

What's Up Tiger Lily?

a novelette

by Paul Di Filippo

Writing "hard SF" is a challenge I don't visit upon myself often enough. Conceiving of new technologies and then rigorously and creatively extrapolating their impact on society is, of course, the quintessential science-fictional game. But as Bruce Sterling mentioned to me recently, "This is damn hard work!" The composition of this story inched ahead at a snail's pace until I fully visualized all the implications of Bash Applebrook's invention.

I'm particularly proud of one sentence here: "The station door hobermanned open." Ever since Robert Heinlein wrote "The door dilated," SF authors have striven to emulate this blend of concision and cognitive estrangement. With my sentence--a reference to the Hoberman curtains employed at the most recent Winter Olympics--I felt I was contributing my little tile to the grand SF mosaic.

What's Up Tiger Lily?

1.

Duck Soup

The first indication received by Bash Applebrook that all was not right with his world happened over breakfast on the morning of Tuesday, June 25th, 2029.

The newspaper he was reading turned into a movie screen.

Bash was instantly jerked out of his fascination with the current headline (MERCOSUR FREETER MAKES SPINTRONICS BREAKTHRU!). His jagged reaction caused some Metanomics Plus nutrishake to spill from his cup onto the tabletop, where it was quickly absorbed.

Looking at the clock on the wall--a display made of redacted fish scales whose mutable refractiveness substituted for ancient LEDs --as if to reassure himself that he hadn't been thrown entirely out of the timestream, Bash sought to gain some perspective on this alarming occurrence.

In itself, this transformation of his newspaper boded no ill. Such things happened millions of times daily around the globe, thanks to proteopape. And since Bash himself was the much-lauded, much-rewarded inventor of proteopape, he was positively the last person in the world to be astounded by the medium's capacity for change.

There was only one problem.

Bash had not instructed his newspaper to swap functions.

This impulsive, inexplicable toggling by his highly reliable newspaper scared Bash very much. Proteopape simply did not do such things. Eleven years ago, Bash had first engineered the substance with innumerable safeguards, backups and firewalls specifically intended to prevent just such herky-jerky transitions. In all the time since, there had been no recorded instances of proteopape malfunctioning, out of billions of uses. Even when sustaining up to seventy-five percent damage, proteopape continued to maintain functionality. (Beyond such limits, proteopape would just shut down altogether.) The miracle

material that had transformed so much of the twenty-first century's media landscape simply did not crash.

And if proteopape were suddenly to develop a glitch-- Well, imagining the immense and catastrophic repercussions from any flaws in the ubiquitous material raised shivers with the magnitude of tsunamis along Bash's spine.

Having assimilated the very possibility that his fabled invention could behave in nonpredictable ways, Bash gave his newspaper a shake, hoping to expunge this anomaly by the most primitive of engineering tactics. But the newspaper stubbornly continued to function as a movie screen, so Bash focused for clues on the actual movie being displayed across his ex-newspaper.

This particular sheet of proteopape on which Bash had been reading his newspaper measured approximately two feet by three feet. Possessing the stiffness and texture of heavy-bond dumb-paper, yet not quite as rigid as parchment, this sheet of proteopape had been folded in half vertically, producing four different faces, two outer and two inner. A bit old-fashioned, Bash preferred to read his newspaper on multiple pages, allowing him to refer backwards if he wished simply by eyeballing a previous face of his newspaper. Of course, upon finishing with the fourth page of the paper, Bash simply turned back to the front, where the fifth page was now automatically displayed, with pages six, seven and eight following.

But now every page revealed only the same movie, a quartet of active images. Bash turned the newspaper upside down, hoping to erase the unrequested show, but the inscribed sensors in the newspaper merely registered the new orientation and flipped the movie upright again.

Bash recognized the leering face of Groucho Marx, one of his father's favorite actors. Groucho wore some kind of ridiculous military uniform. *Duck Soup*, then. Now Margaret Dumont entered the scene, all dowager-haughty. But although the actions of the actors were canonically familiar, the conversation that followed bore no resemblance to any extant Hollywood script.

"So," said Groucho, in his familiar intonations which the MEMS speakers of the proteopape reproduced with high fidelity, "the little lady who wants to waste her mind and talents on artsy-fartsy stuff finally deigns to show up. Well, I'm afraid I've lost all interest in whatever crap you wanted me to watch."

"Okay, granted, I'm a little late," replied Dumont fruitily. "But you did promise after the Woodies that you'd come with me again to hang out with my pals."

As this warped yet still meaningful dialogue from his personal life began to resonate with Bash, he started to feel queasy. He laid the newspaper nearly flat on the breakfast table, right atop his plate of auk eggs and fried plantains with mango syrup, and as the crease separating the half-pages disappeared, the movie redrew itself to fill the whole expanse of one side.

Groucho struck a mocking pose, one hand cradling his chin, the other with cigar poised at his brow. "Well, a self-important louse like me can't be bothered with that bunch of crazy amateur *artistes* you hang out with. Such crazy ideas! So I've decided to abandon you and return to my cloistered sterile existence."

"Hit the road, then, you jerk! But I'll have the last laugh! You just wait and see!"

With that parting sally, Dumont and Marx vanished from Bash's newspaper. But the words and images that comprised Bash's regular morning bluetoothed installment of *The Boston Globe* did not reappear. The sheet of proteopape remained a frustrating virginal white, nonresponsive to any commands Bash gave it.

After his frustrated attempts to regain control of the newspaper, Bash gave up, reluctantly conceding that

this sheet of proteopape was dead. He slumped back in his chair with a nervous sigh, admitting to himself that the origin of this sabotage was all too evident.

Why, oh why had he ever agreed to a date with Dagny Winsome?

2. The Big Chill

York and Adelaide Applebrook had gone bust in the big dotcom crash that had inaugurated the twenty-first century. Their entrepreneurial venture--into which they had sunk their own lifesavings and millions of dollars more from various friends, relatives and venture capitalists--had consisted of a website devoted to the marketing of Japanese poetry. Behind the tasteful interactive facade of *Haiku Howdy!* had been nothing more than a bank of public domain images--Oriental landscapes, for the most part--and a simplistic poetry generator. The visitor to *Haiku Howdy!* would input a selection of nouns and adjectives which the software would form into a haiku. Matched with an appropriate image, the poem would be e-mailed to a designated recipient. Initially offered as a free service, the site was projected to go to pay-per-use status in a year or two, with estimated revenues of ten million dollars a year.

This rudimentary site and whimsical service represented the grand sum of the Applebrooks' inspiration and marketing plan.

The fact that at the height of their "success," in the year 1999, they named their newborn son Basho, after the famous master of haiku, was just one more token of their supreme confidence in their scheme.

When *Haiku Howdy!* collapsed after sixteen months of existence, having burned through millions and millions of dollars of OPM, the Applebrooks had cause to rethink their lifestyle and goals. They moved from Seattle to the less pricey rural environs of Medford, Oregon, and purchased a small pear orchard with some leftover funds they had secretly squirreled away from the screamingly burned investors. They took a vow then and there to have nothing further to do with any hypothetical future digital utopia, making a back-to-the-land commitment similar to that made by many burnt-out hippies a generation prior.

Surely the repentant, simple-living Applebrooks never reckoned that their only child, young Basho, would grow up to revolutionize, unify and dominate the essential ways in which digital information was disseminated across all media.

But from his earliest years Bash exhibited a fascination with computers and their contents. Perhaps his prenatal immersion in the heady dotcom world had imprinted him with the romance of bytes and bauds. In any case, Bash's native talents (which were considerable; he tested off the high end of several scales) were, from the first, bent toward a career in information technologies.

Bash zipped through public schools, skipping several grades, and enrolled at MIT at age fifteen. Socially, Basho Applebrook felt awkward amidst the sophisticated elders of his generation. But in the classroom and labs he excelled. During his senior year on campus he encountered his most important success in the field of moletronics, the science of manipulating addressable molecules, when he managed to produce the first fully functional sheet of proteopape.

Alone late one night in a lab, Bash dipped a standard blank sheet of high quality dumb paper into a special bath where it absorbed a tailored mix of dopant molecules. (This bath was the four hundred and

thirteenth reformulation of his original recipe.) Removing the paper, Bash placed it in a second tub of liquid. This tub featured a lattice of STM tweezers obedient to computer control. Bash sent a large file into the tub's controllers, and, gripping hold of each doped molecule with invisible force pincers, the device laid down intricate circuitry templates into the very molecules of the paper.

Junctions bloomed, MEMS proliferated. Memory, processors, sensors, a GPS unit, solar cells, rechargeable batteries, speakers, pixels, a camera and wireless modem: all arrayed themselves invisibly and microscopically throughout the sheet of paper.

