

Title

Brief History of the North American Gordon Pask Archive

Author

Paul Pangaro, Ph.D.
CyberneticLifestyles.com
200 West 58th Street—Suite 5B
New York, New York 10019 USA
paul@cyberneticlifestyles.com

Prologue

As collector and caretaker of materials called the North American Gordon Pask Archive, I offer this brief history of its origin, development, and current state. I hope to impart context and sentiment about an archive that accompanied me for 30 years and traversed 10,000 miles.

First Artifacts



One of the first items in the archive:
Pask's business card circa 1976.

My first acquisitions to the archive occurred in Cambridge, Massachusetts and came from the hand of the man himself. Having met that day in 1976, Gordon Pask and I talked at length in the lab where Nicholas Negroponte had introduced us. Later, in a bar too noisy to hear much of anything (or was it his accent, or his diction?), Pask offered to give me a few recent papers. We repaired to his hotel room where his large leather suitcase was opened to expose a jumble of clothing, lamp wiring, pill vials, and journal papers. He extracted a few reprints, of which I'm certain one was "Minds and Media in Education and Entertainment: Some Theoretical Comments illustrated by the design and operation of a system for exteriorising and manipulating individual theses" (later published as Pask 1977).

I was immediately seduced by the title, printed on a pink cover (though Pask insisted the color was puce; I later realized he insisted many different colors were all puce). A photocopy of a typed manuscript pasted by hand into a booklet format, this reprint was on the verge of the illegible. But to a young person desperate for alternatives to the conventions of artificial intelligence, it was a Rosetta Stone. It bridged experiences in the arts with intuitions about the everyday, and each to the computational promise of information processing machines. With that reprint and Pask's business card, I carried away a glimmer of my future work and the first English ounce of paper that would become an archive.

System Research Office, Richmond-upon-Thames, Surrey



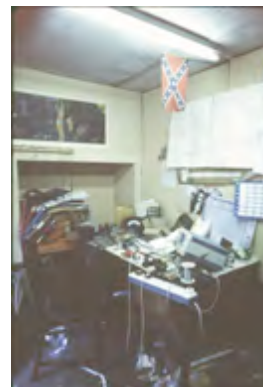
System Research Conference Room, Sheen Road, Richmond, Surrey, 1976.

Cardboard panel of entailment structure (far left). Entailment mesh in Pask's handwriting on blackboard (far right). Decorative Corinthian columns and chandelier, added by Pask to spruce up the office (center).

I was determined to visit Pask in England soonest, and a means soon appeared. Elaine Negroponte, Nicholas' wife and documentary filmmaker, was researching a movie about Alan Turing. (Years before biographies and plays made Turing familiar to an audience beyond computer scientists, Elaine had understood the importance of his story.) The Negropontes suggested I accompany Elaine to support the technical side of her research at King's College, Cambridge, England, where Turing's archive was housed. His archive included unpublished papers and physical artifacts. For example, there was a paper on morphology in plant life (few know of Turing's passion for that subject) and a spoon he had used to experiment with silver plating. A spoon seems ordinary until you know the history: silver plating requires cyanide and Turing died from ingesting cyanide that he had injected into an apple and eaten. While oblivious to my own artifact-collecting future, I was conscious of the emotional impact of holding the object in my hand. (Nothing so dramatic would be housed in the Pask Archive, but often while accessioning its items I would recall this moment intensely. I can still see that spoon in my hand.)

On that same trip for Turing I was able to see Pask and spend time at his company, System Research Limited, then on Sheen Road in Richmond-upon-Thames, Surrey. I met his personal assistant and research staff. Through visits to his home on Montague Road I became acquainted with his family. He continued to dazzle. And, to offer more reprints.

