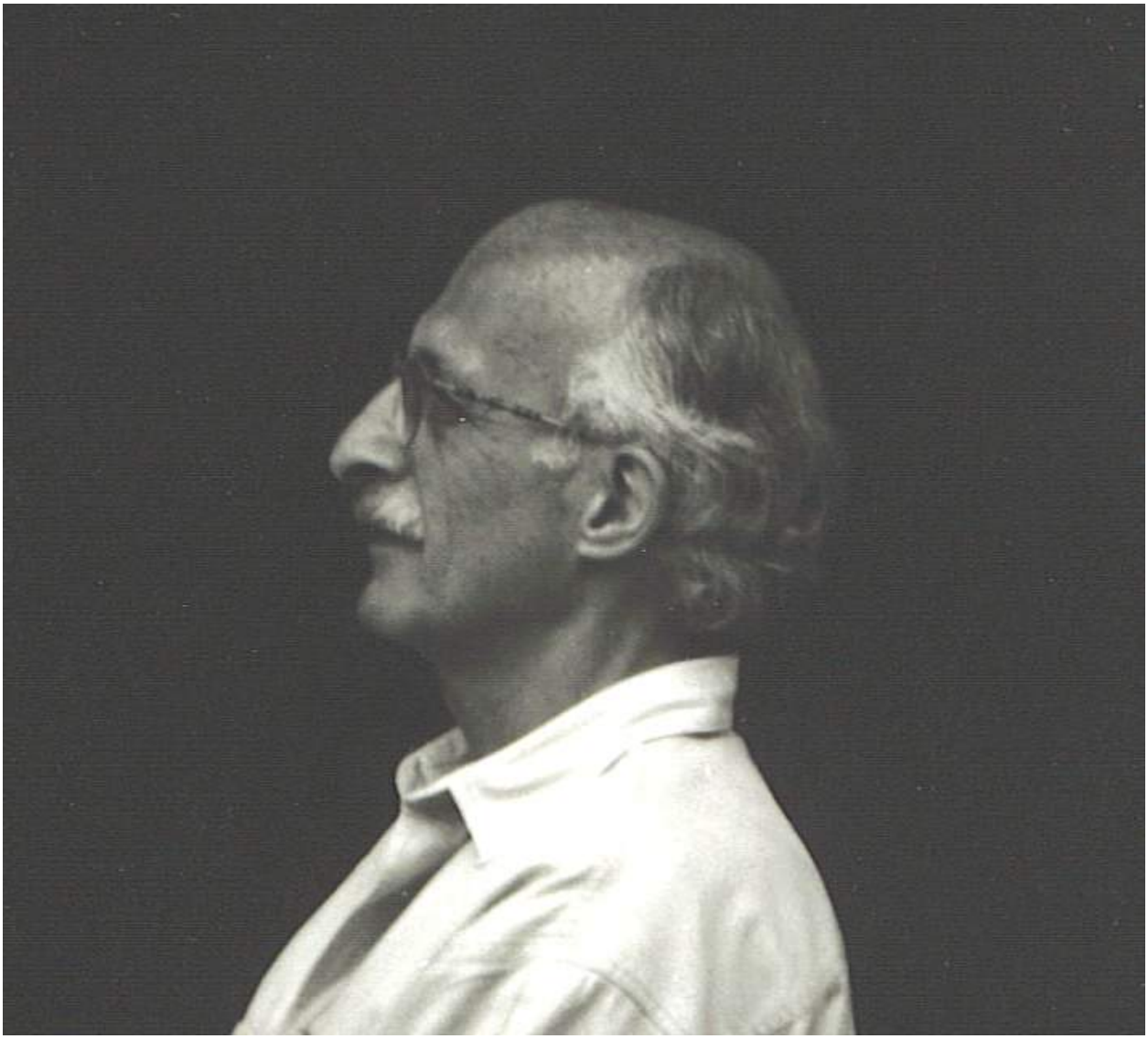
TO HEAL THE WORLD

my life in medicine, poetry, and public health



NORBERT HIRSCHHORN, MD

To All My Teachers

Remember to challenge traditional thinking, look at problems from different angles, ask questions, be compassionate, and stand up for what you know is right. Know that you have the power to effect change.

> Allan Rosenfield, MD (1933–2008), dean of the Mailman School of Public Health, Columbia University

Nine-tenths of our lives is well forgotten in the living. Of the part that is remembered, the most had better not be told; it would interest no-one, or at least would not contribute to the story of what we ourselves have been. A thin thread of narrative remains—a few hundred pages—about which clusters, like rock candy, the interests upon which the general reader will spend a few hours, as might a sweet-toothed child, preferring something richer and not so hard on the teeth. To us such hours have been sweet. They constitute our particular treasure. That is all, justly, that we should offer.

> William Carlos Williams, physician-poet (The Autobiography of William Carlos Williams. New Directions Publishing, 2017, foreword)

We are like the relic garments of a Saint — the same and not the same — for the careful monks patch it and patch it till there's not a thread of the original left, and still they show it for St. Anthony's shirt.

> John Keats (Selected Letters of John Keats Revised Edition, ed. Grant F. Scott, Harvard University Press, 2002, p.376.)

Of making many books, there is no end.

> Ecclesiastes 12:12

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A Doctor's Prologue

I reached the end of the twenty-five-yard lap of the pool at Columbia College—all students had to pass this swimming test before graduation or not get their diploma—gasping for air, my arms leaden, my eyes reddened. As I clutched the lip of the deck, two large, flip-flopped feet stood above me. My eye traveled up the veined and scrawny legs of an old man to find Ed Kennedy, legendary octogenarian swim coach, looking down at me with pity and some horror. With a heaving chest, I managed an outrageous request: "I want to join the swim team."

As it happened, only eight students turned out that freshman year, not enough to make a whole team—we even had our one diver entered into races. And so it was that, being not much good at any other event and the spot needing to be filled, I was coached into the backstroke. I practiced and practiced, pulled weights, swam laps, and threw the leather medicine ball to put some muscle on my sixteen-year-old body. Though never fast, I took enough third places over the next four years, and swam on enough medley relays that won, to earn that privileged C, the letter that adorned my athletic jacket and Columbia blazer, now stored away some place I can't remember.

That experience became the emblem of my life: sheer naiveté, pluck, plod, and luck letting me succeed where I had no obvious talent. Watching Bill Rogers win the 1975 Boston Marathon, I decided to train as a runner, and in 1976 I ran the first of seven marathons, all completed, with four in Boston; my best time was a respectable three hours, thirty-two minutes, and eighteen seconds. I took my running all over the world. The best way to get to know a neighborhood is to run along a Sudanese desert track; beneath the Himalayas on the unfinished Kathmandu ring road; above the Ngorongoro wildlife preserve in Tanzania (where I was bellowed at by an elephant whose breakfast I interrupted); on beaches in Bali; in "nighttime daylight" through Finnish woods; in a road race in Islamabad; along the Mediterranean Corniche in Beirut; through London's parks; along the Hudson River in New York under the still-intact World Trade Center; and around Geneva's Lac Leman in June at 4 am with only swans for company. I think it was most dangerous to run in Papua New Guinea, threatened by blue heeler dogs and men who coveted your shoes. Slipped lumbar vertebrae and an inflamed butt muscle put an end to thirty-six years of running, so I'm back to swimming laps, taking long walks, and doing upper body work.

My father, who gave me life, saved me from drowning once. I was three, a Jewish refugee, who with my family had escaped from Vienna to safety in England, and we were on holiday in Wales in the picturesque town of Betws-y-Coed, with its lovely stream and waterfall when I slipped off the rock we were sitting on and found myself tumbling down to wherever the water was headed. I remember my father jumping in to rescue me. I almost drowned again when I was seven—this time at a lake in the Catskill Mountains. My parents, sitting nearby and sunning, were inexplicably unaware that I was by myself in deep water, and as I floundered near the deck, I thought to myself, "how silly." A tall man reached his foot in, almost casually, and I grabbed it. "Thanks," I said. And that was that. Decades later, I wrote this poem:

The Poet Dies by Drowning at Age Seven

My parents, oblivious, never knew
how light broke up in crystals
inches from my eyes, how underwater
cries went unseen yards from where
they lay, eyes shut against
the sun—unfair to die
this way—and soon their lives
turned horrid, careless of the gift, a firstborn
son with everything they hoped
I should have done: marry
well in the same religion; cheer
their old age with many children; someone
to prosper in a good profession, someone to say
Kaddish once they breached heaven.
None of this matters now: despite intercession
of blood on the lintel, I drowned, age seven.

Not that anyone failed in love,

just none of us knew what I'd be capable of.

I had to learn to swim for myself. But not entirely. I gained something only great geniuses do without—generous mentors willing to help me and watch me grow: John Lindenbaum teaching me how to write a scientific paper; Howard Frazier setting me loose to build my own research equipment with the surgeon's aphorism, "See one, do one, teach one"; and that gentle Professor of Medicine, Charles Davidson, commiserating but teaching me never ever again to give the wrong medication—mentors all, all now gone. More recently, the late Paul Nagel, a historian, and Polly Longworth, an Emily Dickinson scholar, showed me how to write historical essays with verve and bite; and Frank Bidart, *il miglior fabbro*, my poetry Master, said that I had finally achieved "interiority" in my poems.

Naiveté, pluck, plod, and luck isn't the whole story, by the way. What fuels my ambitions is an underlying fierceness to succeed against odds, against opinion, against myself. The ferocity comes from a mother who brooked no incompetence, feeding her own narcissism and sense of a failed life. Of such things are both good and evil born.