Removing the paper from its complexifying wash, Bash was pleased to see on its glistening face a hi-res image. Depicted was a small pond with a frog by its edge, and the following haiku by Bash's namesake:

*Old pond
Frog jumps in
Splash!*

Bash tapped a control square in the corner of the display, and the image became animated, with the frog carrying out the poem's instructions in an endless loop, with appropriate soundtrack.

Bash's smile, observed by no one, lit up the rafters.

Thus was born "protean paper," or, as a web-journalist (nowadays remembered for nothing else but this coinage) later dubbed it, "proteopape."

Bash's miraculous process added merely hundredths of a cent to each piece of paper processed. For this token price, one ended up with a sheet of proteopape that possessed magnitudes more processing power than an oldline supercomputer.

In effect, Bash had created flexible, weightless computers practically too cheap to sell.

But the difference between "practically" and "absolutely" meant a lot, across millions of units.

P--the age of Immanent Information--was about to commence.

A visit to the same canny lawyer who had helped his parents survive bankruptcy nearly twenty years ago insured that Bash's invention was securely patented. Anyone who wanted to employ Bash's process would have to license it from him, for a considerable annual fee.

At this point, the nineteen-year-old Bash went public.

By the time he was twenty-one, he was the richest man in the world.

But he had still never even ventured out on a date with any member of the opposite sex who was not his cousin Cora on his mother's side.

3. **The Breakfast Club**

Dagny Winsome resembled no one so much as a pale blonde Olive Oyl. Affecting retro eyeglasses in place of the universal redactive surgery to correct her nearsightedness, Dagny exhibited a somatotype that

evoked thoughts of broomsticks, birches, baguettes and, given her predilection for striped shirts, barber poles. But her lack of curvature belied a certain popularity with males, attributable to her quick wit, wild impulsiveness and gleeful subversiveness. Her long pale hair framed a face that could segue from calm innocence to irate impatience to quirky amusement in the span of a short conversation. Dagny's four years at MIT had been marked by participation in a score of famous hacks, including the overnight building of a two-thirds mockup of the Space Shuttle *George W. Bush* resting in a simulated crash in the middle of Massachusetts Avenue.

Bash stood in awe of Dagny from the minute he became aware of her and her rep. A year ahead of Bash and several years senior in age, yet sharing his major, Dagny had seemed the unapproachable apex of sophistication and, yes, feminine allure. Often he had dreamed of speaking to her, even asking her on a date. But he had never summoned up the requisite courage.

Dagny graduated, and Bash's following year was overtaken by the heady proteopape madness. For the next decade he had heard not a word of her post-college career. Despite some desultory networking throughout the IT community, Bash had been unable to learn any information concerning her. Apparently she had not employed her degree in any conventional manner.

So in Bash's heart, Dagny Winsome gradually became a faded yet still nostalgia-provoking ghost.

Until the day just two weeks ago, on June 11th, when she turned up on his doorstep.

Women were not in the habit of showing up at the front entrance of Bash's home. For one thing, Bash lived in seclusion in a fairly well secured mansion in the exclusive town of Lincoln, Massachusetts. Although no live guards or trained animals patrolled the grounds of his homestead, the fenced estate boasted elaborate cybernetic barriers wired both to non-lethal antipersonnel devices and to various agencies who were primed to respond at a moment's notice to any intrusion. Bash was not particularly paranoid, but as the world's richest individual he was naturally the focus of many supplicants, and he cherished his privacy.

Also, Bash did not experience a steady flow of female callers since he remained as awkward with women as he had been at nineteen. Although not technically a virgin any longer at age thirty, he still failed to deeply comprehend the rituals of human courtship and mating. Sometimes he felt that the shortened form of his name stood for "Bashful" rather than "Basho."

Naturally, then, Bash was startled to hear his doorbell ring early one morning. He approached the front door tentatively. A curling sheet of proteopape carelessly thumbtacked to the inner door conveyed an image of the front step transmitted from a second sheet of proteopape hanging outside and synched to the inner one. (When weather degraded the outside sheet of proteopape to uselessness, Bash would simply hang a new page.)

Imagine Bash's surprise to witness Dagny Winsome standing impatiently there. After a short flummoxed moment, Bash threw wide the door.

"Dag--Dagny? But how--?"

Ten years onward from graduation, Dagny Winsome retained her collegiate looks and informality. She wore one of her trademark horizontally striped shirts, red and black. Her clunky eyeglasses incorporated enough plastic to form a car bumper. Her long near-platinum hair had been pulled back and secured by a jeweled crab, one of the fashionable ornamental redactives that metabolized human sweat and dead skin cells. Black jeans and a pair of NeetFeets completed her outfit.

Dagny said with some irritation, "Well, aren't you going to invite your old fellow alumna inside?"

"But how did you get past my security?"

Dagny snorted. "You call that gimcrack setup a security system? I had it hacked while my car was still five miles outside of town. And I only drove from Boston."

Bash made a mental note to install some hardware and software upgrades. But he could not, upon reflection, manufacture any ire against either his deficient cyberwards or Dagny herself. He was pleased to see her.

"Uh, sorry about my manners. Sure, come on in. I was just having breakfast. Want something?"

Dagny stepped briskly inside. "Green tea and a poppyseed muffin, some Canadian bacon on the side."

Bash reviewed the contents of his large freezer. "Uh, can do."

Seated in the kitchen, sipping their drinks while bacon microwaved, neither one spoke for some time. Dagny focused a dubious look on the decorative strip of proteopape wallpaper running around the upper quarter of the kitchen walls. A living frieze, the accent strip displayed a constantly shifting video of this year's *Sports Illustrated* swimsuit models, at play in the Sino-Hindu space station, *Maohatma*. Embarrassed, Bash decided that to change the contents now would only accentuate the original bachelor's choice, so he fussed with the microwave while admiring Dagny out the corner of his eye.

Serving his guest her muffin and bacon, Bash was taken aback by her sudden confrontational question.

"So, how long are you going to vegetate here like some kind of anerobe?"

Bash dropped into his seat. "Huh? What do you mean?"

Dagny waved a braceleted arm to sweep in the whole house. "Just look around. You've fashioned yourself a perfect little womb here. First you go and drop the biggest conceptual bombshell into the information society that the world has ever seen. Intelligent paper! Then you crawl into a hole with all your riches and pull the hole in after yourself."

"That's ridiculous. I--I'm still engaged with the world. Why, just last year I filed five patents--"

"All piddling little refinements on proteopape. Face it, you're just dicking around with bells and whistles now. You've lost your edge. You don't really care about the biz or its potential to change the world anymore."

Bash tried to consider Dagny's accusations objectively. His life was still full of interests and passions, wasn't it? He ran a big A-life colony that had kicked some butt in the annual Conway Wars; he composed songs on his full-body SymphonySuit, and downloads from his music website had hit an all-time high last week (53); and he was the biggest pear-orchard owner in Oregon's Rogue River Valley (the holding corporation was run by York and Adelaide)-- Didn't all those hobbies and several others speak to his continuing involvement in the world at large? Yet suddenly Bash was unsure of his own worth and meaning. Did his life really look trivial to an outsider?

Irrked by these novel sensations, Bash sought to counterattack. "What about you? I don't see where you've been exactly burning up the I² landscape. How have you been improving the world since school?"

Dagny was unflustered. "You never would have heard of anything I've done, even though I've got quite a rep in my field."

"And what field is that?"

"The art world. After graduation, I realized my heart just wasn't in the theoretical, R-and-D side of I². I was more interested in the creative, out-of-the-box uses the street had for stuff like proteopape than in any kind of engineering. I wanted to use nifty new tools to express myself, not make them so others could. So I split to the West Coast in 'seventeen, and I've been mostly there ever since. Oh, I travel a lot--the usual swirly emergent nodes like Austin, Prague, Havana, Hong Kong, Helsinki, Bangor. But generally you can find me working at home in LA."

The list of exciting cities dazzled Bash more than he expected it to, and he realized that for all his immense wealth he had truly been leading a cloistered existence.

"What brings you to stuffy old Boston then?"

"The Woodies. It's an awards ceremony for one of the things I do, and it's being held here this year. A local group, the Hubster Dubsters, are sponsoring the affair. It's kind of a joke, but I have to be there if I want to front as a player. So I figured, Bash lives out that way. What if I look him up and invite him to come along."

"But why?"

Dagny fixed Bash with an earnest gaze. "I won't pretend you meant anything to me at MIT, Bash. But I knew who you were, boy genius and all. And when you invented proteopape--well, I was kinda proud to have known you even a little bit. Proetopape is a real wizard wheeze, you know. It tumbled a lot of tipping points, sent some real change waves through the world. I admire you for that. So I guess what I'm saying is I'd like to map your gedankenspace, and maybe help wake you up a little bit."