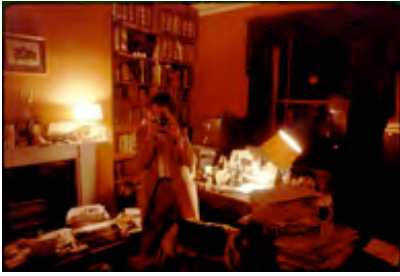
Staying at Montague Road



Left photo: Basement laboratory of System Research, circa 1976. THOUGHTSTICKER system comprising entailment mesh and control panels (left). ARDS graphics display tubes (right).

Right photo: Work area for machine assembly.

A number of trips followed, and I focused on hanging around Pask as much as possible. In time, his wife Elizabeth agreed to rent a room to me in the family home on Montague Road on Richmond Hill, a short walk from the office. This was an impressive, semi-detached Edwardian townhouse, three floors for living above ground and one for a laboratory below. Happy to pay Elizabeth for lodging instead of local hotels, the proximity made it easier for me to help Gordon get up for dinner guests (he preferred to sleep in the day and work all night). This also afforded ready-access to the laboratory in the basement and to the professor in his study, for late-night conversations about conversation theory.



Pask in his study, photographing the photographer, taken before conversation about conversation, circa 1977.

There are “theories” and then there are theories. At MIT I had heard that term applied to physical systems as well as to Marvin Minsky’s efforts in the early 1970s to explain the workings of the mind, ideas later accumulated in his book “Society of Mind” (Minsky 1988). Like his lectures, Minsky’s theory seemed a pastiche rather than a rigorous framework. Pask had a different approach: he wanted a true scientific theory, in the sense that it must comprise, as he tutored me, principles of duality, complementarity, and conservation (think: rigorous theory from physics). Conversation theory had those principles, and Pask had journal papers full of diagrams to explicate them. One paper in particular, simply titled “Consciousness”, was handed to me as I arrived one day and it was a revelation (Pask 1978). In his theory of the physics of cognition, Pask asserted that consciousness is that which is conserved. Here was the Holy Grail of cybernetics—and AI, for that matter—in the form of another reprint.

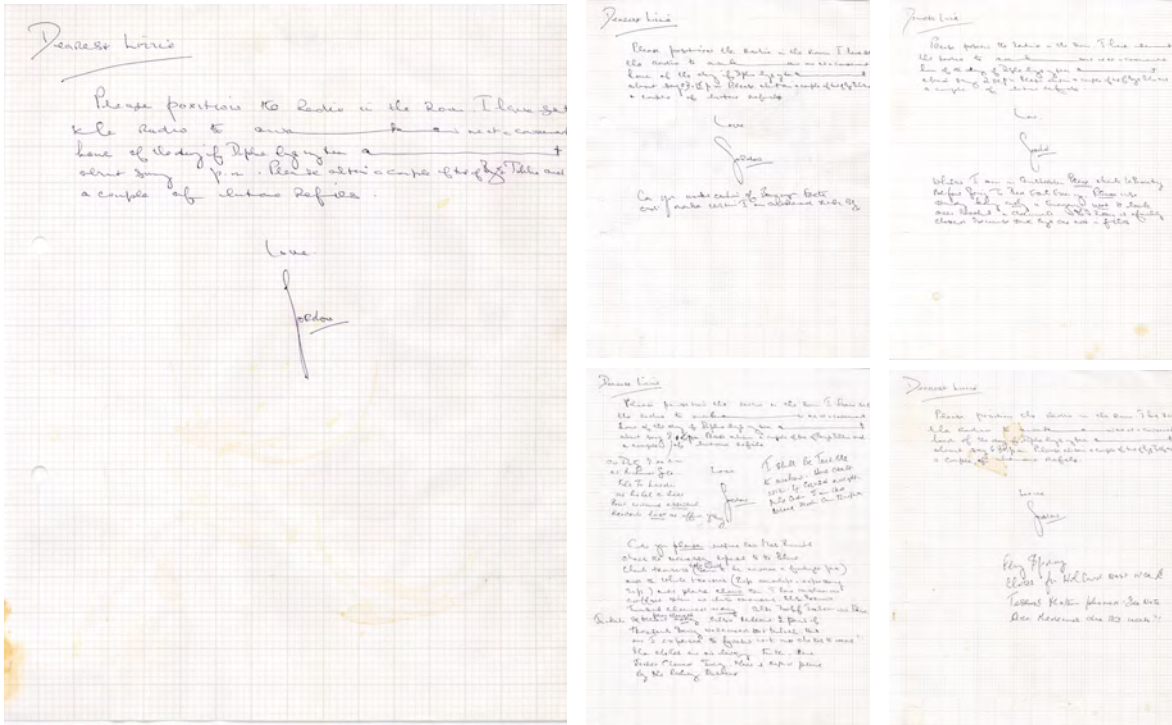
Gordon and Marvin knew each other, of course, and I sensed a rivalry going in both directions when I saw them together or separately. On one occasion Gordon was staying in the Minsky’s home near Boston, where he showed me a paper that Marvin had been working on. It had the same title as Gordon’s prior paper, “Consciousness”. I crouched under the lamp in the room where Gordon was staying and leafed through it with great interest. But I found no mechanisms; no details; no principles of duality, complementarity, or conservation. I looked up at Gordon in puzzlement. He knew that I knew his own paper on the topic; I knew that he knew that I would compare-and-contrast the two. He smiled a wry, wizard’s smile and said he had given Marvin a reprint of his paper with the same title earlier that day. For a few years I watched for Marvin’s version to appear in the journals, but I didn’t come across it.