When I was about ten years old, I felt I was so smart, so wise to the world. I can even remember crossing a particular street in my Washington Heights neighborhood in Manhattan thinking, "I now know almost everything." I had fantasies of greatness to come. One, in particular, was that I would "save the world" (the concept, in Hebrew, known as *Tikkun Olam*), and that I would reach my one-hundredth birthday and be celebrated at an international banquet (!), surrounded by adoring acolytes. Well, the one hundred years is an unlikely prospect; the banquet is plain silly. Saving the world—surely a metaphor for healing my anorectic-bulimic mother; just as surely, it had something to do with redeeming the six million Jewish lives lost in the Holocaust (properly known as the *Shoah*). My parents and I had escaped Vienna in 1938, Italy in 1939, both just in time; all the grandparents being left behind. According to the Talmud, to save a life is to save the world. My work in public health has helped save millions of lives.

There's a darker side to thinking one can heal the world, or even one's parents. It risks arrogance. It risks a belief in one's own charisma to effect change or improve people's lives.

I've experienced an even darker side: impulsive risk-taking. When I was about eight or nine, for instance, for no good reason I jumped down onto a New York subway train track, then couldn't lift myself out. A man pulled me up. I explored hidden places such as the dark basement recesses of our apartment building *by myself*. My mother would have been terrified had she known (that was her default emotion anyway). I've driven too oft sleep deprived, enduring "microsleep," the few seconds when the brain shuts off, in a hurry to get somewhere. Two or three times I drove under the influence of alcohol, escaping something or someone. Perhaps in another decade I'd have experimented with drugs. I wonder if in all those moments some higher force was looking out for me. Or, I was just lucky.

International public health has its own risks and thrills. When I was consulting to health centers in Alaska, I went on a morning jog along a lumber trail. When I got back my host asked, "See any grizzlies?" Another time, in the summer of 1985, I spent several days in a large refugee camp in Sudan, on a job for UNICEF evaluating volunteer groups' response to a famine; while squatting over a camp toilet, I found myself eye to eye with a viper. He lived there. I recall the eighteen-hour drive back to Khartoum through trackless desert, the wonderful driver guided by the sun, the stars, or an abandoned train track. And an eleven-hour truck ride in Nepal along narrow mountain trails, seeing carcasses of buses in ravines below. Though I never lived the life of a Peace Corps volunteer, these were tastes of it; I relished them. My colleagues at John Snow, Inc. (JSI), the consulting firm I helped establish in 1978, weren't five-star-hotel consultants writing reports from foreign hotel rooms, but were willing to take the same risks as their counterparts going into the thick of things. One wrote to me about her experiences with bandits, scorpions, flat tires in the desert, potential hostage taking, and an internal flight whose predecessor had been shot down.

In Tanzania I learned something about "food insecurity," the harbinger of famine. We took a van on a week-long trip to visit primary schools in rural districts to see how JSI's school health program funded by the United states Agency for International Development (USAID) was coming along: teaching teachers the basics of hygiene to pass on to their students, and building safe latrines for girl pupils. We were well provisioned with food brought from Dar es Salaam, but in the countryside, where a drought had been ongoing for several years, we found one roadside café after another offering only stale buns and beer, or a rare scrawny chicken at high price. People had left their farms and villages, crowding into the capital city to avoid starvation. Government policy was designed to keep citizens in big cities compliant.

More than once I found myself trusting to a local guide or colleague as we came into a darkened village, with dogs barking, shadows moving among the trees, and low-pitched voices in a language I didn't understand. I could not be afraid. I had to be passive: greet when greeted, sit when others sat, eat when others ate, and mostly stay silent. By morning (after a night spent on an army cot with a bed net and a hard pillow) the village wakened; people were chatting, singing, going about daily business.

I became a good teacher in public health because I could absorb not only my experiences but those told to me by frontline workers as *narratives*, like lessons one absorbs from fiction. When I taught at the Liverpool School of Tropical Medicine in 1988, using call and response and Socratic questioning, the students' evaluations included such phrases as, "respected us"; "simple but practical"; "taught by story and analogy"; "let us share our experiences . . . talked in terms of my own daily experiences."

Famine, drought, and war afflicted western Sudan when I visited. I had little experience in refugee issues but I could see the difference between the American and French medical teams' approaches. The former threw themselves into emergency-room mode, examining and treating patient after patient until the team members became exhausted. The French first laid in provisions for themselves—wine, pâtés, good bread—and then went about organizing the sector they were assigned to, recruiting volunteers from the various tents and doing triage. I didn't know then the underlying causes of the famine—the Nobelist economist Amartya Sen has shown how virtually all famines are human-made—but in my diary of the time I wrote, "Health is much more a social and political issue. I feel I've achieved as much clinical and scientific work as I can use to contribute."

What I could do, I did. I received a sweet note from an NGO director in Sudan shortly after my visit. I had sent a report to them and photographs of a severely dehydrated child in a rudimentary clinic who was brought around by oral rehydration therapy (ORT) in a rehydration center I helped start. The director wrote: "All the photos you sent are being used. Your visit helped in many ways—folks started gearing up for cholera."

My inclination to sometimes take reckless risks served me well in my work. It was because I was willing to challenge given "truths," even at the expense of being proved wrong or held in contempt, that I made progress. (I once embarrassed myself giving a lecture at Harvard on a subject I had only a weak grasp of, which the students knew better.) As I relate later in detail,

whether in the treatment of children's diarrhea with ORT, which I was told by pediatricians would "kill children," or directing a worldwide program on immunization knowing little at the outset about the subject. With sheer chutzpah, I still insist on pointing out errors in authors' published works, from history to poetry to science. It's a tic. As Marianne Moore wrote, "The passion for setting people right is in itself an afflictive disease."

In my later writing career, I combined my medical skills to make posthumous diagnoses for famous persons of the nineteenth century. Researching their lives, I had to invade the territories of expert biographers, teaching myself what they already knew and challenging received truths. With coauthors I wrote on Abraham Lincoln and his poisoning with mercury as used in nineteenth-century medicine; on Mary Lincoln's neurological illness, which may have been tertiary syphilis (contemporary physicians suspected it, while her enemies impugned her morals); on Louisa May Alcott suffering from lupus erythematosus; on Emily Dickinson's illnesses, ranging from tuberculosis, chronic iritis, and severe hypertension. An important paper I wrote with the eminent Dickinson scholar Polly Longworth demolished the potted theory by a professional biographer that Emily Dickinson had epilepsy.

Perhaps most of my career in medicine and public health has been a buffet of experiences, from the jungles of the Amazon to the equanimity of Geneva; from the rough people of Afghanistan to the sweetness of Arabs. I never settled into any one place or project longer than three years. Often, I was forced to move on, perhaps in echo of being a refugee, always "a stranger in a strange land." Yet my life has been a series of lucky strokes for which I was always ready. Louis Pasteur put it best: "Fortune favors the prepared mind."

I. Why I Became a Doctor Even Though I Hated Medical School

Father wanted me to be a doctor. I wanted to be a sociologist and heal the world, with no idea of what sociologists did. In my sophomore year at Columbia College I took on a volunteer job reading texts to a blind student. He was majoring in . . . sociology. And he was Black. I said to myself, "How can I want to be a sociologist when a blind, Black student is going to be one?" The memory shames me still.

I remember vividly the moment I acceded to my father's wish. Standing on the steps of Low Library in my junior year, 1957, I said to myself, "Oh, alright, medicine it will be." I had to accelerate my studies, taking a maximum number of credits to qualify for premed: courses in

embryology, organic chemistry, qualitative and quantitative chemistry (with labs), and elementary calculus.

At the same time, if I was going to heal the world, I needed to explore it. As I was adept at my minor in Asian studies, my professor, the great Theodore (Ted) de Barry (1919–2017) offered me a fellowship to study Chinese, travel to Asia, and work on Oriental studies and humanities. I was tempted, but once on the medical track I had to refuse the offer. Ultimately, I did travel the world, but for the sake of medicine and public health.

Columbia University College of Physicians and Surgeons (P&S) accepted most of its students from Harvard, Princeton and Yale, but hardly any from Columbia College. This, I'm sure, was a holdover from Jewish quota days that extended into the 1950s, since most of the applicants and admissions from those schools had been white Anglo-Saxon Protestants. Columbia College had many Jewish premeds who were disparaged as New York "grinds." Postwar economic and social changes saw graduates from the other Ivy League schools going into law or banking or business at the same time that more Jewish students were being admitted to those schools. As a result, my class of 1962 at P&S was one-third Jewish, up from about 10 percent before WWII. Other prejudices continued: there were only eight women in the class out of 120, one of whom was African American, and three Catholics. The school, located in Washington Heights, was a mere ten blocks from my childhood neighborhood, itself a Jewish enclave.

At P&S I encountered anti-Semitism face to face for the first time in my life. One classmate told me that he admired Israeli Jews, but hated so-called New York Jews. So, what was I? Another couldn't see the problem with saying of someone driving a hard bargain, "He jewed him down." At Columbia, the professor of medicine was expected to be Christian. Ironically, Robert Loeb was the son of Jewish convert Jacques Loeb, the biologist. The dean was George Pereira, undoubtedly descended from a Portuguese New Christian family (the name means "pear"). I'm sure I was one of just three chosen from Columbia College because I was not a grind—only a late premed, on the swim team and winning the coveted letter C, who wrote and broadcast my his program on the student radio station WKCR. That is, my profile was "not too Jewish." I was given, realizing in retrospect, a soft interview. In those days, the "stress interview" was in vogue: the candidate was asked, say, to open a sealed window; or told to sit when no seat was offered. My interviewer was the gentle Quaker surgeon, Dr. Bailey. When he pulled out a cigarette from his pocket, I quickly reached over for the ashtray. I think that gesture of observation made a

difference. He asked the softball question, “Why do you want to be a doctor?” “Because I want to help people.” “Good enough answer,” he said.