Bash considered this speech for a short time.

"You were proud of me?"

Dagny grinned. "Do porn stars have sex?"

Bash blushed. "So, when is this awards thing?"

4. Valley of the Dolls

Some years back, Kenmore Square had been turned into a woonerf. The Dutch term meant literally "living yard," and referred to the practice of converting urban streets from vehicular to pedestrian usage. The formerly confusing nexus of several Boston avenues beneath the famed Citgo sign (now a giant sheet of laminated proteopape, like all modern billboards and exterior signage) had been transformed into a pleasant public venue carpeted with high-foot-traffic-sustaining redactive grasses and mosses and crisscrossed by flagstone paths.

On this early evening of June 12th, the temperature registered typical for Neo-Venusian New England, a balmy 92° F. The Square was crowded with strolling shoppers, picnickers, café patrons, club- and movie-goers. Children squealed as they played on the public squishee sculptures and underneath intricately dancing cyber-fountains. Patrolling autonomes--creeping, hopping and stalking, their patterning optics and tanglefoot projectors and beanbag-gun snouts and spray-nozzles of liquid banana peel swivelling according to odd self-grown heuristics--maintained vigilance against any possible

disrupters of the peace. A lone cop mounted on his compact StreetCamel added a layer of human oversight (the random manure dumps were a small price to pay for this layer of protection).

Bash and Dagny had parked Dagny's fuel-cell-powered Argentinian rental, a 2027 Gaucho, several blocks away. They entered the Square now on foot from the south, via Newbury Street, engaged in earnest conversation.

"Mutability, Bash! Mutability rules! We're all Buddhists now, acknowledging change as paramount. Nothing fixed or solid, no hierarchies of originals and copies, nothing stable from one minute to the next. Every variant equally privileged. That's what proteopape's all about! Media and content are one. Can't you see it? Your invention undermined all the old paradigms. First editions, signed canvases, original film negatives-- Those terms mean nothing anymore, and our art should reflect that."

Bash struggled to counter Dagny's passionate, illogical and scary assertions. (Carried to its extreme, her philosophy led to a world of complete isotropic chaos, Bash felt.) But the novelty of arguing face-to-face with a living interlocutor had him slightly flustered. "I just can't buy all that, Dag. Proteopape is just a means of transmission and display. The contents and value of what's being displayed don't change just because the surface they're displayed on might show something different the next minute. Look, suppose I used this store window here to display some paintings, changing the paintings by hand every ten seconds. That would be a very slow analog representation of what proteopape does. Would the canvases I chose to exhibit be suddenly deracinated or transformed by this treatment? I don't think so."

"Your analogy sucks! The canvases are still physical objects in your instance. But anything on proteopape has been digitized and rendered virtual. Once that happens, all the old standards collapse."

Their seemingly irresolvable argument had brought them to the door of their destination: a club with a proteopape display in an acid-yellow neon font naming it the Antiquarium. The display kept changing sinuously from letters into some kind of sea serpent and back. A long line of patrons awaited entrance.

A tall bald guy walking up and down the line was handing out small proteopape broadsides for some product or service or exhibition. Those in the queue who accepted the advertisements either folded the pages and tucked them into their pockets, or crumpled them up and threw them to the turf, where the little screens continued to flash a twisted mosaic of information. Bash remembered the first time he had seen someone so carelessly discard his invention, and how he had winced. But he had quickly become reconciled to the thoughtless disposal of so much cheap processing power, and aside from the littering aspect, the common action no longer bothered him.

Dagny turned to Bash and gripped both his hands in a surprisingly touching show of sincerity. "Let's drop all this futile talk. I think that once you see some of the stuff on display tonight--the awards ceremony features extensive clips, you know--you'll come around to my viewpoint. Or at least admit that it's a valid basis for further discussion."

"Well, I can't promise anything. But I'm keeping an open mind."

"That's all I ask. Now follow me. We don't have to stand in line here with the fans."

The stagedoor entrance behind the club, monitored by a chicly scaled Antiquarium employee, granted them exclusive entry into the club. Bash snuffled the funky odor of old spilled beer, drummer sweat and various smokable drugs and experienced a grand moment of disorientation. Where was he? How had he ended up here?

But Dagny's swift maneuvering of Bash across the empty club's main dancefloor gave him no time to savor his *jamais vu*.

Crossing the expanse, Bash saw the exhibits that gave the club its name. Dozens of huge aquariums dotted the cavernous space. They hosted creepy-crawly redactives whose appearance was based on the Burgess Shale fossils, but whose actual germlines derived from common modern fishes and crustaceans. In tank after tank, stubby-winged Anomalocarises crawled over the jutting spikes of Hallucigenias, while slithering Opabinias wagged their long pincered snouts.

Bash felt as if he had entered a particularly bad dream. This whole night, from the tedious argument with Dagny up to this surreal display, was not proceeding as cheerfully as he had hoped.

Workers in STAFF T-shirts were setting up folding chairs in ranks across the dance floor, while others were positioning a lectern onstage and rigging a huge sheet of proteopape behind the podium. As Bash exited the main floor he saw the proteopape come alive:

FIFTH ANNUAL WOODY AWARDS
SPONSORED BY
MUD BUG SPORTS CLOTHES
NASHVILLE SITAR STUDIO
XYLLELLA COSMETICS
AND
THE HUBSTER DUBSTERS

Below these names was a caricature of a familiar bespectacled nebbish, executed by Hirschfeld (well into his second century, the 'borged artist was still alive and active in his exoskeleton and SecondSkin).

Now Dagny had dragged Bash into a dressing room of some sort, crowded with people in various states of undress and makeup. They passed through this organized confusion into the club's Green Room. Here, the atmosphere was both less frenetic yet tenser.

"Bash, I want you to meet some special friends. Holland Flanders--"

Bash shook the hand of a well-muscled fellow wearing a wife-beater and cargo shorts, whose bare arms seemed to be slowly exuding miniscule flakes of golden glitter.

--Cricket Licklider--"

The petite woman wore a suit of vaguely Japanese-looking crocodile-skin armor, and blinked reptilian eyes. Contacts or redactions, Bash could not discern.

--Roger Mexicorn--"

This wraithlike, long-haired lad sported banana-yellow skin, and reminded Bash of a certain doomed albino from the literature of the fantastic.

--Lester Schill--"

Bash thought this besuited, bearded guy the most normal, until he clasped Schill's palm and received a distinct erotic tingle from some kind of bioelectrical implant.

--and Indicia Diddums."

Indicia's broad face cracked in a smile that revealed a set of fangs that any barracuda would have envied.

"These are some of the Hubster Dubsters, Bash. My fellow auteurs. They're all up for one or more Woodies tonight."

Bash tried to make sensible conversation under the slightly oppressive circumstances. "So, I have to confess I had never heard of your special kind of, um, art before Dagny brought me up to speed. You guys, ah, mess with old films...."

Schill frowned. "Crudely put, but accurate enough. Only the dialogue, however."

Diddums chimed in, her speech somewhat distorted by her unnatural teeth. "Thash right. We practish a purer art than thosh lazy chumps who simply fuck with the images. They have their own awards anyway. The Zelig."

Bash was confused. "Wait a minute. Your awards are named after Woody Allen, correct? Because he altered the soundtrack of that Japanese film over half a century ago--"

"*What's Up Tiger Lily?*" supplied Dagny, as if coaching a favored but deficient student.

"But didn't Allen also make *Zelig*?"

"Certainly," said Mexicorn in a languid tone. "But just as the magnificent *Tiger Lily* preceded the feeble *Zelig*, so did our ceremony anticipate that of our degenerate rivals. We distinguish, of course, between the Good Woody and the Bad Woody."

"We're *writers*, you see," interjected Flanders, gesturing in a way that left a trail of bodyglitter through the air. "The *word* is primary with us."

Licklider doffed her angular helmet and scratched the blonde fuzz revealed. "And the artistic challenge arises in fitting our words to the established images, creating a startlingly different film in the process. Any idiot can paste King Kong into *Guess Who's Coming to Dinner*. But it takes real skill to formulate a new script that hews to the actions of the original film and the mouth movements and gestures of the actors, yet still completely detourns it."

Dagny said, "Well put, Cricket. There's our credo in a nutshell, Bash. Startling novelty born from the boringly familiar. But you'll soon see for yourself. Here, grab a glass of champagne. It's just the cheap stuff made from potatoes, but you'd never know from the taste."

