vats of oatmeal, admix our secret ingredient, hops. Homogenized, press-sieved, our colloidal, anti-itching oatmeal extract waits in plastic jars for its trade name. Testing is underway, but we don't expect any trouble from the FDA.

Good things fall to the prepared mind. By some German donor's whim the Eisenhower College gym was rich in steam baths. The new Deodarant Division though big: Heated intact oxen discharged sweat in a steady outpour for a while, then fell into pulsed patterns with five minute periodicities synchronized animal to animal. And I had to clean the floor

(

after them. Next door, in the erstwhile shower stalls, isolated perfused horse skin studies taught us that adrenalin induced sweating. So rare that one gets large animal models for antiperspirants.

The No. 1 depilatory spot is shared by Neet and Nair, but we propose to pull past them in this bushy market. Our lotion contains calcium hydroxide, calcium thioglycolate, sodium silicate, mineral oil and an activated alumina silicone product. If only we could find a replacement for two ingredients we could label it as "all natural." Hypoallergenic, no offensive odor, it smoothes away unwanted hair in 5-10 minutes. Coarser hair may take a bit longer. Our desperate customers are advised not to use it around the eyes, inside nose or ears, or in perianal and genital areas. But legs, arms, underarms, face, even bikini line will do.

Long lines of empty sinks, tiled floors; the toilet stalls had to be ripped up but the scene was right for field tests of our ultra-high foam dentrifice. A heavy-bodied astringent product, whipped-cream texture, sweeps up and entraps food particles, gum-line debris, bacteria. Lines of volunteers gargle, then brush their teeth a canonical three minutes, in harmonies of swishing punctuated by timer beeps and the forced expulsion of water froths. By afternoon

they shape tentative claims
that the clocks cheat them,
slow to the side of eternity.
They lean with one hand
on the sink, snatch reflections
of their neighbors. The consensus
is for coconut flavor, but something,
something must be added
to discourage such wanton swallowing.

It took some disinfection, but the gym lockers proved ideal for raising adult female and castrated male hamsters. A banner hung from the roof: "Acne is the bane." Before the females got testy, into the pinna of both groups we injected subcutaneously Epidermal Growth Factor. The number of cells per sebaceous gland increased. The effect was fortunately localized to the treated ear and was equally induced by the injection of testosterone into that organ. The hamster keeper's wife reported weird bedroom games, but we must do what we can for the teenage boy.

"The art of expressing emotions"

"That lush, silken feel. Rich dense foam."

"Viscosity does it all"

"We came up with a pair of nonionics that are really sweethearts"

"Proteins with personal appeal"

"Winning scents"

"A gel with an outstanding rheology"

"The essential oils and extracts of flowers, leaves, roots, wood and musks:

"...mix, blend, emulsify, moisturize, add emolliency, lubricate, bind, release."

SHE SANG

The air owed it to you. For those many times it dove avidly into your expanding chest. It knew

there it would be organized, expelled with the clarion impress of tone and overtone. You did so much

for air that it had longed for to dance, with us, in Lillas Pastia's tavern by the ramparts of Seville.

To stroke Tatiana's hair as she writes to Onegin, even on that dread hill to join you and the flute

draping Jesus down from our cross. Then, the air was pleased to be your errand boy, to pass and be passed

through by your pellucid song. You pushed it on tactfully, you gave it pause. Ungrateful aether, then,

for in the end, when air became hard to come by, the uncoordinated road gang strain of your mouth, tensed

neck and chest had to pry it out in jagged blocks from a quarry that we could not see. To be consumed

in one obliterating heave, with aftershocks of gasping. No coda, only that raspy dissonant summons

of a fickle accompanist.

CAVAFY'S CHOICE

A face. From smoky distance or some dark, in slow-motion acknowledgement of its nearing

the still androgynous image collects itself. Proffered in sequence are ambiguities of cut or sweep

of hair, curls, chin shadows, silhouette of a shirt collar or the sweet curve of its absence;

it is too dim or far yet for lips or the telltale eye-cheek complex to be seen. The expectant mind

awaits the spur of gender choice to will down the prescored nerves the imperative I-you

scan of softs that are or may be. or...the unsexed way in which this Alexandrian skips over

the woman's face, searching behind and through her for the boy of the long hard night.

RED ALERT RAG

I have to tell you how we sat drinking beer — Friday I think it was in Randy's place. Rain outside, cats and dogs, Just sheets of rain. Jerry had this new bright crimson jacket, he went out for another case of beer, after we collected the money. The mood was right, relaxed, we were getting high. Jerry came back, all wet, and it went on with the beer. Such a great evening. Manny told Jerry his shirt was red on the shoulders from the rain and the new jacket running. I saw it too and patches of red down his back. "Incarnadine" I said. Jerry sang out: "Et incarnatus est." It was fun. "The carnage of multitudinous carnations." Manny got some sausage and American cheese from the fridge. Man, we were hungry. "Eat meat in the cardinal's diner." We laughed. You can't believe how funny it was. Jerry said: "I didn't know Nadine had Inca blood," and Manny couldn't wait to get in "I got to know her in Macbeth's charnel house chili parlor." The cheese ran out, but the beer did its work.

It was that kind of night. I can't explain it but the atmosphere was just right, you know

LIFT-TO-DRAG RATIOS

Avjet feeds the ram and thrust, thrust and ram, a punch, a path across

the sky. What a male way to fly!
Look, softer lines of geese, their

sequenced necks crimping the sky, tie to water and tough landings

understood. The honk drama of a southering traverse mends still

smarting sky. But in their V I see common principles of flight apply.

AN UNUSUAL STATE OF MATTER

In the beach sands of Kerala, abraded from the gneiss, in the stream sands of North Carolina one finds monazite, the solitary mineral. In its crystalline beginning there was order, there was a lattice. And the atoms - cerium, lanthanum, thorium, yttrium, phosphate - danced round their predestined sites, tethered by the massless springs of electrostatics and by their neighbors' bulk.

They vibrated, and sang

in quantized harmony.

to absent listeners, to me.

But the enemy is within. The radioactive thorium's nervous nuclei explode in the random thrum

of a hammer

of no Norse god.

The invisible searchlights of hell, gamma rays, flash down the lattice. Alpha particles, crazed nuclear debris, are thrust on megavolt missions of chance destruction. The remnant atom, transmuted, recoils, freeing itself from its lattice point, cannonballs awry through a crowded dance floor. There are no exits to run to. In chain collisions of disruption neighbors are knocked from their sites. The crystal swells from once limpid long-range, short-range order to yellow-brown amorphousness. Faults. defects, vacancies,

dislocations, interstitials, undefine the metamict state.