Gordon had many personal rituals. Each night, toward the end of his work session, he would begin to write a note addressed to Elizabeth on grid-lined paper pads. Each night the note began with the same message, each time written out with the same linebreaks (mirrored in the typesetting here, along with his underscores and variations in letter density to maintain right justification):

Dearest Lizzie

Please position the radio in the room. I have set the radio to awak_____en me at a convenient hour of the day if Daphne brings my tea at a _____t about say 8:15p.m. Please obtain a couple of tins of Barney’s Tobacco and a couple of butane refills.

Love
Gordon



While he did smoke Barneys Tobacco (the archive holds a representative tin) and was sometimes in need of butane refills to light his pipe with the metal stem (also in the archive), Daphne had long since ceased being the housekeeper. And, needless to say, he needed neither tobacco nor butane every day.

While he began each note identically, as the night wore on he would append instructions specific to the coming day—what actual items to buy, what errands needed running. He would leave the wake-up time blank until he knew what time he was going to sleep. Sometimes he fell asleep and never filled it in.

New York City

By 1977 I had moved from Cambridge, Massachusetts, to an apartment in New York City. By then I had accumulated a box full of reprints. Gordon stayed with me periodically, sometimes Elizabeth too, and there were parties each such Sunday afternoon to run through the songs for which he wrote lyrics. (These had music by Steve Perillo, not to be confused with a later collaboration with composer Anthony Feldman in London, sometimes with the same lyrics). The archive holds songs such as “Homeostasis (In Suburban Places)”, “Cat-Cat-Catastrophe Sue”, “If You’ve Got A Guru With A White Beard”, and “Song for Amanda” (written for Gordon and Elizabeth’s elder daughter). One of my favorites is the opening verse to “Time”:

You im-mu-ta-ble, you in-scru-ta-ble, TIME,
 Con-tra-ver-sial, ir-re-ver-sa-ble, I'm
 Caught-up, brought-up with the trick-er-y
 Of your dead-pan tick-tock-tick-er-y
 Beat the clock to live like quick-er-ly, TIME.

Producers from the Toronto educational television show FASTFORWARD came to shoot Pask in that apartment for their series on technology. They also shot Ted Nelson there, the famous inventor of “hypertext” and lecturer-raconteur. Ted was the master of sound bites and he appeared multiple times in the TV series. Gordon’s ideas

required more screen time and were harder to follow; they ended up on the cutting room floor. A large blue case with a reel of 1" video sits in the archive. I fear there will come a day when a machine to replay it will be hard to come by. (Ditto for a handful of open-reel videotapes of unknown content and reliability, recorded in the UK.)