Bash took the drink. Truthfully, it wasn't bad. Dagny went to talk to others of her peers, leaving Bash alone.

Cricket Licklider approached Bash. He shifted his stance nervously and drained his glass. A bad mistake, as the potato champagne went straight to his brain.

"So," said the woman, "you're the brainiac who invented proteopape."

"Well, sure," said Bash. "That is, I did, but it didn't seem to require too many brains. After all, others had been messing with e-paper for a while, even if they weren't getting anywhere fast. It's not like I conceptualized the whole thing from scratch. The rest was just solid, if inspired, engineering."

"So why didn't anyone else get there first? No, you deserve all the luster, fizz." Cricket pinned Bash with her alligator eyes. "Tell me, you get much hot tail along with the royalties?"

"Uh, I, that is--"

"Well, believe me, you could walk off tonight with a double armful of proteopape groupies--of any of several genders. So just remember: if your date tonight doesn't come across like she should, there're are plenty of other bints in the bleachers. And that includes me."

Cricket grinned broadly, then turned to leave. Bash said, "Wait a minute."

"Yeah?"

"Are you related to--?"

"My great-grandfather. And wouldn't he have sold my grandfather for a single sheet of proteopape?"

Dagny came then to reclaim Bash. "Let's go. We've got seats in the reserved section, but I want to be on the aisle so I can jump up easily when I win."

Bash followed Dagny out of the Green Room, which was emptying rapidly. Out on the main floor, fans were now swarming into chairs. The crush at the various bars was intense, and a palpable excitement filled the club.

Dagny managed to secure more drinks, and she and Bash took their seats. Before too long, the lights dimmed and the ceremony began.

First came a few live song-and-dance numbers, each one in the spirit of the Woodies. Music and choreography replicated famous routines, but all the lyrics had been altered. The rumble between the Jets and the Sharks from *West Side Story* now limned the current scientipolitical feud between the Viridians and the Dansgaard-Oeschgerites. Gene Kelly's acrobatic leaps from *Singin' in the Rain* now parodied the recent scandal involving Lourdes Ciccone and that prominent EU minister, Randy Rutger.

The audience applauded wildly for every act. Bash found himself bemused by this disproportionate reception to what amounted to some juvenile satire. Was this truly representative of the cultural revolution that proteopape had supposedly engendered? If so, he felt ashamed.

Finally the master of ceremonies appeared, wearing a disposable suit cut along the lines of the famous oversized outfit often worn during shows of the last millennium by the singer David Byrne, whose octogenarian career had recently received a boost thanks to a soldout tour with the Bleeding Latahs. Fashioned entirely from proteopape, the MC's outfit displayed a rapidfire montage of subliminal images. The flicker rate made Bash's eyes hurt, and he had to avert them.

"Our first category is 'Best Transformation of Tragedy to Comedy.' And the contenders are Faustina Kenny for her *Casablanca*--"

A clip rolled on the big proteopape screen, and on smaller screens scattered throughout the Antiquarium. Bogart leaned over to Dooley Wilson as Sam, seated at the piano, and said, "Are those keys made from redactive ivory or wild ivory?" Sam replied, "Neither, Rick--they're human bone from Chechnya. Can't you see how they glow!"

--Engels Copeland for his *High Noon*--"

A stern Gary Cooper faced an adoring Grace Kelly and said, "Don't worry, Amy, the family jewels won't be damaged. My underwear is redactive armadillo hide!"

--Jim Cupp for his *Lord of the Rings*--"

Frodo Baggins gazed deeply in Sam Gamgee's eyes as their boat drifted downriver and said, "Admit it, Sam, you ate the last damn antioxidant superchoc bar."

--Lura Giffard for her *Blue Velvet*--"

A dissipated Dennis Hopper, breathing mask clamped to his face, muttered, "Why the hell did I ever volunteer to beta-test this new crowd-control spray?"

"--and finally, Dagny Winsome for her *Gone With the Wind*."

Cradling Vivien Leigh in his arms, Clark Gable said, "But Scarlett, if you go in for gender-reassignment, where will that leave me?" "On the bottom," she replied.

"And the winner is--Dagny Winsome for *Gone with the Wind*!"

To a storm of applause, Dagny trotted onstage. Gleefully triumphant, she clutched the offered trophy--a bronze bust of Woody Allen with a blank word-balloon streaming from his lips--and launched into her acceptance speech.

"This was not a lock, folks! I was up against a lot of strong contenders. My thanks to the judges for recognizing that a femplus subtext does not preclude some real yocks. I'd just like to thank the California State Board of the Arts for their continued support, my parents for zygotic foresight, and Alex, my physiotherapist, for those inspirational heated Moon rock treatments. Oh, and let's shed some special luster on Basho Applebrook, the inventor of proteopape, who's with us tonight. Bash, stand up and take a bow!"

Utterly mortified, Bash got out of his seat as a spotlight zeroed in on him. Blinking, he turned to face the audience, essaying a weak smile. After enduring the noise of their clapping for as short a time as politely allowable, he gratefully sat down.

Dagny had returned to his side. She leaned in to kiss his cheek. Bash felt partially recompensed for his forced public exposure. But the rest of the ceremony quickly soured his mood.

"Best Transformation of Comedy to Tragedy" naturally followed the award Dagny had won. Then came "Musical into Nonmusical" and vice versa. "Subtext Foregrounded" and "Mockumentaries" were succeeded by the award for "Bomb Defusing," the object of which category was apparently to rob a suspenseful film of any suspense. "Idiot Plotting" featured all the characters exchanging moronic dialogue and offering the stupidest of motives for their actions. "Comic Book Narration" forced the actors to summarize aloud all their actions, and also to indulge in long-winded speeches during any fight scenes. "Gender Swap" found all the males dubbed with female voices, and contrariwise. "Ethnic Mismatch" covered the introduction of inappropriate foreign accents.

Bash's father had been born in 1970. During Bash's childhood, he had discovered a stash of magazines that York Applebrook had accumulated during his own childhood. Fascinated by the antiques, Bash had devoured the pile of *Mad* magazines, only half-understanding yet still laughing at parodies of movies old before he had been born. At the wise old age of ten, however, Bash had put aside the jejune drolleries of "the usual gang of idiots."

Tonight felt like being trapped in a giant issue of *Mad*. Bash simply could not believe that all these supposedly mature adults felt that such juvenile skewings of classic films constituted a new and exciting artform. And somehow his invention of proteopape had catalyzed this stale quasi-dadaist display? Bash experienced a sense of shame.

He did not of course let Dagny know how he felt. Her pleasure in winning and in the victories of her peers prevented any such honesty. And, selfishly, Bash still thrilled to her kiss. The conversation with Cricket Licklider had made the possibility of post-Woodies sex with Dagny more vivid. No point in sacrificing the first likelihood of unmonied intercourse in two years on the altar of stubborn opinionated speechifying.

Finally the tedious ceremony ended. The assembled auteurs from around the globe split into cliques and adjourned to various other venues to celebrate or weep. Bash found himself accompanying Dagny, the Hubster Dubsters and a pack of hangers-on to a bar called The Weeping Gorilla, whose decorative motif involved the lugubrious anthropoid posed with various celebrities. There Bash consumed rather too much alcohol, rather too little food, and a handful of unidentified drugs.

Somehow Bash found himself naked in a hotel room with Dagny. Sex occurred in lurid kaliedoscopic intervals of consciousness. Afterwards, Bash remembered very little of the perhaps enjoyable experience.

But much to his dismay, he clearly recalled some boastful pillow talk afterwards.

"Hadda put a trapdoor in pro'eopape during testing. Lemme get inna operating system to debug. Still in there! Yup, never took it out, nobody ever found it neither. Every single sheet, still got a secret backdoor!"

Dagny, eyes shuttered, made sleepy noises. But, as evidenced by the subversion of Bash's *Boston Globe* on the morning of June 25th, when his newspaper had played a symbolical version of their harsh breakup on the shoals of Bash's eventual honesty during their aborted second date, she had plainly heard every word.

5. The Fugitive

Bash stood up from the breakfast table. His dead newspaper continued slowly to absorb the juices of his abandoned breakfast. The fishscale wallclock morphed to a new minute. Everything looked hopeless.

Dagny Winsome had hacked the hidden trapdoor in proteopape, the existence of which no one had ever suspected until he blurted it out. Why hadn't he eliminated that feature before releasing his invention? Hubris, sheer hubris. Bash had wanted to feel as if he could reclaim his brainchild from the world's embrace at any time. The operating system trapdoor represented apronstrings he couldn't bring himself to cut. And what was the appalling result of his parental vanity?