Today the top academic and administrative posts go to Jews of Eastern European descent, and many of the school’s benefactors are wealthy Jews. That’s another story.

I hated medical school. Unlike these days, when students study and are tutored in groups, helping one another, in that time exclusive cliques studied together. I was included in none, reinforcing the pattern of a lonely childhood. I slept through most lectures and had to copy my next-door neighbor’s notes. I was known as someone different: one day before a big exam, I was sleeping on the sidewalk in front of the old Metropolitan Opera house to get standing-room tickets for the Bolshoi Ballet in its inaugural visit to the United States. And yet, I did well enough in internal medicine to be invited to give one of the half-dozen senior-student lectures to the class. While others presented the latest advances in biology or medical treatments, my lecture was on the evolution of tuberculosis in populations from high mortality epidemics to chronic disease, attempting to explain that pattern. Rather than complex biochemical pathways, I showed slides of classic paintings depicting the disease, and spoke about the history of epidemics in evolutionary terms: a bit of art, a bit of anthropology and history, a bit of epidemiology.

My paper for urology class was on medieval uroscopy, the art of diagnosis by examining urine specimens, with many slides of paintings from the time. Others wrote on the latest physiology, surgery, and medical treatments. I got a grade of Satisfactory, while the others got an A. It was that kind of status ranking. Following the charismatic professor, some of my brightest classmates went into urology.

What I also didn’t like was the punitive, almost medieval attitude of the top professors, who made rounds hell by intimidating the students, even in front of patients on the open wards. In anatomy class we dissected cadavers (the smell of formaldehyde persisted in my clothing and nose for days). The person my team of four took apart layer by layer was an anonymous Black man. What had he done in life? Who loved him? Who missed him? We didn’t ask such questions, but we took the obligatory group photo, he being sat up. I think we gave him some disparaging name, like “Chuckie.” It was our first lesson in medical dehumanization. Despite today’s virtual, 3-D software models of the body, cadaver dissection still goes on, but I read that in some schools a memorial service is now held for the person.

I chose as my senior elective course, Medicine in the Tropics, which is what passed for international health in those days. It was organized by Professor Harold Brown, a specialist in intestinal parasites, known behind his back as Stoolie Brown. I went to Suriname with two classmates under the sponsorship of Alcoa, the Aluminum Company of America, attending rounds with the company physicians at the employee hospital.

The best part of our sojourn was the two-week foray by motorboat up the Tapanahoni River, visiting villages of people of African descent; and then those of the Wayana Indians. The ostensible reason for our trip was a reported outbreak of typhoid along the river, which was used both for defecation and a source of drinking water. (Mind you, pooping into the river while saying good morning to others a few yards away was most pleasurable. My classmates were uptight and used the bushes, exposing themselves to who-knows-what insects and snakes!). We were to inoculate as many people as possible with a dubiously effective typhoid vaccine. No data were taken.

We'd also been assigned a research project on hypertension and cholesterol by one of our professors back home. Our task was to compare descendants of African plantation slaves who clearly had white ancestry with descendants of slaves (the Djukas) who had escaped into the jungle, creating a new version of West African culture complete with artefacts, songs, and language derived from and blended with their separate tribes. The ex-plantation Africans lived on the original grounds. They were, to the eye, much fatter than the Djukas, who led a more active life. The ex-slaves were lined up for us ("informed consent" was not ever discussed; it was the 1960s, before the protection of human subjects was codified). We took blood pressures, used a bathroom scale for body weights, and drew bloods to measure cholesterol levels, the samples kept on dry ice and eventually making their way back to Columbia. As I recall, the subjects' cholesterol levels were high; was it because they ate a lot of coconuts? Not much was known then about causes of hypercholesterolemia, and our work did little to illuminate the matter. I can't remember how we made similar measurements of the Djukas, or even if we did. It was careless research.

The Tapanahoni River ran between Suriname (also known then as Dutch Guiana) and French Guiana, near the border between Djuka and Amerindian territories. It wasn't more than a few hundred yards wide; we could row across. On the Suriname side a Dutch police officer paraded up and down at his border post, wearing khaki shorts and a pith helmet and carrying a swagger

stick. A few Djukas in ragged T-shirts and shorts hung about. We rowed to French Guiana to discover Africans in a French café imbibing all manner of drink—I noticed absinthe and a recording of Edith Piaf playing in the background —and speaking a French patois instead of the Sranan–Taki-Taki English creole on the Dutch side. Some of the customers wore berets. It was my first exposure to cultural difference caused by separation (here, artificial). In evolutionary terms, Darwin called it speciation.

Memorably, we came upon a gathering of Indians from various outlying villages to celebrate the initiation of boys into adulthood. They had to go through several rituals including withstanding ant bites through a woven mesh wrapped around their arms, their kind of bar mitzvah. The host clan made the beer—sour mash made from manioc left to ferment over weeks in plaited straw barrels. The whole day and evening were spent by the men and women getting gloriously drunk by swallowing pailsful of the brew, then vomiting the mash to make more room in the stomach for the alcohol. Drink, vomit, drink, vomit. They were happy. Everyone slept in hammocks, we also. I heard lovemaking in the slings alongside, and wished I could do the same.

The tribal “captain” (a nonindigenous designation introduced by colonialist nations) was a short man with a wrestler’s build, expressing charisma like any powerful authoritarian. A helicopter from the malaria service descended and he was challenged to take a ride. It was no time to show fear, so up he went. Having ascended to the heavens, he was now like a Caesar, or a god.

One time we took a long walk in the jungle, our Alcoa physicians wanting to do some hunting. Our guide took us here and there along invisible paths indicated by natural landmarks, until at one point he sheepishly confessed he’d lost his way. We had to wait for another tribesman to show up and show us out. At another time we swam in the river until we saw a fisherman pulling up piranhas. We were also told about the candirú, a little fish that sometimes swims up into a man’s penis and dies there, extraction under anesthesia required. But for all the vaunted jungle horrors, we encountered nothing worse than mosquitos; even then we were protected by quinine and bed nets. Along the way we met a French anthropologist doing his research among the Wayana. Some decades later I spotted a National Geographic spread on the same tribe, and there was our anthropologist! He had married into the tribe, “gone native” as anthropologists sometimes do.

The experience convinced me I would go into what was then called tropical medicine. That designation evolved into medicine in the tropics, then geographic medicine, international health, and now global and planetary health. Of my class of 120 students, I was the only one to go into any form of public health. In that time public health was considered a joke, what weak students went into, and a way for medical doctors to earn much less than one's classmates. Public health workers don't save individual lives, don't fix bones, and have scant authority in policy or political arenas. Ministries of Health in most developing countries are the lowest on the government pole, often headed by grey-haired time-servers. How unfair. To go into public heath requires a selfless passion for social justice, and to succeed, sharp political elbows. One could become a commissioner of health in a big city like New York and have an impact on big topics like HIV/AIDS, obesity, tobacco control, etc., and then be promoted to the national scene.

But as a South End Boston matron informed me, a commissioner of health was considered one level above a milk commissioner who checks on adulteration. I was once offered the job of Commissioner of Public Health for the city of Cambridge, home to Harvard. The job was to supervise the handful of community health centers and to look in on but not interfere with Cambridge City Hospital. I said to the city manager that with Harvard's Mount Auburn Hospital down the road it made better health and economic sense to have Harvard take over the budget drainer. "Oh no," he replied, "we'd never do that! Our nurses were *born* in Cambridge hospital." I declined the offer. Some years later, Harvard did take over the hospital, after which it became part of the Cambridge Health Alliance, which serves a north-of-Boston tier of towns offering multiple health and public health services. It made sense, however unsentimental.

In my second year I spent a semester at Guy's Hospital in London (where the poet John Keats studied) in the Pathology Department, the connection made with help from a New York neighbor related to the chief of the department, one Dr. Robson. *Robson* was an anglicized Jewish name, probably once *Rabinowitz*. It was my first return to England since leaving the country as a school boy to come to America in 1945. In England I was known as Bertie Henson (Bertie was the king's name). Only once in the safety of America did I learn my true name.

I became "English," with my old accent returning, wearing a heavy wool suit from Burton's and carrying the requisite umbrella even when no rain was expected (but rain is always expected). My mentor was Tony Missen, a regal fellow with an upper-class accent and all—a dear man. He

knew my story and said, “Even if the Germans had invaded, we would not have let them touch a single Jew.”

I had the chance to explore. In Wales, I climbed the rough trail to the top of Mount Snowdon peaks, visiting the little town of Betws-y-Coed and its stream where my father rescued me. It wasn’t as dangerous as it seemed then. In Scotland I climbed Ben Lomond, overlooking the Loch, and camped out. An English family in the next tent over offered me tea. When I first demurred the father said solemnly, “Never refuse an Englishman’s invitation to tea.” Slowly, I became liberated from my cramped, Upper-West-Side-of-New-York-City past.

I also visited where I grew up in World War II. The German bombs and rockets had fallen all about us. I remembered the frightening air raid siren and the reassuring all clear siren. I remembered the backyard dugout shelter covered by dirt and rippled tin. I remembered sleeping on a platform at a deep Underground station. I remembered hiding in a closet under the stairs. (Long after, whenever I heard a plane overhead I would duck under a table.) I remembered being told not to speak my first language, German. I remembered going with my mother to the same movie over and over to learn English. I remembered at age three being sent to the countryside, to a summer camp, and being hazed by older boys who gave me toothpaste to eat, saying it was candy. I must have been unhappy because my parents came for me a few days later.