Gordon and Ted met somehow in the 1960s. Gordon earned a place in Ted's great work, *COMPUTER LIB/DREAM MACHINES* (Nelson 1974). There's a first edition in the archive that I bought from the MIT bookstore before I knew Gordon or Ted. It was a beguiling work because it juxtaposed the power of knowing about computers with the power of dreaming about what they could do. Ted and Gordon shared a flair for the theatrical, Ted himself being the son of a famous Hollywood actress and apt to quote Shakespeare in his talks about technology. Ted protested to me and to others that he didn't really understand Gordon's work (Glanville 2007), but Ted described it cogently. It seems highly likely that Ted got some crucial ideas about hypertext—perhaps the interconnections among concepts in a mental repertoire and thereby the construction of meaning—from Gordon in the 60s. Gordon thought so, or so he told me, but Gordon's report may be unreliable.



Left Photo: Pask with make-up artist before video shoot for Toronto educational television show *FASTFORWARD*, circa 1980.

Right Photo: Elizabeth Pask née Poole, headshot for acting work, circa 1950s.

Elizabeth had been an actress and somehow I came across a headshot of her. I asked her if I could keep it, and collected it along with everything else that made sense.

Dismantling the Laboratory on Montague Road

As research contracts dried up for System Research in England, the large house on Montague Road had to be let go. The basement laboratory, full of damp equipment, endless wiring, and detritus from decades of building experimental machinery needed to be dismantled. A giant "skip" was rented to accept what could not be saved (the American term is "dumpster") and it occupied the entire front driveway.

Some decisions about what to keep and what to toss were easy. There were old newspapers and electrical parts that were just be thrown in the skip. Then there was STATLAB, a set of tilted panels with switches and pluggable sockets where a student configured a statistics experiments under the guidance of the CASTE training system (Pask and Scott 1973). There was also a panel from CHARLIE GAS, a kiosk interface at a public exhibition by the UK Gas Board. It asked a few questions and used the consumer's answers to decide if she was a good candidate for installing gas heat; it was simply a mechanized salesperson. These parts of STATLAB and CHARLIE GAS clearly had to be kept.

Equipment such as TDS ("Team Decision System"), funded by the Army Research Institute and comprising multiple displays, processors, and input panels, was to have a new home in the Architectural Association in London, where Gordon would again

lecture for a number of years. (I was certain it would never work again, but it did, apparently, with the able assistance of Robin McKinnon-Wood, a long-time colleague and partner.) Gordon and I spent all of a night dismantling TDS, and I kept one of the panels with labeled lights for the archive (it was to be remade for the next installation). As we struggled to untangle, unwire, and pack up the equipment, Gordon spoke of the topology of strings and knots, which explained why, of course, they took so long to de-tangle. There must have been hundreds of feet of cables. The light was glaring and the air was dank. What might have been a tedious task was made bitter-sweet by context: a master and one of his many pupils, a little sad together, cleaning out a lab with much history.

(This incident became the inspiration for a “web avatar” called Dr Wires. The concern of Dr Wires is “always being connected” by bringing focus on how technology affords an extension to biology for creating conversation and collaboration. His work can be viewed at DrWires.com.)



Left Photo: SAKI plug-in module (top, shown front and back) with filmstrip (middle) and light array (bottom). By pushing the module into the unit (not shown) and screwing it down via the large knob, SAKI was programmed to expect the letter sequence contained on the filmstrip. Lights held in the light array lit each letter on the filmstrip in sequence, timed according to the skill of the user.

Right Photo: Segment of panel to EUCRATES.