Now Dagny could commandeer every uniquely identifiable scrap of the ether-driven miracle medium and turn it to her own purposes. For the moment, her only motivation to tamper appeared to consist of expressing her displeasure with Bash. For that small blessing, Bash was grateful. But how long would it take before Dagny's congenital impishness seduced her into broader culture-jamming? This was the woman, after all, who had drugged one of MIT's deans as he slept, and brought him to awaken in a scrupulously exact mockup of his entire apartment exactly three-quarters scale.

Bash felt like diving into bed and pulling the covers over his head. But a moment's reflection stiffened his resolve. No one was going to mess with *his* proteopape and get away with it! Too much of the world's economy and culture relied on the medium just to abandon it. He would simply have to track Dagny down and attempt to reason with her.

As his first move, Bash took out his telephone. His telephone was simply a stiffened strip of proteopape. His defunct newspaper would once have served the purpose as well, but most people kept a dedicated phone on their persons, if for nothing else than to receive incoming calls when they were out of reach of other proteopape surfaces, and also to serve as their unique intelligent tag identifying them to I² entities.

Bash folded the phone into a little hollow pyramid and stood it on the table. The GlobeSpeak logo appeared instantly: a goofy anthropomorphic chatting globe inked by Robert Crumb, every appearance of which earned the heirs of the artist one milli-cent. (Given the volume of world communication, Sophie Crumb now owned most of southern France.) Bash ordered the phone to search for Cricket Licklider. Within a few seconds her face replaced the logo, while the cameras in Bash's phone reciprocated with his image.

Cricket grinned. "I knew you'd come looking for some of the good stuff eventually, Bashie-boy."

"No, it's not like that. I appreciate your attention, really I do, but I need to find Dagny."

Frowning, Cricket said, "You lost your girlfriend? Too bad. Why should I help you find her?"

"Because she's going to destroy proteopape if I don't stop her. Where would that leave you and your fellow Dubsters? Where would that leave any of us for that matter?"

This dire news secured Cricket's interest, widening her iguana eyes. "Holy shit! Well, Christ, I don't know what to say. I haven't seen her since the Woodies. She might not even be in town anymore."

"Can you get the rest of your crew together? Maybe one of them knows something useful."

"I'll do my best. Meet us at the clubhouse in an hour."

Cricket cut the transmission, but not before uploading the relevant address to Bash's phone.

Bash decided that a shave and a shower would help settle his nerves.

In the bathroom, Bash lathered up his face in the proteopape mirror: a sheet which digitized his image in realtime and displayed it unreversed. The mirror also ran a small window in which a live newscast streamed. As Bash listened intently for any bulletins regarding the public malfunctioning of proteopape, he took his antique Mach3 razor down and sudsed his face. Having been raised in a simple-living household, Bash still retained many old-fashioned habits, such as actually shaving. He drew the first swath through the foam up his neck and under his chin.

Without warning, his mirror suddenly hosted the leering face of Charles Laughton as the Hunchback of Notre Dame.

Bash yelped and cut himself. The Hunchback chortled, then vanished. And now his mirror was as dead as his newspaper.

Cursing Dagny, Bash located a small analogue mirror at the bottom of a closet and finished shaving. He put a proteopape bandaid on the cut, and the bandaid instantly assumed the exact texture and coloration of the skin it covered (with cut edited out), becoming effectively invisible.

Bash's showercurtain was more proteopape, laminated and featuring a loop of the Louisiana rainforest, complete with muted soundtrack. Bash yanked it off its hooks and took a shower without regard to slopping water onto the bathroom floor. Toweling off, he even regarded the roll of toilet paper next to the john suspiciously, but then decided that Dagny wouldn't dare.

Dressed in his usual casual manner--white Wickaway shirt, calf-length tropical-print pants and Supplex sandals--Bash left his house. He took his Segway IX from its recharging slot in the garage, and set out for the nearby commuter-rail node. As he zipped neatly along the wealthy and shady streets of Lincoln, the warm, humid June air laving him, Bash tried to comprehend the full potential dimensions of Dagny's meddling with proteopape. He pictured schools, businesses, transportation and government agencies all

brought to a grinding halt as their proteopape systems crashed. Proteopape figured omnipresently in the year 2029. So deeply had it insinuated itself into daily life that even Bash could not keep track of all its uses. If proteopape went down, it would take the global economy with it.

And what of Bash's personal rep in the aftermath? When the facts came out, he would become the biggest idiot and traitor the world had ever tarred and feathered. His name would become synonymous with "fuckup." "You pulled a helluva applebrook that time." "I totally applebrooked my car, but wasn't hurt." "Don't hire him, he's a real applebrook."

The breeze ruffling Bash's hair failed to dry the sweat on his brow as fast as it formed.

At the station, Bash parked and locked his Segway. He bounded up the stairs and the station door hobermanned open automatically for him. He bought his ticket, and after only a ten-minute wait found himself riding east toward the city.

At the end of Bash's car a placard of proteopape mounted on the wall cycled through a set of advertisements. Bash kept a wary eye on the ads, but none betrayed a personal vendetta against him.

Disembarking at South Station, Bash looked around for his personal icon in the nearest piece of public proteopape, and quickly discovered it glowing in the corner of a newsstand's signage: a bright green pear (thoughts of his parents briefly popped up) with the initials BA centered in it.

Every individual in the I² society owned such a self-selected icon, its uniqueness assured by a global registry. The icons had many uses, but right now Bash's emblem was going to help him arrive at the Dubster's club. His pocket phone was handshaking with every piece of proteopape in the immediate vicinity and was laying down a trail of electronic breadcrumbs for him to follow, based on the directions transmitted earlier by Cricket.

A second pear appeared beyond the newsstand, on a plaque identifying the presence of a wall-mounted fire extinguisher, and so Bash walked toward it. Many other travelers were tracking their own icons simultaneous with Bash. As he approached the second iteration of the luminous pear, a third copy glowed from the decorative patch on the backpack of a passing schoolkid. Bash followed the stranger until the kid turned right. (Many contemporary dramas and comedies revolved around the chance meetings initiated by one's icon appearing on the personal property of a stranger. An individual could of course deny this kind of access, but surprisingly few did.) The pear icon vanished from the pack, to be replaced by an occurrence at the head of the subway stairs. Thus was Bash led onto a train and to his eventual destination, a building on the Fenway not far from the Isabella Stewart Gardner Museum.

As he ascended the steps of the modest brownstone, Bash's eye was snagged by the passage of a sleek new Europa model car, one of the first to fully incorporate proteopape in place of windshield glass. He marveled at the realism of its "windows," which apparently disclosed the driver--a handsome young executive type--chatting with his passenger--a beautiful woman.

The car windows were in reality all sheets of suitably strengthened proteopape, utterly opaque. The inner surfaces of the "windows" displayed the outside world to the occupants of the car (or anything else, for that matter, although the driver, at least, had better be monitoring reality), while the outer surfaces broadcast the car's interior (the default setting) or any other selected feed. The driver and passenger Bash saw might have been the actual occupants of the Europa, or they might have been canned constructs. The car could in reality hold some schlubby Walter Mitty type, the President-in-exile of the Drowned Archipelagos or the notorious terrorist Mungo Bush Meat. (Suspicious of the latter instance, roving police would get an instant warrant to tap the windows and examine the true interior.)

Returning his attention to the door displaying his icon, Bash phoned Cricket.

"I'm here."

"One second."

The door opened on its old-fashioned hinges and Bash stepped inside, to be met by Cricket.

Today the woman wore an outfit of rose-colored spidersilk street pajamas that revealed an attractive figure concealed the previous night by her formal armor. She smiled and gave Bash a brief spontaneous hug and peck.

"Buck up, Bashie-boy. Things can't be that bad."

"No, they're worse! Dagny is going to bring down civilization if she keeps on messing with proteopape."

"Exactly what is she doing, and how's she doing it?"

"I can't reveal everything, but it's all my fault. I inadvertently gave her the ability to ping and finger every piece of proteopape in existence."

Cricket whistled. "I knew you zillionaires bestowed generous gifts, but this one even beats the time South Africa gave away the AIDS cure."

"I didn't *mean* to pass this ability on to her. In fact, all I did was drop a drunken clue and she ran with it."

"Our Dag is one clever girl, that's for sure."

Bash looked nervously around the dim narrow hallway full of antiques and was relieved to discover only dumb wallcoverings and not a scrap of proteopape in sight. "We should make sure to exclude any proteopape from our meeting with your friends. Otherwise Dagny will surely monitor our discussions."

Following his own advice, Bash took out his phone and placed it on an endtable.

"Wait here. I'll run ahead and tell everyone to de-paperize themselves."

Cricket returned after only a minute. "Okay, let's go."