My trip to England was supported by a stipend from my medical school to do research on the incidence of multiple endocrine adenomas (MEA), known as Wermer’s Syndrome, by scanning autopsy records at Guy’s Hospital and Hammersmith Hospital. My donor was Dr. Paul Wermer (1898–1975) himself. Like us, he was a Jewish refugee from Vienna. He later tried to cure my mother’s terrible depression with insulin shock therapy.

I wrote a detailed medical report covering my findings — I did find cases — including an analysis of the changing patterns of stomach and duodenal ulcers over a century. It was my first piece of medical writing. I showed it to Dean Pereira at Columbia, hoping for a suggestion where it could be published. He gave me a small curl of the lip, a sort of “well, maybe not” response. Funny how one remembers such small put-downs so precisely years later. What a way to kill a young person’s ambition; but I wouldn’t let it happen.

A two-month rotation at New York's Bellevue Hospital made me more confident in my skills as a doctor, unafraid of bodies in their final decay. Bellevue was where the down-and-outs, alcoholics, and patients with tuberculosis would be sent. The ubiquitous TB organism could be cultured from the air in the corridors. Another brief rotation was to the dreary tuberculosis pavilion in one of the hospitals located on islands in the East River (North Brother, South Brother and Roosevelt Island). Renwick Smallpox Hospital on Roosevelt Island was once used to isolate patients with smallpox; it also housed "Typhoid Mary."[1] The visit was meant to inculcate us into public health. What a miserable effort it was.

Actually, before I really thought of myself working in public health, I wanted to do laboratory research, emulating my smooth, confident professors. The story is told of two students placing identical beakers filled with identical solutions in identical volumes on identical Bunsen burners flamed to identical heights. Both go off for lunch together, and on return Student A's preparation is nicely ready, while Student B's has boiled over and the beaker cracked. I was Student B. With a small student stipend (money was flush in those days), I spent several hours a week in an ophthalmology research laboratory trying to do a simple experiment in electrophoresis, but I could not get anything right that involved several steps; even preparing the buffers and solvents. The research doctors must have pitied me, but left me alone. It's astonishing that I could master lab research some years later.

One of the scientists in the lab had escaped from the Warsaw Ghetto, somehow surviving among anti-Nazi partisans to reach America. Although he had a doctorate in chemistry, he could only get the job of research assistant. I burbled to him how brave he must have been. He looked at me sadly and said, "One shouldn't push humans too far."

Even though my tuition was covered by my wealthy Uncle Bernie ($1500 a year, $13,000 in today's currency, with actual tuition now well over $50,000), I took multiple part-time jobs to cover my living and school expenses:

Evening lifeguard in the pool of the medical-student dormitory.

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[1] The hospital's history and wonderful photos of the gothic structure is at https://en.wikipedia.org/wiki/Smallpox_Hospital.

Swim instructor at a hotel pool.

Morning phlebotomist on private wards (465 straight successful jabs using an ordinary 22-gauge needle and syringe).

Autopsy assistant, on the top floor of P&S, down a long, unlit corridor at night. My job was to open the skull with a bone saw (I wore no mask so this was a dangerous exposure in days before we knew of slow-acting viruses); then to open the abdomen, and wash the intestines after the pathologist had run through the various organs, taking samples. I was then left alone to sew and clean up, a solitary, 60-amp bulb lighting the prosector's table. One night the cadaver's arm slipped off and hit my thigh! What a fright.

Volunteer in hypertension experiments. Besides being fed a special liquid diet for two weeks, I was also told to take amphetamines to artificially drive up my blood pressure. Unsupervised in my dorm room, I took too many capsules because at rest my self-measured blood pressure, I thought, didn't go high enough. Only when I stood up and moved did I realize my mistake as the pressure rose alarmingly. It seemed my head would burst; I could have had a stroke. Good that I'd studied physiology, as I figured out how to lower the pressure by standing in a hot shower to dilate my blood vessels. I didn't sleep for three days with my abdominal aorta banging away, threatening to burst out of my skin. Some years later I met the professor running the experiment, John Laragh. He asked sheepishly, "Did I nearly kill you?"

Volunteer in an experiment in total sensory deprivation that lasted eight hours, part of a psychiatric fellow's research. I was kept seated for eight hours in a padded lounge chair in a closed-up capsule, wearing foam gloves, eye shades, and ear plugs. I played mental chess, slept, and had hypnogogic visions. I guess it proved my existence.

Working at so many jobs was not so different from my childhood, beginning at age twelve. I delivered shoes from an Italian cobbler to his customers, earning a dime per delivery. He smoked acrid Parodi cigars. I was a stock boy in a pharmacy—sorting and cleaning yards of shelves of dusty medicinal bottles in the basement. At a kosher butcher's I scraped down the butcher block and saw-dusted the floors once a week. My parents needed the money, especially when my father was unemployed.

My best moonlighting job was as attendant at the New York State Psychiatric Hospital (now housing the Columbia Mailman School of Public Health), in return for room and board. That job lasted a year, during which time I encountered a variety of psychiatric patients who were part of one or another research program: the young man with Tourette's Syndrome; the older man with chronic schizophrenia who, if permitted, couldn't stop telling his life story in every minor detail, for hours on end; and the identical twin men, one of whom was sociopathic and could charm his way out of a locked ward to do some tricks in Greenwich Village and return by nightfall. His brother was a simple, lost soul. I learned a lot from Gaylord Simpson, a remarkable professional attendant, Black, who *cared* for his patients, and they responded to him. I'm sure he effected cures more than the nurses or doctors could. We got on well; he once invited me to meet his friends, but then thought better of it. I would have a similar experience years later.

Almost six decades later, I returned to Bard Hall, a lovely, art deco structure dating from 1932. My diaries, seventy volumes and counting, are archived at the medical library and I read through them daily for two weeks in preparation for writing this memoir. I stayed in a dormitory room, as spartan as I remember, overlooking the Hudson River and the Palisades across the way. A modern gym has replaced the old volleyball court, but the swimming pool looked the same. Its attendant was surprised to hear that I'd once sat in his perch; he didn't think it was *that* old. The medical campus has sprouted high-rise research, education, and housing buildings, all named after wealthy donors (in a remarkable turnabout, many of them Jewish). The school is now called the Vagelos College of Physicians and Surgeons, after the most generous philanthropist, Roy Vagelos, a physician and former head of Merck & Company, the pharmaceutical giant. The campus has expanded across Broadway into a previous no-go area of north Harlem, abutting the Audubon Ballroom where, in 1965, Malcolm X was assassinated, one of the many troubling events in the tumultuous 1960s. The Alumni Office sent me a list of classmates who have died, numbering one-third of the original group at this writing. "Ave atque vale," hail and farewell.

Oddly enough, although I spent fifteen years of my life in New York, the longest I have lived anywhere, this time I found it overwhelming.

II. How I Came to Love Medicine at Boston City Hospital

I gained a coveted internship at Boston City Hospital (BCH) in the Harvard Medical Divisions (Boston University and Tufts managed the other divisions). Here is where my life took flight. BCH was the place

where, if you had to go there, they had to take you in, but also a place you shouldn't have to deserve (to paraphrase poet Robert Frost [2]). BCH served Boston's down-and-out: alcoholics, little old Irish and Jewish ladies left behind in decaying neighborhoods, Hispanics and Haitians, African Americans, the drunk and demented. One learned to be a physician with humility: unlike elite colleagues at Massachusetts General Hospital (MGH), we did all our own basic lab work (urine, sputum, blood counts), and wheeled up our own patients from the emergency room (ER). It was there I learned frontline medicine, and also that the nurses, orderlies, and telephone operators could be your best friends—or not.

The three professors ruling the program embodied the best of humane medicine. William B. Castle, who discovered the cause of pernicious anemia, was a six-foot-plus Boston patrician. He would visit our wards late at night to buck us up, showing keen interest in any problems we had. He playfully led the competition of who could fill a graduated cylinder highest with urine (in my time, only one of us was a woman). Dr. Castle headed the renowned Thorndike Memorial Laboratory, where much research on anemia and intestinal disease was carried out.

Charles S. Davidson, whose ancestors settled in the Plymouth Colony in 1629 and then went by wagon train to California for the gold rush, was a specialist in liver disease, nutrition, and international medicine. As chief of the Harvard Medicine Division, he chose the incoming interns and residents and led our morning patient presentations with humor and clinical acuity. He made sure we presented *patients*, not *cases.* His robust laugh could be heard all the way down the corridor. We were known as Charlie's Boys. One time, when I was overwhelmed with new admissions and the ER complained to him that I hadn't come to fetch my newest patient, he simply went down himself to get the patient. That he was gay, in what we would now acknowledge as a marriage, was an open secret, but scarcely mentioned; I had to deal with my own insecurities when I found out. Dr. Davidson guided me to my future career.

And then, Maxwell Finland: Jewish, born like my ancestors in Galicia, Eastern Poland, immigrated to America at age four. Standing just under five feet tall, he had made it out of the Jewish enclave in Boston's West End to graduate Harvard University: the College (cum laude) and the Medical School. He went on to become a Harvard professor at a time when few Jews

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[2] *Death of the Hired Man*

were accepted at either of these august institutions. He was a specialist in infectious disease, from a time before antibiotics were discovered and through their subsequent development. He always led the first-ward rounds each June with the newest cohort of interns. He had a gruff manner, probably from shyness, though never to embarrass house staff or patients. Invariably, a raw intern would prescribe an inappropriate combination of antibiotics and Dr. Finland, remembering the previous years, would grumble, "you guys never get it." Castle, Davidson, Finland, all gone now, as is the Harvard Medical Unit.[3]

The culture these great men embodied made me feel for the first time in my life part of an authentically supportive group, where one's status was based on merit and congeniality. The pay was risible: $1300 a year for interns (up from zero a few years earlier), $2000 for assistant residents, and $3000 for senior residents. We felt privileged.