Then there were the things I couldn't face tossing out. There were a few SAKI keyboard training machines from the 1950s, commercially manufactured by Solartron (Pask 1982). These probably weighed 60 pounds and were as large as a medium-sized suitcase. I was especially pleased to find a front panel from EUCRATES (Pask 1961), a large contraption with a “student” part being taught by a “teacher” part. (Each “part” was the size of a refrigerator as tall as a person, with a middle section equally large.) The panel had knobs to control the student's degree of OBSTINACY as well as OBLIVESCENCE, as the labels indicated. (An English dictionary defined the latter as “willful forgetfulness”.)

I retrieved a uniselector, an electrical part the size of a small fist, considered a critical component by Robin and Gordon. This was a stepping switch that allows the dynamic connection of a circuit from one wire to one of possibly many, depending on evolving conditions. Here was the heart of a number of Paskian machines from the 1950s, including, I believe, SAKI and EUCRATES.

Some years before I had asked, What happened to the famous Musicolour machinery? The answer: It was cannibalized to make the next experiment. Now again I asked, Where was the rest of EUCRATES? The answer was always the same, gone to make up its children. But then, was it possible the uniselector I saved had been inside of the original Musicolour? What an exciting conjecture! Musicolour deserves a paper in itself and Gordon wrote essentially that, though he also wished to document a second installation piece of his, called Colloquy of Mobiles (Pask 1971). Each was interactive with its audience in a rich and open-ended way, and each was the first of its kind.

In the 1950s Musicolour was installed in a number of music halls around England. It comprised an adaptive, collaborative partner in an improvised conversation between performer (usually a musician) and the Musicolour machine. Musicolour tracked the input of the performer based on its own evolving concept of novelty. It tracked 4 channels of pitch and 1 of rhythm, each seeking evolving behaviors from the performer. Based on the degree of novelty it measured, each channel modulated a theatrical spotlight—its color via a rotating wheel with filters and its brightness via voltage-controlling electronics—that projected onto large scrims. The performer observed the lighting on the scrims and became engaged in a conversational loop that demanded the performer’s novelty—otherwise Musicolour would stop reacting, shut down its lights, and get “bored”. There were stories, from Robin and Gordon and Elizabeth too, about how performers would get so absorbed in the collaboration that hours would pass which they thought it were only minutes. Attempts to couple Musicolour with a group of dancers instead of a musician led to vomiting, or so they insisted.

In 1968 Colloquy of Mobiles was part of an exhibition at the ICA in London comprised of moving sculptural pieces hung from the ceiling, larger than the audience they entertained and engaged (Pask 1971). Left on their own, the mobiles would move and serendipitously engage each other in a kind of mating dance mediated by lights and mirrors mounted on their “bodies”. The audience could observe passively or intervene by blocking the channels of communication formed by light, or even use hand-held flashlights to “confuse” them.

While nothing remains of Musicolour or Colloquy—or nearly nothing, there’s still that uniselector—both have generated interest recently and therefore some demand for archival materials. There was an extraordinary symposium and exhibition held in São Paulo, Brazil, at the ITAU Cultural center there. The curators of Itaulab understand well the work of Maturana, von Foerster, Pask, along with the context of second-order cybernetics. Their event title, “Cybernetic Interfaces”, and the explanatory displays in the exhibit halls explicated cybernetic principles and the central role of interaction in daily experience (Cuzziol and Kujawski 2006). Some of the interactive installations were in direct lineage with Pask. Symposium speakers included Jasia Reichardt, curator of the original Cybernetic Serendipity exhibition at which Colloquy originally appeared. She offered first-hand descriptions of Gordon’s installation (she said, in essence, that it was baffling). I was asked to speak about the context of cybernetics and interaction (Pangaro 2006) and I drew heavily from the archives in constructing the argument and the visuals.

Back in the damp basement lab, I also kept the bulky ARDS display tubes (“Advanced Remote Display Station”). Negro Ponte had sent them to System Research as partial payment for services rendered. These were commercially made and the first of their kind to provide an effective means for drawing diagrams under computer control depending on user actions. They were unusually heavy and there were 3 of them.