Walking down the long hall, Bash asked, "How did you guys ever end up in a building like this? I pictured your clubhouse as some kind of xinggan Koolhaus."

"Well, most of us Dubsters are just amateurs with dayjobs, you know. We can't afford to commission special architecture by anyone really catalyzing. But our one rich member is Lester Schill. You met him the other night, right? The Schills have been Brahmins since way back to the nineteen-fifties! Big investments in the Worcester bio-axis, Djerassi and that crowd. But Lester's the last of the Schill line, and he owns more properties than he can use. So he leases us this building for our HQ for a dollar a year."

"Isn't he concerned about what'll happen to the family fortune after his death?" This very issue had often plagued the childless Bash himself.

Cricket snickered. "Lester's not a breeder. And believe me, you really don't want to know the details of his special foldings. But I expect he's made provisions."

Their steps had brought them to a closed door. Cricket ushered Bash into a large room whose walls featured built-in shelves full of dumb books. Bash experienced a small shock, having actually forgotten that such antique private libraries still existed.

Close to a dozen Dubsters assembled around a boardroom-sized table greeted Bash with quiet hellos or silent nods. Bash recognized Flanders, Mexicorn, Diddums and the enigmatic Schill himself, but the others were strangers to him.

Cricket conducted Bash to the empty chair at the head of the table and he sat, unsure of what he needed to say to enlist the help of these people. No one offered him any prompting, but he finally came up with a concise introduction to his presence.

"One of your West Coast associates, Dagny Winsome, has stolen something from me. The knowledge of a trapdoor in the operating system of proteopape. She's already begun screwing around with various sheets of my personal protean paper, and if she continues on in this manner, she'll inspire widespread absolute distrust of this medium. That would spell the end of our I² infrastructure, impacting your own artistic activities significantly. So I'm hoping that as her friends, you folks will have some insight into where Dagny might be hiding, and also be motivated to help me reach her and convince her to stop."

A blonde fellow whose face and hands were entirely covered in horrific-looking scarlet welts and blisters which apparently pained him not a whit said, "You're the brainster, why don't you just lock her out?"

Bash vented a frustrated sigh. "Don't you think that was the very first thing I tried? But she's beaten me to it, changed all my old access codes. She's got the only key to the trapdoor now. But if I could only get in, I could make proteopape safe forever by closing the trapdoor for good. But I need to find Dagny first."

Cricket spoke up. "Roger, tell Bash what you know about Dagny's departure."

The jaundiced ephebe said, "I drove her to the airport a day ago. She said she was heading back to LA."

"Did you actually see her board her flight?" asked Bash.

"No...."

"Well, I think she's still in the Greater Boston Metropolitan region. The timelag between coasts is negligible for most communications. Even international calls ricochet off the GlobeSpeak relays practically instantaneously." Bash was referring to the fleet of thousands of high-flying drone planes--laden with comm gear and perennially refueled in mid-air--which encircled the planet, providing long-distance links faster than satellites ever could. "But she wouldn't want to risk even millisecond delays if she was trying to pull off certain realtime pranks. Plus, I figure she'll want to finally pop out of hiding to lord it over me in person, once she's finished humiliating me."

The toothy Indicia Diddums spoke. "That raises a good point. This looksh like a purely pershonal feud between you two. You're the richesht plug in the world, Applebrook. Why don't you just hire some private muschle to nail her ass?"

"I don't want word of this snafu to spread any further than absolutely necessary. I spent a long time vacillating before I even decided to tell you guys."

Lester Schill stroked his long beard meditatively before speaking. "What's in this for us? Just a continuation of the status quo? Where's our profit?"

Bash saw red. He got to his feet, nearly upsetting his chair.

"Profit? What kind of motive for saving the world is that? Was I thinking of profit when I first created proteopape? No! Sure, I'm richer than God now, but that's not why I did it. Money is useless after a certain point. I can't even spend a fraction of one percent of my fortune, it grows so fast. And you, Schill, damn it, are probably in the same position, even if your wealth is several orders of magnitude less than

mine. Money is not at the root of this! Proteopape means freedom of information, and the equitable distribution of computing power! Don't any of you remember what life was like before proteopape? Huge electricity-gobbling server farms? Cellphone towers blighting the landscape? Miles of fiberoptics cluttering the sewers and the seas and the streets? Endless upgrades of hardware rendered almost instantly obsolescent? Big government databases versus individual privacy? Proteopape did away with all that! Now the server farms are in your pockets and on cereal boxes, in the trash in your wastebasket and signage all around. Now the individual can go head-to-head with any corporation or governmental agency. And I won't just stand helplessly by and let some dingbat artist with a grudge ruin it all! If you people won't help me without bribery, then I'll just solve this problem on my own!"

Nostrils flaring, face flushed, Bash glared at the stubborn Dubsters, who remained unimpressed by his fevered speech.

The stalemate was broken when a segment of the bookshelves seemingly detached itself and stepped forward.

The moving portion of the bookcases possessed a human silhouette. In the next second the silhouette went white, revealing a head-to-toe suit of proteopape. This suit, Bash realized, must represent one of the newest third-generation Parametrics camo outfits. The myriad moletronic cameras in the rear of the suit captured the exact textures and lighting of the background against which the wearer stood, and projected the mappings onto the front of the clothing. The wearer received his visual inputs on the interior of the hood from the forward array of cameras. Gauzy portions of the hood allowed easy breathing, at the spotty sacrifice of some of the disguise's hi-rez.

A hand came up to sweep the headgear backward, where it draped like a loose cowl on the individual's back. The face thus revealed belonged to a young Hispanic man with a thin mustache.

"My name is Tito Harnnoy, and I represent the Masqueleros. We will help you, hombre!"

6. **The Manchurian Candidate**

Tito Harnnoy drove his battered industrial-model two-person Segway down Mass Ave toward Cambridge. Riding behind Harnnoy, Bash experienced a creeping nostalgia, not altogether pleasant, that grew stronger the closer they approached his old alma mater, MIT.

Although Bash, once he became rich, had given generously to his university, endowing entire buildings, scholarship funds, research programs and tenured positions, he had not returned physically to the campus since graduation. The university held too many memories of juvenile sadness and loneliness blended with his culminating triumph. Whenever Bash cast his thoughts back to those years, he became again to some degree the geeky prodigy, a person he felt he had since outgrown. His maturity always a tenuous proposition, Bash felt it wisest not to court such retrogressive feelings. But now, apparently, he had no choice but to confront his past self.

Harnnoy broke Bash's reverie by saying, "Just a few smoots away from help, pard."

Indeed, they were crossing the Charles River into Cambridge. The scattered structures of MIT loomed ahead, to east and west.

Bash noted extraordinary activity on the water below. "What's happening down there?" he asked Harnnoy.

"Annual Dragon Boat Festival. Big Asian carnival today, pard."

Harnnoy brought the scooter to a gyrosopic stop nearly below the shadow of the Great Dome and they dismounted. Walking into the embrace of the buildings that comprised the Infinite Corridor, they attained grassy Killian Court. The bucolic campus scene reflected the vibrant July day.

Several artists were "painting" the passing parade from various perspectives, employing smart styluses on canvases of proteopape. Depending on what programs each artist was running, their strokes translated into digitized pastels or charcoal, acrylics or oils, ink or pencil or watercolor. Some had style filters in place, producing instant Monets or Seurats.

Elsewhere a kite-fighting contest was underway. Made of proteopape with an extra abundance of special MEMS, the kites could flex and flutter their surfaces and achieve dynamic, breeze-assisted flight. Tetherless, they were controlled by their handlers who employed sheets of conventional proteopape on the ground that ran various strategy programs and displayed the kites'-eye view. Curvetting and darting, the lifelike kites sought to batter aerial opponents and knock them from the sky without being disabled in turn.

Elsewhere, sedentary proteopape users read magazines or newspapers or books, watched various videofeeds, mailed correspondents, telefactored tourist autonomes around the globe, or performed any of a hundred other proteopape-mediated functions.

Conducting Bash through the quad and toward the towering Building 54, Harnnoy said, "I'm glad you decided to trust the Masqueleros, Applebrook. We won't let you down. It's a good thing we have our own ways of monitoring interesting emergent shit around town. We keep special feelers out for anything connected with your name, you know."

Bash didn't know. "But why?"

"Are you kidding? You're famous on campus. The biggest kinasehead ever to emerge from these hallowed halls, even considering all the other famous names. And that's no intronic string."

Bash felt weird. Had he really become some kind of emblematic figure to this strange younger generation? The honor sat awkwardly on his shoulders.

"Well, that's a major tribute, I guess. I only hope I can live up to your expectations."