Cafeteria meals reflected Boston cuisine: fish on Fridays, baked beans and pale hot dogs on molasses bread on Saturdays. Any of our three mentors might sit down beside us and chat about medicine and our lives.

The Second Medical service in the so-called Medical Building had four-bed wards, with one or two single rooms for the sickest or infected patients. The Fourth Medical service in the Peabody Building was a long hall with beds placed against the walls, like those depicted in paintings of medieval wards. Curtains provided privacy when needed, but there was not any separately staffed Intensive Care Unit (ICU). In a way, keeping all our patients with us seems, in retrospect, more humane than having desperate cases piled into an ICU, with the lights always on and monitors beeping twenty-four hours a day and resuscitations ("Code!") carried out with doleful regularity. I learned various intervention techniques applied at the bedside: liver biopsies, spinal taps, and peritoneal dialysis. (The latter by penetrating the abdomen with a catheter, flooding the peritoneum with saline, then after a few hours draining the fluid containing whatever the kidneys hadn't been able to handle. It sounds crude but can even be done by a patient at home!) Our techniques were less than optimal, but these days I can empathize when I see on television physicians and nurses struggling to treat patients in Yemen, Gaza, and Syria under

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3 Peter Tishler has written about these medical giants and their predecessors in *"*The Sociology of the Deceased Harvard Medical Unit at Boston City Hospital," Yale Journal of Biology and Medicine *88 (2015): 423–26.*

horrific conditions. It prepared me to treat patients with severe diarrhea later on, also under what one may euphemistically call “field conditions.”

My first patient when I entered the ward in June was a Finnish merchant sailor named Oscar Lahti. A gnome of a man: dour, uncommunicative, speaking no English. He died mysteriously on his third admission—“failure to thrive” (a diagnosis we ordinarily make in infants) was my best guess. Only when we lived in Finland did I connect his name with the city boasting the most beautiful concert hall in the world. Then came the 105-year-old man named Homer, sitting blissfully by his bed and smoking his pipe (yes, we allowed him to smoke). He had cancer of the colon and we gave him a choice: don’t operate and it may cause a painful obstruction; operate and you may not survive the surgery. He said, “Sure, let’s do it.” He died on the table. I can think of worse ways to go.

We were often exhausted, working eighty- to ninety-hour weeks. I once was examining an African American woman, listening to her heart behind her ample breast: lub-dup, lub-dup, lub… and fell asleep on her chest to the lullaby. When I woke, apologetic and mortified, she said, “That’s alright, doctor, I know you’re tired, you can just rest.” More than once I fell asleep while writing notes after being up all night, only to wake up to see my handwriting gone into an undecipherable scrawl. Twice a year we took turns attending to the wards at night, admitting new patients and then going home in the morning. It was supposed to relieve the day and evening work, but more often than not on the day shift we’d still be up late doing the necessaries for our own patients. We probably got more sleep on the night shift. It’s now known that sleep deprivation leads to serious errors in patient care, or piloting an airplane.

My first big mistake helped kill a patient. She had heart failure and a low blood sodium level. I foolishly gave her saline. My resident kindly but firmly instructed me in the causes of hyponatremia in heart failure, an overload of body sodium and water. I’d only made it worse. Then there was Audrey with Guillain-Barré syndrome—muscle weakness and paralysis. Its cause is some autoimmune event, seen rarely after vaccination for influenza, for instance. She never recovered, but it was a medical challenge for weeks to try to support her life through all the complications. During my internship I was in awe of my medical residents who were so smart. When I became a medical resident the next year, I overheard a new intern say, “That Hirschhorn, he’s so smart.”

I was present only twice as a person took a last breath. I was doing a tour as senior resident at Harvard-affiliated Mount Auburn Hospital. I don't remember the patient's name. She came in on a stretcher, fearful, breathing shallowly, in and out of consciousnes. She had what neurologist Sara Manning Peskin describes as "terminal lucidity." As I waited for her to be transferred to the ward (the hospital had no real emergency room in those days) I held her hand and spoke quietly to her as she died before me. I understood then the good doctor's aphorism: to cure sometimes, to relieve often, to comfort always. Before my elderly cousin died, he, too, drifted in and out of consciousness. At the last time he said, "Isn't it over yet?"

But I was unafraid to ask the last question of a dying person. At a senior colleague's bedside, I asked, "Cliff, what are you thinking of now?" He said, "This is one of the most profound questions ever asked of me. I'm thinking of Anusol." Why Anusol, the rectum stool softener? Because morphine was stopping him up. To comfort always.

One of our assistant professors also had a three-pronged precept about medicine: "If what you are doing is working, keep doing it; if what you are doing isn't working, stop; and keep your patient out of the hands of the surgeon."

What I liked less well was the competition, prize given, between the Second and Fourth Medical Services for which could obtain the most family permissions to do an autopsy on a deceased relative. I understood its value at a teaching hospital, and we were encouraged to attend perhaps to see what we had missed, but the competition felt unseemly and I wasn't enthusiastic. These days, with all the imaging technology, perhaps routine post-mortem examination is less necessary.

The BCH Boston-Irish telephone operators somehow learned that I was married to Mary Ann (née) O'Shea, always treating me with joking familiarity but also with respect. I had joined their tribe as an honorary member. And I knew the difference between the South End and South Boston (aka "Southie").

I loved working in the emergency room. Patients kept pouring in, some with stab or gunshot wounds (BCH was the place the police brought such emergencies, not the Massachusetts General Hospital, God forbid), some in heart failure, some psychotic or overdosed on drugs. You had to be fast and alert, and never panic. The trick was to have the highly experienced nurses and orderlies be extra eyes and ears, and to gain their confidence with the respect they

deserved so that they would feel part of your team—arrogant interns wouldn't be given the time of day; or as the Irish hard saying goes, "He wouldn't tell you if your coat was on fire."

I was less enamored of duty in the outpatient clinic—which is what most general and family practice is about. But I got to know my regulars. When any were admitted to hospital, I made sure to follow them to see if I had made any mistakes. The French-Canadian Joseph Pelletier and I had a good relationship. When he came in with his heart attack and died, I felt especially grieved.

It was possible to do a six-week rotation on the Tufts University pediatrics ward, under the tutelage of the superb practitioner Professor Sydney Gellis. There I learned how to handle even tiny infants, taking their bloods, placing intravenous lines, and assessing their conditions. The experience gave me the necessary skills and confidence I would apply soon after at the Cholera Research Laboratory in East Pakistan.

Every physician remembers making a brilliant diagnosis about a patient whose condition stumped others. At the Harvard-affiliated Mount Auburn Hospital, residents were the first-line physicians for private patients. A middle-aged woman came in with a history of back spasms (experienced once while coming off a diving board), muscle pain, multiple abdominal surgeries for suspected acute abdominal crises, and chest pain resulting in many electrocardiograms (all normal). Her physicians—and there were plenty in the past, as judged by the thickness of her medical record—even wondered about Munchausen Syndrome: factitious illness produced intentionally to gain attention. I ordered the one urine test that led to the diagnosis: acute intermittent porphyria (a metabolic disorder), a classic case. I walked about with a halo for some time after. The proper management of her condition would remain complex.

Status differentiated the three medical-surgical services: Harvard, Boston University, and Tufts, their *perceived* ranking indicated here by their order. Though truly, thinking back on it, we were all about the same, both in competence and incompetence. After I left BCH, Boston University took over the whole hospital as part of its grand medical complex in the South End.

Unlike medical school, with its snarky atmosphere, my years at BCH were exciting, a pleasure. I matured. All my life up to then I had been a bit off the stream—those dreadful teenage years!—but here I enjoyed my fellow house officers and felt respected and valued by my professors. The culture of BCH was one of collaboration, dignity, even fun. Perhaps serving an inner city and

diverse population made us humbler. Our hospital was old and in poor repair. Equipment was outmoded: we had to have intravenous tubing autoclaved and reused. Needles, too, were recycled, often unsharpened. Occasionally one us disguised in a white coat would slip over to the MGH to “borrow” the new disposable needles just coming on the market. I suppose this gave us a sense of working collegially against odds, as if we were in a developing country. This was not ideal, but we came away without a sense of entitlement. Surely it was the example and leadership of our professors that made it possible.

Dr. Davidson had always wanted a career in tropical medicine. He had spent time in Burma researching beriberi and liver disease, but returned to Boston and stayed. When I told him about my experience in Suriname and my desire to work overseas, he recommended me to the new National Institutes of Health’s International Research Career Development Program, which originated in Congress to put a pacific face on the global military alliances America was building up during the Cold War. Well, what I actually told him was I wanted to be a medical missionary. Somehow Alaska was in my mind, my ultima Thule to escape certain family constraints. Dr. Davidson patiently explained that medical missionaries were Christians who went out with stethoscopes and bibles to convert natives to Jesus. There was some urgency to be accepted into the program, since the Vietnam war was heating up and doctors as a class were made subject to military draft. I’d even been instructed to report to the induction center at the Boston Naval Yard and went through the mass physicals (“bend over!”). Joining the NIH, which was part of the uniformed US Public Health Service, would satisfy the draft requirement. We were known pejoratively or in jest as "Yellow Berets" instead of the Green Berets, the Army Special Forces. Anthony Fauci was one of us.