A reference bibliography typed on index cards and held in a metal box was easier to carry away, otherwise unwanted. I kept multiple copies of reprints when they were of favorite papers of mine, and I imagined myself handing them out to readers who would realize their provenance and be happy to own them (for example (Pask 1970), which was also Heinz von Foerster’s favorite Pask paper). Manuscripts of theatrical works, photocopied papers-in-progress—there was too much for Gordon and his limited where-with-all to worry about. Plus, he had hundreds of valuable books and his office file cabinets were chock full. (He threatened with such seriousness that the cabinets

would explode if tampered with, that I almost believed him. I certainly never tampered with them, nor did his family.)



Left Photo: Gordon and Elizabeth Pask in his study in Clapham, London, circa 1990.

Right Photo: Pask at his desk, circa 1990.

He had quite enough stuff to keep close to him for this move and a subsequent one, first to the other side of Richmond Hill, and then to Clapham, London.

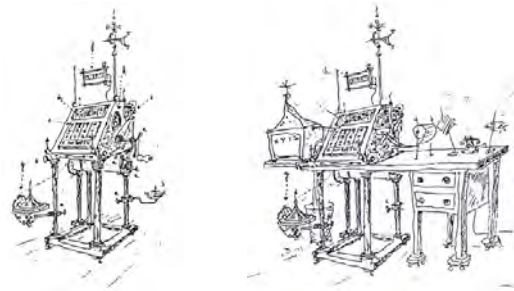
So: Equipment, journal papers, and memories. Now the archive was substantial, a responsibility, and a pain to move.

Washington, DC

When my own contracts in the UK ended, I gave up my flat in Richmond where I had been stuffing the garage with archival artifacts. The piles of equipment and paper were packed up by my colleague and friend, Peter Paine, and shipped over by slow boat to my office in Washington, DC. Fortunately there was ample room to receive them. Weeks were spent combing through the papers, ordering them against a bibliography, and figuring out what all was really there. In addition to roughly half of the papers listed in a complete Pask bibliography of the time, there were dozens of contract reports (interim and final), a folder of correspondence (a fraction compared to what Gordon kept with him, but some gems from Negroponte), and some of Gordon's cartoons and figures.

Somehow the ARDS tubes did not arrive in the shipment. This was a disappointment to the executive director of the Computer Museum of Boston, who was hoping to obtain working versions from me, as they were important to the history of computer graphics. (He had no interest in Pask's hand-made hardware.)

During many trips to Washington during the 1980s, Gordon lectured to our clients at the Army Research Institute, filling flipcharts with text and figures about decision-making, entailment meshes, and models of conversation. The archive holds them for handwriting experts to unlock in the future.



Left: Original "Eureka" pocket calculator as it appeared in the book "Calculator Saturnalia"

Right: Enhancement to desktop model.

Gordon had been known to draw cartoons that sometimes appeared in his scientific papers, his own and those of Heinz von Foerster. He wrote "Calculator Saturnalia" with Ranulph Glanville and Mike Robinson (Glanville, Pask, and Robinson 1980), which included the birth of the Eureka Machine, one of his great conceits. This was a "pocket

calculator” that stood atop Corinthian columns and that came with its own sources of true random numbers: roulette wheel and weather vane. Despite all this—as Gordon’s hand-written caption attests—the Eureka, “when dismantled via thumbscrews, fits easily into pockets”. In my view the Eureka machine is Gordon’s savage satire of artificial intelligence, expressed by simply drawing the limitations of the calculating engines that engender it. (Elizabeth pointed out that it was named after a brand of toilet seat.) With a colleague and a little spare cash, I made a series of posters and tea mugs with the Eureka on it, hoping to popularize it among cybernetics conference goers. They didn’t sell but the archive stores some samples.