"Even if you never released anything beyond proteopape, you already have. That's why we want to help you now. And it's truly exonic that we managed to get a spy--me--into place for your meeting with the Dubsters. Those sugarbags would never have lifted a pinky finger to aid you."

Despite the worshipful talk, Bash still had his doubts about the utility and motives of the mysterious Masqueleros, but the intransigence of Cricket's friends left him little choice. (Ms. Licklider herself, although expressing genuine sympathy, had had no solid aid of her own to offer.)

"I really appreciate your help, Tito. But I'm still a little unclear on how you guys hope to track Dagny down."

"Cryonize your metabolism, pard. You'll see in a minute."

Descending a few stairs into an access well, they stopped at an innocuous basement door behind Building

54. A small square of proteopape was inset above the door handle. Harnnoy spit upon it.

"Wouldn't the oils on your fingers have served as well?" Bash asked.

"Sure. But spitting is muy narcocorrido."

"Oh."

The invisible lab in the paper performed an instant DNA analysis on Harnnoy's saliva, and the door swung open.

Inside the unlit windowless room, a flock of glowing floating heads awaited.

The faces on the heads were all famous ones: Marilyn Monroe, Stephen Hawking, Britney Spears (the teenage version, not the middle-aged spokesperson for OpiateBusters), President Winfrey, Freeman Dyson, Walt Whitman (the celebrations for his two-hundredth birthday ten years ago had gained him renewed prominence), Woody Woodpecker, SpongeBob SquarePants, Bart Simpson's son Homer Junior.

"Welcome to the lair of the Masqueleros," ominously intoned a parti-faced Terminator.

Bash came to a dead stop, stunned for a moment, before he realized what he was seeing. Then he got angry.

"Okay, everybody off with the masks. We can't have any proteopape around while we talk."

Overhead fluorescents flicked on, and the crowd of conspirators wearing only the cowls of their camo suits stood revealed, the projected faces fading in luminescence to match the ambient light. One by one the Masqueleros doffed their headgear to reveal the grinning motley faces of teenagers of mixed heritage and gender. One member gathered up the disguises, including Harnnoy's full suit, and stuffed the potentially treacherous proteopape into an insulated cabinet.

Briefly, Bash recapped his problem for the attentive students. They nodded knowingly, and finally one girl said, "So you need to discover this bint's hiding place without alerting her to your presence. And since she effectively controls every piece of proteopape in the I²-verse, your only avenue of information is seemingly closed. But you haven't reckoned with--the internet!"

"The internet!" fumed Bash. "Why don't I just employ smoke signals or, or--the telegraph? The internet is dead as Xerox."

A red-haired kid chimed in. "No latch, pard. Big swaths of the web are still in place, maintained by volunteers like us. We revere and cherish the kludgy old monster. The web's virtual ecology is different now, true, more of a set of marginal biomes separated by areas of clearcut devastation. But we still host thousands of webcams. And there's no proteopape in the mix, it's all antique silicon. So here's what we do. We put a few agents out there searching, and I guarantee that in no time at all we spot your girlfriend."

Sighing, Bash said, "She's *not* my girlfriend. Oh, well, what've I got to lose? Let's give it a try."

The Masqueleros and Bash crowded into an adjacent room full of antique hardware, including decrepit plasma flatscreens and folding PalmPilot peripheral keyboards duct-taped into usability. The trapped heat and smells of the laboring electronics reminded Bash of his student days, seemingly eons removed from the present. Several of the Masqueleros sat down in front of their machines and begin to mouse furiously away. Interior and exterior shots of Greater Boston as seen from innumerable forgotten and dusty

webcams swarmed the screens in an impressionistic movie without plot or sound.

Tito Harnnoy handed Bash a can of Glialsqueeze pop and said, "Refresh yourself, pard. This could take a while."

Eventually Bash and Tito fell to discussing the latest spintronics developments, and their potential impact on proteopape.

"Making the circuitry smaller doesn't change the basic proteopape paradigm," maintained Bash. "Each sheet gets faster and boasts more capacity, but the standard functionality remains the same."

"Nuh-huh! Spintronics means that all of proteopape's uses can be distributed into the environment itself. Proteopape as a distinct entity will vanish."

Bash had to chew on this disturbing new scenario for a while. Gradually, he began to accept Harnnoy's thesis, at least partially. Why hadn't he seen such an eventuality before? Maybe Dagny had been right when she accused him of losing his edge....

"Got her!"

Bash and the others clustered around one monitor. And there shone Dagny.

She sat in a small comfy nest of cushions and fast-food packaging trash, a large sheet of proteopape in her lap.

"What camera is this feed coming from?" Bash said.

"It's mounted at ceiling level in the mezzanine of the Paramount Theater on Washington Street, down near Chinatown."

When Bash had been born in 1999, the Paramount Theater, one of the grand dames of twentieth-century Hollywood's Golden Age, had already been shuttered for over two decades. Various rehabilitation plans had been tossed about for the next fifteen years, until Bash entered MIT. During that year, renovations finally began. The grand opening of the theater coincided with the churning of the economy occasioned by the release of proteopape and also with a short-lived but scarily virulent outbreak of Megapox. Faced with uncertain financing, fear of contagion in mass gatherings, and the cheapness of superior home-theater systems fashioned of proteopape, the revamped movie house had locked its doors, falling once again into genteel desuetude.

"Can you magnify the view?" Bash asked. "See what she's looking at?"

The webcam zoomed in on the sheet of paper in Dagny's lap.

And Bash saw that she was watching them.

In infinite regress, the monitor showed the proteopape showing the monitor showing the proteopape showing....

Bash howled. "Someone's got proteopape on them!"

Just then a leering Dagny looked backward over her shoulder directly at the webcam, and at the same time Bash's chin spoke.

"It's you, you idiot," said Bash's epidermis in Dagny's stepped-down voice.

Bash ripped off the smart bandaid he had applied while shaving, and the image of the Masqueleros on Dagny's proteopape swung crazily to track the movement.

"Dagny!" Bash yelled into the bandaid. "This has gone far enough! You've had your fun at my expense. Now give me your current password so I can make proteopape secure again."

"Come and get it," taunted Dagny. "I'm not going anywhere."

"I will!"

With that bold avowal, Bash furiously twisted the bandaid, causing the image of the Masqueleros on Dagny's proteopape to shatter. On the monitor screen she appeared unconcerned, lolling back among her cushions like the Queen of Sheba.

Bash turned to Tito. "Lend me a phone and your Segway. I'm going to nail down this troublemaker once and for all."

"Some of us'll go with you, pard."

"No, you stay here. Dagny won't react well to intimidation by a bunch of strangers. And besides, I need the Masqueleros to keep on spying on her and feed me any updates on her actions. All I can hope is that she'll listen to me and abandon this insane vendetta. If she doesn't-- Well, I'm not sure what I'll do."

"No problemo, fizz."

Someone handed Bash a phone. He downloaded his identity into it, then established an open channel to Harnnoy. After tucking the phone into the neckline of his shirt, allowing him to speak and be spoken to hands-free, Bash darted from the underground room.

7. **Phantom of the Opera**

Bash made it as far as Killian Court before the first of Dagny's attacks commenced.

On all the canvases of the amateur painters, on all the individual sheets of proteopape held by the idling students, Bash's face appeared, displacing laboriously created artworks, as well as the contents of books, magazines and videos. (Dagny had unearthed a paparazzo's image of Bash that made him look particularly demented.) And from the massed speakers in the proteopape pages boomed this warning in a gruff male voice:

"Attention! This is a nationwide alert from Homeland Security. All citizens should immediately exert extreme vigilance for the individual depicted here. He is wanted for moral turpitude, arrogant ignorance and retrogressive revanchism. Approach him with caution, as he may bite."

This odd yet alarming message immediately caused general consternation to spread throughout the quadrangle. Bash turned up his shirt collar, hunched down his head and hurried toward the street. But he had not reckoned with the kites.

Homing in on his phone, the co-opted kites began to divebomb Bash. Several impacted the ground around him, crumpling with a noise like scrunching cellophane, but one scored a direct hit on his head,

causing him to yelp. His squeal attracted the eyes of several onlookers, and someone shouted, "There he is!"

Bash ran.

He thought briefly of abandoning his phone, but decided not to. He needed to stay in touch with the Masqueleros. But more crucially, giving up his phone would achieve no invisibility.

Bash was moving through a saturated I² environment. There was no escaping proteopape. Every smart surface--from store windows to sunglasses, from taxi rooftop displays to billboards, from employee nametags to vending machines--was a camera that would track him in his dash across town to the Paramount Theater. Illicitly tapping into all these sources, utilizing common yet sophisticated pattern recognition, sampling and extrapolative software, Dagny would never lose sight of her quarry. Bash might as well have had cameras implanted in his eyeballs.