My interviews at NIH went well. I was to go to Ghana, and under Dr. Davidson’s guidance do research on hepatitis, whose viral origins were suspected but unproved. I spent six months preparing myself, studying the country’s history and culture, making contact with American physicians already serving there, and learning some basic greetings in Akan. I even had a project in mind: to collect stool and liver biopsy samples to identify the organism. Then we got word that the United States would cut back on cooperative projects with Ghana because its leader, Kwame Nkrumah, was cozying up to Russia; my placement was cancelled. I was now reassigned to the newly organized Pakistan-SEATO (Southeast Asia Treaty Organization)

Cholera Research Laboratory (CRL) in Dacca [4], East Pakistan. (SEATO was a military alliance meant to counteract China, especially with the Vietnamese war heating up. CRL was created in part to project a humanitarian side to the alliance, but also to help protect American soldiers fighting in a cholera-endemic zone.)

I was bitterly disappointed by this sudden turn. The recruiting officer, a physician, tried to mollify me, telling me I'd get free housing, transport of my car, extra "combat zone" pay, household help, all perks I righteously disdained. And I certainly did not want to study diarrhea, my mother's affliction. Robert Gordon, the NIH scientist who helped found the CRL, told me later I was the "most negative'" candidate he'd encountered. They must have been hard up for recruits because I was accepted anyway.

Imagine that a pique by Ghana's leader changed the whole trajectory of my life. I've often wondered what would have happened had I gone to Ghana. Baruch S. Blumberg (P&S 1951) received the 1976 Nobel Prize in Physiology and Medicine for his identification of the hepatitis B virus, which led to screening of blood-bank donations, and his development of a vaccine against the virus. Blumberg had a distinguished career and life, saying in an interview with the New York Times in 2002, "[Saving lives] is what drew me to medicine. In Jewish tradition it is thought that if you save a single life, you save the whole world." Jonathan Chernoff, the scientific director at the Fox Chase Cancer Center where Blumberg spent most of his working life, said, "I think it's fair to say that Barry prevented more cancer deaths than any person who's ever lived." I recognize now that I never had the laboratory nous to accomplish what he did; I would simply have been the messenger transferring samples to some established research center.

III. Diarrhea, After All

So, off to the Pakistan-SEATO Cholera Research Laboratory,(which after the Bangladesh War of Independence in 1973 became the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B). First, I spent a few months at the Thorndike Memorial Laboratory, where I learned to do assays of intestinal enzymes, specifically the enzyme involved in transporting sodium and potassium from the intestine into the blood: Na-K adenosine triphosphatase (Na-K ATPase). My supervisor, Irwin Rosenberg, was convinced that failure of

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[4] After independence, *Dhaka*

this electrolyte pump played a role in promoting or permitting the voluminous watery diarrhea of cholera, due to electrolyte-rich fluids sapped from the blood supply and spilling into the intestine. Once again, I found myself being clumsy in the lab. I wonder now if I was much better at thinking, designing, analyzing, and writing; never at handiness. At the CRL I came to rely on the smart and skilled lab technicians; we complemented each other's skills nicely.

One of them was Jnan Ranjan Saha—whose classic Bengali Hindu name was a dangerous liability in a mostly Muslim society where religious riots and slaughter took place periodically. He finally immigrated to the United States with his illiterate village wife. Once in New York City, he worked again as a research technician while his wife remained cloistered at home. She took up sewing, then designing women's clothing, Indian style. Saha took the garments to a department store buyer, who put them on display. In the nascent hippie era, they sold and sold and the buyer demanded more. Soon Saha's wife was hiring other Bengali women to sew her designs at her apartment. It was a version of a sweatshop. Her success was similar to my uncles' experience. They fled the Nazis, came to America penniless, started in textile knitting, and ended up millionaires, the immigrant's dream. Only in America.

As one comes out from an airplane onto the tarmac of a tropical country, the wet heat strikes immediately. There's no training for the assault of such places on all senses: the great mass of people (in the 1960s, they would have been nearly all men), the cacophony of voices, the pungent smells of spices and decay, the sheer physicality of small, dark strangers entering one's space. You take a deep breath and hope your CRL administrative officer will escort you through passport control and customs and into an air-conditioned car, which will take you to your newly built home smelling of wet concrete, with domestic staff already recruited and at attention. It's a long way from baked beans and brown bread.

The CRL was housed in an empty building of the national Public Health Institute. I arrived just two years after its founding. Bob Gordon had made sure it was equipped with modern chemistry and bacteriology labs. Bengali and Pakistani staff were hired, notably some fine young doctors. Two very tall American physicians, William B. ("Buck") Greenough III of Amherst Yankee descent, and John Lindenbaum, Jewish, were in charge of the clinical service, a role I would take on when they left. A superb nursing staff—nearly all Bengali Christian women—was assembled by the redoubtable Scottish woman, Dorothy Torrance (also over six feet tall—imagine what the Bengalis must have thought of us), who tolerated no deviation from high

standards of care and hygiene. By the time I arrived, the physicians had developed the single intravenous solution that quickly rehydrated patients with cholera and other causes of diarrhea: the “5-4-1” solution of five grams sodium chloride, four grams sodium bicarbonate and one gram potassium chloride per liter of solution, similar to the well-known Ringer’s solution. The composition was based roughly on the composition of electrolytes being lost in the stool, and was used in patients of all ages, a most important discovery on the path leading to the fluid used in oral rehydration therapy (ORT). It was good none of us were trained pediatricians who would have been horrified (and still are) by our cavalier approach to loading even infants with so much sodium. But as one wag would have it, “kidneys are the best pediatricians,” adjusting the balance physiologically. Another early discovery was that the antibiotic tetracycline would cut the number of days and volume of diarrhea by half.

Patients were laid on a “cholera cot,” a simple wood-and-canvas structure made locally with a fortified hole cut under the buttocks. A plastic sheet with a sleeve fitted into the hole allowed fluid stools to flow into a calibrated bucket beneath, tracking output and allowing the nurses to adjust intravenous intake to match continuing losses. Bleaching and disposal of the stools was necessary, of course, a job left to lower-caste workers.

These elemental therapies brought mortality from cholera down to under 1 percent, compared to 20 percent (or higher) in uncontrolled epidemics where no such organization was in place. Sadly, the latter still pertains today in outbreaks in Africa and the Middle East.

Not long after I arrived, a two-year-old girl died. It was a custom to give a grieving family a full meal of rice and lentils. I watched, bemused, as the parents and another of their children ate avidly. I thought, “How can they at such a time?” (Answer: Never, in a country prone to calamities, turn down a full meal.) I’d read that girl children weren’t as valued as boys in these societies. I left to do some errands and on return noticed the family leaving in a tuk-tuk, the ubiquitous, three-wheel, auto rickshaw. The father was driving. Tears were streaming down his face. In that moment I became a bit more human.

I felt intimidated by Greenough and Lindenbaum. They were ahead of me in their training (both had come out of the Columbia medical system), in their research capabilities, and in their adaptation to Bengali culture and spicy food. Buck wore a mantle named DUTY. Shortly before I left for Dacca, his wife died of a brain tumor, and he came to our house to reassure us her death had nothing to do with living in Bengal. A Bengali sister-in-law of a high court justice had been a

family friend and grade school teacher to Buck's four children, but now would be forbidden to visit a single man in his house; so Buck converted to Islam and married her. It was his duty, and he's kept to the faith. It scandalized the expatriate community, which gossiped that he had married the nanny. John was an aesthete: a jazz aficionado, an expert in Italian art, and a determined researcher and clinician. Years later, he was but two days away from his death from lung cancer, yet was still putting the finishing touches on a scientific paper. I've never understood what drove him to do that; I wonder what I would do, even as I write this memoir.

It was only after I noted and documented from the records that pregnant women with cholera passed much more stool (a finding still not properly explained; something to do with hormones and prostaglandins, I believe), and quickly submitted the paper to *The Lancet* (accepted), that I earned John's respect. I remember that only a few days before my father died some years later that he at last said to me, "I'm proud of you."

With help from a fine young Bengali pediatrician, Abdul Majid Molla, who performed the intestinal biopsies (using a swallowed "Crosby Capsule"), and my technician, Ayesha Siddiqi, who analyzed the specimens for intestinal enzymes— one involved in the movement of sodium and potassium into the blood stream, others related to digestion of sugars — we discovered that the intestinal lining in patients with cholera and other acute diarrhea diseases did have lower levels, recovering rapidly in convalescence. It took some years and sophisticated research to determine the main driver of cholera diarrhea: a locked-in, secretory state stimulated by the cholera toxin. Only when the intestinal lining renewed itself—in a matter of days—did the diarrhea abate. The key to treatment was to prevent patients from dying from dehydration in the meantime.

A sweeter part of my enzyme studies was that Majid would regularly carry the biopsy samples upstairs to Ayesha; sometime later they married! They have two lovely daughters who became physicians themselves. Their courtship was discreet, and I only learned of it when invited to the wedding. I was proud to be the matchmaker, however inadvertently.

I need to digress here. The too-tall Americans imposed a certain colonialist situation on the CRL, all too familiar to Bengalis and Pakistanis. We were in charge, we had the tools and brought in the resources. It was not long before several Bengali physicians became angry, even disruptive, about our attitudes and practices. When I became head of the Clinical Division, I managed to neutralize a ringleader by sponsoring her for a research fellowship in the United

Kingdom (among several other Bengali researchers and clinicians). Somehow, I had learned to be politic, even devious, but not yet to address the attitudes and practices that were the source of their anger. It would happen again my career.