At some point I complained to Gordon that the Eureka was old hat so far as computing engines go, and that desktop models had become all the rage. Didn’t the Eureka need an update? Forthwith, via photocopies, white-out eraser fluid, and a fresh pen, the Eureka Desktop Model was created. Naturally enough, it came with its own desk.

Cambridge, Massachusetts

When contracts dried up in Washington too, I moved back to Cambridge, Massachusetts, in 1991. The archive moved again. It was all there, accessible. It even had a working version of THOUGHTSTICKER on a Symbolics-brand AI workstation (Pangaro 2001). Few knew such resources were available to any researcher who came calling. So, when the World Wide Web made it possible, I created a site that listed the contents of the archive, with an invitation to visit or to request papers (Pangaro 1995). A few researchers came by and many more emailed me to request papers. Overall, the usefulness of the archive began to grow.

While he was alive, Gordon and I had spoken about our shared desire to make his work as widely available as possible. When he died in 1996 I learned for the first time that he had left specific provisions for a “North American Archive” of his work, naming me responsible. (Practically speaking, there were no other candidates.) His will made a parallel to the European Archive under the stewardship of Amanda and her husband, Jonathan Heitler, with the stated desire for reciprocal sharing of materials.

Silicon Valley, California



Front panels to STATLAB being prepared for a video shoot by Claudia L’Amoreaux, producer of the movie “Paskian Artifacts”.

After a few years in Cambridge I had to move again to find gainful employment—cybernetics was a hard sell, as the Pasks had known so well. In 1977 I went to Silicon Valley, that part of California associated with technology start-ups and the Internet. The archive came with me, of course. By now the Internet made research easy and requests for Pask papers were steady, if very modest: a dozen per year at most.

Heinz von Foerster, a long-time colleague of Gordon's in forging second-order cybernetics and who called Gordon "a cybernetician's cybernetician", had retired to Pescadero, a small coastal town not far from where I was living. I had many cherished visits to him and his extraordinary spouse, Mai, in their custom-built home on Rattlesnake Hill. Heinz was an archivist's archivist. He had files of every trip, every lecture with letters of invitation and his speaker's notes, even airline ticket stubs; and everything clearly marked. There was much to learn.

As video production became feasible and inexpensive, Claudia L'Amoreaux suggested we make a video to explicate the Paskian Artifacts in the archive. We shot me talking and gesturing toward the books, photos, drawings, and equipment (L'Amoreaux and Pangaro 2002). Having the physical objects made for powerful props and made the experience more vivid, for me and I believe for the viewer.

During this period I noticed some increase in "traction" for cybernetics (to use a favorite metaphor of that region). At an art seminar held at Stanford University, I heard the word "cybernetics" uttered over and over in the course of an afternoon. Terry Winograd was present, who became famous for his seminal work in AI while a student of Minsky, and then again for his rejection of AI and embrace of the work of Maturana (Winograd and Flores 1986). Terry was widely recognized for his ongoing influence in the field of human-computer interaction and for his support of generations of students at Stanford, who rightly revered him. I had briefly met Terry through Heinz and so emailed him about this repeated mention of cybernetics and asked if it was perhaps a time to bring it forward again. He heard my intention perfectly and wrote back to ask if I was interested in teaching cybernetics in his program. So with Terry's support, cybernetics has been taught at Stanford for the last 7 years, once by me solo (focusing on the history of its practitioners, ideas, and influences) and the remaining times co-taught with Hugh Dubberly, a world-recognized designer and design planner (focusing on the value of cybernetic models in design). Hugh, himself an historian and archivist of design planning, has uncovered connections among cybernetics, the work of Horst Rittel, and the field of operations research (which ties back to Stafford Beer). Each year we expose a new crop of undergraduate and graduate students to the synergies between cybernetics and design. And, to content from the archive.