Out on Mass Ave, Bash faced no interception from alarmed citizens. Apparently the false security warning had been broadcast only in Killian Court. But surely Dagny had further tricks up her striped sleeves.

He spoke into his dangling phone. "What's she doing now?"

Harnnoy's voice returned an answer. "Noodling around with her pape. She's got her back to the camera, so we can't see what kind of scripts she's running."

"Okay, thanks. I'm hitting the road now."

Once aboard the Segway, Bash headed back toward downtown Boston.

He came to a halt obediently at the first red stop light, chafing at the delay. But something odd about the engine noise of the car approaching behind him made Bash look over his shoulder.

The car--a 2029 Vermoulian with proteopape windows--was not slowing down.

In a flash, Bash realized what was happening.

Dagny had edited out both the traffic light and Bash's scooter from the driver's interior display.

Bash veered his Segway to the right, climbing the curb, and the Vermoulian zipped past him with only centimeters to spare. In the middle of the intersection it broadsided another car. Luckily, the crash of the two lightweight urban vehicles, moving at relatively low speeds, resulted in only minor damages, although airbags activated noisily.

Bash drove down the sidewalk, scattering pedestrians, and continued around the accident.

Things were getting serious. No longer was Dagny content merely to harass Bash. Now she was involving innocent bystanders in her mad quest for revenge.

His ire rising, Bash crossed the Charles River. Beneath the bridge, huge jubilant crowds had assembled for the Dragon Boat races.

Bash took several wrong turns. Dagny had changed the street signs, misnaming avenues along his entire route and producing a labyrinth of new one-way streets. After foolishly adhering to the posted regulations for fear of getting stopped by some oblivious rulebound cop, Bash abandoned all caution and just raced past snarled traffic down whatever avenue he felt would bring him most quickly to Washington Street.

Now Bash began to see his face everywhere, in varying sizes, surmounted or underlined by dire warnings. WANTED FOR CULTURAL ASSASSINATION, GUILTY OF SQUANDERING ARTISTIC CAPITAL, MASTERMIND IN FELONIOUS ASSAULT ON VISIONARIES....

The absurd charges made Bash see red. He swore aloud, and Harnoy said, "What'd I do, pard?"

"Nothing, nothing. Dagny still at the Paramount?"

"Verdad, compañero."

As he approached the Common, Bash noted growing crowds of gleeful pedestrians. What was going on....?

The Dragon Boat Festival. Chinatown must be hosting parallel celebrations. Well, okay. The confusion would afford Bash cover--

A sheet of proteopape--spontaneously windblown, or aimed like a missile?--sailed up out of nowhere and wrapped Bash's head. He jerked the steering grips before taking his hands entirely off them to deal with the obstruction to his vision, and the Segway continued homeostatically on its new course to crash into a tree.

Bash picked himself up gingerly. The paper had fallen away from his face. Angrily, he crumpled it up and stuffed it into his pocket. He hurt all over, but no important body part seemed broken. The scooter was wrecked. Luckily, he hadn't hit anyone. Concerned bystanders clumped around him, but Bash brusquely managed to convince them to go away.

Harnoy said, "I caught the smashup on the phone camera, Bash. You okay?"

"Uh, I guess. Sorry about totaling your ride. I'm going on foot now."

As Bash scurried off, he witnessed the arrival of several diligent autonomes converging on the accident. He accelerated his pace, fearful of getting corralled by the authorities before he could deal with Dagny.

Downtown Crossing was thronged, the ambient noise like a slumber party for teenage giants. The windows of Filene's claimed that Bash was a redactive splice between a skunk, a hyena and a jackal. As Dagny's interventions failed to stop him, her taunts grew cruder. She must be getting desperate. Bash was counting on her to screw up somehow. He had no real plan otherwise.

Weaseling his way through the merrymakers, Bash was brought up short a block away from the Paramount by an oncoming parade. Heading the procession was a huge multiperson Chinese dragon. In lieu of dumb paint, its proteopape skin sheathed it in glittery scales and animated smoke-snorting head.

People were pointing to the sky. Bash looked up.

One of the famous TimWarDisVia aerostats cruised serenely overhead, obviously dispatched to provide an overhead view of the parade. Its proteopape skin featured Bash's face larger than God's. Scrolling text reflected poorly on Bash's parentage and morals.

"God *damn!*" Bash turned away from the sight, only to confront the dragon. Its head now mirrored Bash's, but its body was a snake's.

Small strings of firecrackers began to explode, causing shrieks, and Bash utilized the diversion to bull onward toward the shuttered Paramount Theater. He darted down the narrow alley separating the deserted building from its neighbors.

"Tito! Any tips on getting inside?"

"One of our webcams on the first floor shows something funky with one of the windows around the back."

The rear exterior wall of the theater presented a row of weather-distressed plywood sheets nailed over windows. The only service door was tightly secured. No obvious entrance manifested itself.

But then Bash noticed with his trained eye that one plywood facade failed closeup inspection as he walked slowly past it.

Dagny had stretched an expanse of proteopape across an open frame, then set the pape to display a plywood texture.

Bash set his phone aside on the ground. "Tito, I'm going in alone. Call the cops if I'm not out in half an hour."

"Uptaken and bound, fizz!"

Rather vengefully, Bash smashed his fist through the disguising pape, then scrambled inside.

Dagny had hotwired electricity from somewhere. The Paramount was well-lit, although the illumination did nothing to dispel a moldy atmosphere from years of inoccupancy. Bash moved cautiously from the debris-strewn backstage area out into the general seating.

A flying disc whizzed past his ear like a suicidal mirror-finished bat. It hit a wall and shattered.

Dagny stood above him at the rail of the mezzanine with an armful of antique DVDs. The platters for the digital projectors must have been left behind when the Paramount ceased operations. The writing on a shard at Bash's feet read: *The Silmarillion*.

Dagny frisbee'd another old movie at Bash. He ducked just in time to avoid getting decapitated.

"Quit it, Dagny! Act like an adult, for Christ's sake! We have to talk!"

Dagny pushed her clunky eyeglasses back up her nose. "We've got nothing to talk about! You've proven you're a narrow-minded slave to old hierarchies, without an ounce of imagination left in your shriveled brainpan. And you insulted my art!"

"I'm sorry! I didn't mean to, honest. Jesus, even you said that the Woodies were a big joke."

"Don't try putting words in my mouth! Anyway, that was before I won one."

Bash stepped forward into an aisle. "I'm coming up there, Dagny, and you can't stop me."

A withering fusillade of discs forced Bash to eat his words and run for cover into an alcove.

Frustrated beyond endurance, Bash racked his wits for some means of overcoming the demented auteur.

A decade of neglect had begun to have its effects on the very structure of the theater. The alcove where Bash stood was littered with fragments of plaster. Bash snatched up one as big as his fist. From his pocket he dug the sheet of proteopape that had blinded him, and wrapped it around the heavy chunk. He stepped forward.

"Dagny, let's call a truce. I've got something here you need to read. It puts everything into a new light."

Bash came within a few meters of the lower edge of the balcony before Dagny motioned him to stop. He offered the ball of pape on his upturned palm.

"I don't see what could possibly change things--"

"Just take a look, okay?"

"All right. Toss it up here."

Dagny set her ammunition down to free both hands and leaned over the railing to receive the supposedly featherweight pape.

Bash concentrated all his anger and resolve into his right arm. He made a motion as if to toss underhand. But at the last minute he swiftly wound up and unleashed a mighty overhand pitch.

Dagny did not react swiftly enough to the deceit. The missile conked her on the head and she went over backwards into the mezzanine seats.

Never before had Bash moved so fast. He found Dagny hovering murmurously on the interface between consciousness and oblivion. Reassured that she wasn't seriously injured, Bash arrowed toward her nest of pillows. He snatched up the sheet of proteopape that displayed his familiar toolkit for accessing the trapdoor features of his invention. With a few commands he had long ago memorized as a vital failsafe, he initiated the shutdown of the hidden override aspects of proteopape.

From one interlinked sheet of proteopape to the next the commands raced, propagating exponentially around the globe like history's most efficient cyberworm, a spark that extinguished its very means of propagation as it raced along. Within mere minutes, the world was made safe and secure again for Immanent Information.

Bash returned to Dagny, who was struggling to sit up.

"You--you haven't beaten me. I'll find some way to show you--"

The joyful noises from the continuing parade outside insinuated themselves into Bash's relieved mind. He felt happy and inspired. Looking down at Dagny, he knew just what to say.

"Forget it, Jake. It's Chinatown."

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