Another issue feeding the discontent was the matter of so-called informed consent. True, all research and treatment protocols had to be reviewed by an outside council of Western, Bengali, and Pakistani advisors before proceeding. A sign in Bangla over the entrance to the CRL, painted on wood, said, in essence, that by coming for treatment the patient would accept the interventions. A furious exchange of letters in *The Lancet* in 1978 dealt with accusations of unethical research done in the 1960s (two of my studies were mentioned). The whistle-blowers were Americans. The charges had merit. Ethical considerations about research on patients were just coming to the fore in the west, and by the mid-1970s Institutional Review Boards (IRBs) and strict guidelines about consent were being developed. The international successor to the CRL, the ICDDR,B, took up and has followed strict US-university procedures exactly.

It continues to be a painful matter for all clinical researchers who are trying to develop new methods of treatment to understand better the causes of disease and the body's responses—especially when career advancement and reputation are part of the mix; a conflict, sometimes, between career and the public good. Frankly, near the close of my research career, I was glad to be done with all that.

One of my impugned studies was a description of hypoglycemia, severe low blood sugar, in children with diarrhea, both in well and malnourished children. It was a more common affliction than had been realized; a few children succumbed even with rapid infusion of glucose, though most survived. The article was published in *The Lancet* in 1966. In 2014, the American daughter of one of my coauthors, an Urdu-speaking Muslim named Mahmoud, found the article and told me I had saved her father's life by arranging for him to work in the United States, shortly before a Bangla-speaking mob murdered many in his family during the Bangladesh War of Independence, breaking away from Pakistan. He, too, would have been killed and his three daughters never born. Mahmoud and I had a sweet correspondence. He described his philosophy gained in old age:

> The quest for inner peace and happiness has become prime object of my life. In order to make our inner life more perfect, more comprehensive, more universal, in fact more truly human a life. Living in U.S.A. has afforded me opportunities to self-introspection

> because of the diversities of culture, beliefs, environment and educational facilities. Today, I feel that I am a better human being than when I was in Dacca, where monolithic belief and culture compelled me to believe and act in a certain way. I was trained in such a way that a person born in a certain religion, that religion is the repository of truth and even to study other religions was blasphemous, that exclusiveness of religious beliefs of absolute truth has resulted in world-wide conflicts, wars and horrors that we witness today. I feel that a good human being can overcome these flaws by making his life 'infinite self,' the resolutions of feelings to which the basic motifs are the opposite of frustration, futility and boredom. When I realized that I had fulfilled my basic responsibilities I turned myself in the quest of inner peace and happiness. On a mundane level, I try to do things which are useful for the well-being of mankind. Although this is a tall order especially for me with limited capabilities and knowledge, yet I believe that even if one person's life can be affected for a better future is an achievement in itself.

Tikkun Olam, to heal the world.

Soon after the Bangladesh War of Independence from Pakistan, abetted by India, a wonderful poster was issued by the newborn tourist bureau: “Come to Bangladesh before the tourists do.” The Bengal countryside is magical, with its great rivers with varieties of country boats and their sails, and voices singing of love across the waves of green rice fields (*Sagar kuler naiya re Amar belay tumi kothay hay jao baiya re*—“Oh boatman of the ocean’s shore, where have you disappeared to, abandoning me?”). A great pleasure would be to hire a country boat and bring food and wine on board for a twilight sail with friends. The weather provided dramatic moments: drenching monsoon rains accompanied by grapefruit-sized hailstones (best not to be caught out in the open!); brilliant sunset skies known as “cow-coming-home time” when the dust the herds raised added to the reds and purples. At one moment, rain had cleared the air so completely that one could make out individual leaves on faraway trees and hear a flute’s plangent notes carried from a long distance. Bangla, a language of poets, has a specific term of love for such a moment.

I wasn't there in 1971 for the Bangladesh War of Independence when a great massacre of Bengalis took place, millions fleeing to neighboring India. [5] America stuck by its ally, Pakistan, largely because it was the intermediary in the negotiations between the United States and China leading up to President Nixon's meeting with Chairman Mao Tse Tung (celebrated in John Adams's opera, *Nixon in China*). It wasn't the first time nor the last our country has made realpolitik dominate humanitarian considerations. I joined the citizen lobby group, the Bangladesh Information Center, based in Washington, DC, organized by westerners who had served at the CRL. I remember walking the halls of Congress, visiting representatives, even supplying medical testimony to a Senate committee (it can be found in the Federal Register). Henry Kissinger dismissed the newborn nation as an international "basket case." But unlike Pakistan from which it was severed, Bangladesh has developed a vibrant (if imperfect) democracy, with an industrial base in textiles that has freed up whole generations of women (despite exploitation by factory owners, abetted by western purchasers of inexpensive clothing). Its immunization rate of children is as good as in western countries, the response to the Covid-19 pandemic better. Bangladesh has also created warning systems, coastal barriers, and shelters against the periodic floods that both enrich the soil but devastate the population. Pakistan remains a troubled and troublesome nation.

The climate crisis now brings greater flooding each year to the low-lying country, and the heat is more intense. "Climate refugees" are not just the pitiful, rickety boatloads of Africans and Asians trying to reach Europe. Most rural and coastal people head to the nearest big city: Dhaka, Lagos, or Nairobi, whose burgeoning populations are making a decent quality of life unsustainable. Even in 1965, when I toured an urban slum housing families were escaping the rural floods, the alleyways were fetid with human and animal waste; shacks built of cardboard were crowded with people; and gaunt women and malnourished children seen everywhere. The lucky ones found shelter on the concrete-slab floors of unfinished, high-rise buildings.

Bangladesh has agreed to shelter tens of thousands of Rohingya Muslim refugees from neighboring Myanmar, fleeing their own ethnic cleansing, which is more than one can say for

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[5] The full history of the breakaway of East Pakistan from West Pakistan is given at https://en.wikipedia.org/wiki/Bangladesh_Liberation_War

the US response to Latin Americans fleeing violence in their countries. As a refugee myself from Austria in 1938, a time when millions of Jews couldn't find safety, I hate such inhuman behavior.

I was there for the 1965 war between India and Pakistan. All "nonessential" Americans were evacuated to the Philippines, and also families of those physicians and scientists who had stayed. I was appointed as air-raid warden for the CRL, which meant I supervised sandbagging against windows to protect patients and equipment. Since the CRL was only a short distance from the airport, we worried about an Indian bomb missing its target and hitting us instead. I ordered that a red cross be painted on top of our building's roof, but when I looked at the result, the workers had painted an X. So much for my military nous.

I made good friends in my time there. As one Bengali physician told me, "If we become friends, we will be like fingers on two hands intertwined." But I've lost touch with them all.

Cholera was always a frightening disease, striking and spreading so quickly, and causing panic each winter season. The worst-afflicted patients died within the day of onset. Their eyes were rolled back and sunken, they vomited frequently and passed liquid, straw-colored stools uncontrollably (the stool had a "fishy" smell due to the mucus); they suffered severe muscular cramps. I went with a small team of doctors and nurses to look at an outbreak in the southern, riverine city of Khulna. The hospital was unprepared and the local doctors had fled. Patients were laid on the concrete floor, inches deep in cholera's watery stool. The hospital's intravenous supply was inadequate and of the wrong composition. We had liters of "5-4-1" solution, and needles, tubing and tetracycline shipped down from the CRL by speedboat. We organized triage (my experience at Boston City Hospital coming in handy here), with the most dehydrated getting intravenous infusions as fast as could be administered through any locatable vein. A Magic Marker stroke on the forehead helped keep track of how many liters had gone in. We assessed clinical progress by degree of consciousness and feeling the patient's pulse. Meanwhile, our epidemiologist discovered that the hospital's waste pipe discharged into the river a few yards upstream from the pipe that was bringing in untreated drinking water.

Perhaps this was not as terrible as the Ebola outbreak in Africa. Perhaps this was not happening in a war zone with hospitals bombed and health workers murdered as in Syria. Still, outbreaks like this needed a coherent hospital treatment plan, like the one that was developing at the CRL, that could reach directly into communities. Here is where oral rehydration therapy (ORT) came in.

There are two competing narratives about the development of ORT. One is about the steady, seamless progression of scientific steps leading to an essential outcome, recalling Newton's generous words "If I have seen further it is by standing on the shoulders of giants." Then there's the narrative of messy politics, jealousies, and unseemly competition that suppress sharing and collaboration and slow discovery. Both are true and necessary for advancing knowledge. [6]
Our cohort of clinicians at the CRL was aware of the basic research, beginning in the previous decade, that revealed how water and salts moved across the intestinal lining from blood to gut and in reverse. Secretion into the gut was related to movement of the chloride ion from the blood; and absorption back into the blood stream related to the sodium ion linked to that of glucose and amino acids. The latter is called cotransport or coupled transport. This makes physiologic sense: Carbohydrates and proteins from food are dissolved in the presence of water and salts secreted from the blood stream. The nutrients are broken down within the upper intestine to their constituent molecules, glucose and amino acids. Then the salt-rich fluid and molecules are cotransported back into the blood stream. If this didn't happen, we would have diarrhea each time we ate. (Such a condition exists in the rare glucose-galactose malabsorption syndrome.)

Cholera toxin secreted by the bacterium *Vibrio cholerae*, it turned out in later research, fixed to intestinal cells and locked chloride secretion to an "on" position. An essential discovery at the CRL by David Sachar was that the gut in patients with cholera still manifested the normal electrical response to the movement of sodium and glucose across its epithelium. This meant that a salt-sugar solution given by mouth (ORT) could potentially replace the losses in the stool until such time that the diarrhea stopped.