At some point I noticed a shift in the types of requests for archive access, from technical to architectural focus, made by historians rather than practitioners. Andrew Pickering and Maria Fernandez, among others, have had some benefit from the materials (Pickering 2002; Fernández 2005). Most recently, the amount of interest in Pask's architectural work is reaching a new peak. His work with Cedric Price is being rediscovered for its contributions to "responsive architecture"—a topic that ties to Negroponte's interest in Pask. So many of Gordon's students were architects (Glanville 2007) that a future version of Negroponte's "Soft Architecture Machines" seems inevitable (Negroponte 1975).

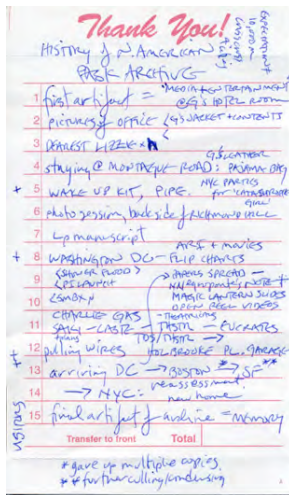
New York City Again

As of 2007, the archive is back in New York, due to another personal move by its collector. Unfortunately, some artifacts didn't survive the many relocations. The SAKI boxes are gone, simply too much to cart around and to house (though the odor of decaying electronics and dead insects was a contributing factor). Of STATLAB, the front panels and their cardboard overlays survive, but not the housings that stood them up

before a student. Multiple copies of reprints are gone, but one is all that is needed to reproduce (an obvious tactic promoted by Heinz von Foerster). But there are some 130 papers, hundreds more contract reports and letters, some pieces of equipment, theatrical programs and scripts, figures and scribbles.

The archive is accessible, if jammed into a hallway, blocking an exit doorway. Someday the North American Archive will find its way out and into a proper home. Having done what I could, I will wish it well and will miss it too.

Epilogue



Left: The last artifact, draft outline to this brief history, written on the back of a restaurant check.

Right: North American Pask Archive as it is stored today, awaiting its next voyage.

Since circumstances were very different, the North American Archive had no equivalent to Turing’s Spoon. Quite the contrary, no part carries tragic weight and there are parts of which I am especially fond. There are photographs of Gordon playing mad professor (vey convincingly, I might add) and one of him asleep at his desk. There is the flat leather bag with deco design, lined with silk and the initials “A.G.S. Pask”, traditionally used at boarding school to house a student’s pajamas. And I remember well the application of the “Pask Wake-up Kit”, a circular pillbox with enough amphetamine to keep a normal human awake for a week. This is a totem for his serious energy for ideas and work, and for which the sheer volume and weight of the archive is a full reminder.

The specific future of the North American archive is uncertain, but there need be no further attrition. My hope would be to find a North American home for copies of the papers.

The ultimate archive is held in that dynamic medium we call “the mind”. Memories form, fade, and are burnished by time and experience. As conversation theory proposes, on first seeing and holding a physical artifact the nervous system is triggered to formulate new concepts, to hold internal conversations across perspectives, and to generate new distinctions. Over time, these experiences are re-lived (Pask would say “re-produced”) even without the artifact present. Along with models of cognitive structures and measures of resonances that he called agreement, I learned all this from the master. As others learn this, and much more than I will learn, the archive lives.

Credits & Acknowledgements

Lyrics to the song "TIME" by Gordon Pask, copyright 1980. Eureka drawings copyright Gordon Pask. Photographs of SAKI modules and EUCRATES by Usman Haque and Ai Hasegawa, 2007. Photo of Elizabeth Poole copyright Pask Archive. All other photos copyright Paul Pangaro. The author wishes to thank Ranulph Glanville for suggesting a publication to celebrate the arrival of the European Archive to Vienna; Karl and Albert Müller for giving the European Archive a home it deserves; CJ Maupin, for her support of the archive and the collector; and most especially Gordon, Elizabeth, Amanda, and Hermione Pask for their countless kindnesses over a lifetime of friendship and love.

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