Other bacteria, a strain of *Escherichia coli* [E. coli] in particular, also produce a toxin with similar effects. Soon after I arrived in Dacca, I developed profuse, watery diarrhea. "Sorry," said the bacteriologist, "it's only E. coli, not cholera." Sitting on the laboratory bench near mine was microbiologist Jack Craig, on sabbatical, who had developed an assay for the putative cholera toxin. I never thought to ask him to test my "only E. coli" diagnosis. If I had, we would have

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[6] Joshua Ruxin's article, "Magic Bullet: The History of Oral Rehydration Therapy" (Medical History 38 (1994): 363-97) eloquently describes these intertwining streams.

discovered this toxin a few years earlier than had happened. Fortune evades the unprepared mind.

Sachar's discovery was still a long way from *therapy.* A year after my arrival, the CRL had a new director. Robert A. Phillips, a US Navy captain, came aboard. He was larger than life: tall, a former surgeon, and charismatic; he emphasized excellent physiological research rather than treatment, the latter of which he believed was simply an adjunct to the former. He drank heavily. He also smoked, with a long cigarette holder allowing his first drag to be unfiltered. He trusted only those young doctors under his supervision in research who would also provide medical care for his high blood pressure. He was paterfamilias, and we the members of his household. It was fitting that he had led the Naval Medical Research Unit (NAMRU) in Taiwan, where he lived like a mandarin. He trusted me.

Phillips had been keen on cholera research since the late 1940s. He and his then-follower, Craig Wallace, serendipitously found that two patients with cholera absorbed a salt solution that contained glucose. But in those instances, glucose was being used as a balancing molecule; by most accounts he was unaware of the basic research in cotransport. Phillips' own theory was that a putative "sodium pump" was "poisoned" by the cholera vibrio, and that it could be "cured" by a potent cocktail of sodium and glucose. But the cocktail was too potent: a concentrated solution given to thirty patients with cholera led to five deaths; from then on, he was most reluctant to approve any research on the phenomenon.

After Sachar's finding I was keen to take the next step: could measured amounts of sodium-glucose solution given into the intestine be absorbed by patients with cholera? What lent further urgency to my ambition was that a surge in the winter cholera epidemic had us running out of essential, purified ingredients for intravenous solutions. One of our team even traveled to Thailand to bring back kilos of the chemicals. If we were in the verge of running out, my argument went, we could use ORT as an emergency backstop. Captain Phillips brought me into his office and laid down the edict: "You absolutely cannot try this again, it does not work." Not really being a military man, I persisted, and convinced him to show me the files of the experiments that ended so disastrously. He opened a file drawer, locked the door behind me, and gave me three hours to explain what went wrong. That was easy: the solutions were too concentrated in sodium, and the glucose pumped it all in. It was like drinking sea water: the patients died of hypernatremia, too much salt in the blood.

Phillips allowed me to take the next step: infuse a measured solution equivalent in molecular terms (isotonic) to the blood, and measure what came out. We used plastic tubes to infuse the solutions into the intestine directly, one liter per hour, so the test was not oral. Phillips insisted we keep our patients on intravenous fluid as a precaution; that we weigh the patients every four hours; and that I sleep on a cot next to the patient being treated. In the study of eight men with cholera, we found that glucose and the related sugar galactose decreased the net stool loss; but fructose, not cotransported with sodium, did not; nor did sodium chloride solution without glucose. The research, published in the *New England Journal of Medicine*, was a perfect "proof of concept," but yet well away from being a practical therapy. When I presented the findings to a local medical society, I was astonished to hear a tea-plantation doctor, the Scotsman Donald MacKay, praise the work as "one of the most profound developments in the treatment of cholera diarrhea this century". I was approaching the matter mainly from physiological research, with only the prospect in mind it might have been a necessary treatment in an emergency.

Research clinicians at the Johns Hopkins University Center for International Research in Calcutta were carrying out similar experiments, in some ways more sophisticated but with similar results. They, too, weren't sure if the finding had any practical application. We had a modest rivalry in later years about who originated the work first, or who published first. Nathaniel Pierce and his coauthors published their work in an Indian journal two months before ours appeared in the *New England Journal of Medicine*. It took my successors, David Nalin and Richard Cash, to demonstrate in 1968 the practical application of the treatment under field hospital conditions, to give as much oral rehydration solution (ORS) as necessary to rehydrate the patient, and then replace measured, ongoing losses.

Here is ORT in action. It is 1984, a three-month-old Egyptian boy, call him Ahmed, has had diarrhea for three days and is now dehydrated. His mother brings him to a pediatric hospital in Alexandria, a training center for physicians and nurses in the method. Both child and mother have been up all night. He's been vomiting, rejecting any drink she tries to give. She is frightened. By clinical estimation, the child has lost 8–10 percent of his body weight in fluid, about a liter. Note the sunken eyes, the sunken soft spot on the head, and the limp neck. A trainee physician begins administering the salt-glucose fluid at about one teaspoon, five cc, a minute. In one hour, if all goes well, the child should receive three hundred cc, roughly a third of the loss.


9:00 AM

Ahmed at first resists, but as the fluid begins to go down, he begins to drink eagerly. As the solution is being absorbed across his intestine into the blood stream, his body recognizes something good is happening to the circulation.

After three hours and about a liter of ORS, Ahmed is pretty well hydrated. Note improvement in his eyes, neck, and head, and his alertness.

Importantly, the nausea and vomiting have also ceased as electrolyte balance is restored. The next step is to give him food, here breast milk.

Photos by the author

ORT has put paid to the standard teaching that the gut in diarrhea needed to be rested ("no food, no breast milk!"). Pediatricians typically also advised sugary fluids—flat Coke drinks or tea, for instance—or boiled milk. But these made diarrhea worse and the blood electrolyte pattern more askew. In Ahmed's intestine, sugar without sodium would be poorly absorbed in diarrhea, pulling more fluid into his gut by osmosis. The sugar lactose in cow's milk is especially troublesome. Having had no food for three days also damaged his intestinal lining further. Certain foods like rice cereal, yoghurt, potatoes, and breast milk provide the carbohydrates and proteins that are broken down into glucose and amino acids. Thus, oral rehydration therapy means ORS plus early re-feeding. It bears repeating: oral rehydration therapy means ORS plus early refeeding. In theory, an ORS with digestible rice powder could reduce stool output while also rehydrating. This has proved true in cholera patients, although somewhat less so in non-cholera diarrhea. Wheat-based ORS proved superior to glucose-based ORS, and more acceptable to mothers of Afghan children in refugee camps in Pakistan. A firm, Cera Products, produces a rice-based formula, Ceralyte. For WHO, the need for a standard ORS and the complexities of the manufacture of rice-based ORS worldwide precluded recommendation of the latter.

Ahmed was sent home with packets of ORS, the nurse first teaching his mother how to make up the solution and use it properly, and how to continue feeding the child. ORT at home will prevent his rehospitalization, and also protect his nutritional state.

Lest anyone cavil about saving lives in an overcrowded world, it is necessary to note that *most children survive* poorly treated episodes of diarrhea, measles, pneumonia, and malaria, although many of the survivors are weakened and stunted in growth. ORT, vaccination, treatment of pneumonia, and prevention of malaria assure a resilient, stronger child going into adulthood. Governments of even poor countries that put resources into primary health care and education of women show much lower rates of child mortality—Kerala (India) Nepal, and Egypt are prime examples. In 1980, of every one thousand Egyptian babies 168 died before reaching their fifth birthday; in 1990, the number had fallen to 86; and in 2019, to 37. ORT played a substantial role in this decline.

About twenty years later, on a revisit to Egypt, I asked my taxi driver if he knew about ORT. "Of course!" he said. "It saved my little boy." "And what is your little boy doing now?" I asked. "He's studying computers at the University of Florida!" The good we do often comes well after us.

Field hospital use and measured intake and output was one thing; use of ORT in community outbreaks without the benefit of equipment and skilled personnel was another. In 1971, a major breakthrough came with Dilip Mahalanbis's discovery in a war-refugee camp in Calcutta under dreadful conditions that patients with cholera and dehydration would voluntarily drink as much balanced ORS as needed (in medical parlance, "ad lib" for ad libitum), administrated by family members given basic instructions. Vomiting had always been seen as an obstacle to oral rehydration, so the caregivers were shown how to administer the fluid in small doses at regular intervals. Intravenous fluids were a backup. (For patients too weak to drink or who are vomiting too much, intravenous fluids are a necessity, but small amounts of oral solution can be given at the same time.) I regard Dilip's work as critical for the widespread acceptance and use of ORT, because now—with information and education—mothers and other caregivers could administer the solution to children, who are the principal victims of severe diarrhea, in a clinic's rehydration corner or at home. The solution would prove effective in preventing serious dehydration in children discharged to home, cutting hospital visits and death rates. I am particularly proud and privileged to have shown these outcomes at local and international conferences. More on these later.

Several decades later, in 2002, David Nalin, Nate Pierce, Dilip, and I were awarded the Pollin Prize for our work, in an award ceremony at Columbia's College of Physicians and Surgeons. As I'd grown up just ten blocks away, I began my acceptance speech with, "Local boy makes good." My other fifteen minutes of fame was being interviewed and filmed for the BBC under the title, "The man who helped save fifty million lives." [7]

I'm sometimes asked what's the difference between ORS and Gatorade? The ingredients of Gatorade, as currently constituted, are wrong for what's lost in diarrhea. But here's a story: At one point during our work at the CRL, representatives from Stokely Van Camp paid a visit. The company (now owned by Pepsico) had obtained the rights to the formula from the University of Florida, whose football team are called the Gators, as in alligators. The university had developed the drink as a sweat replacement under a grant from the US Navy. We developed ORS under the general funding by the NIH and the Department of Defense (SEATO), but made

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[7] https://www.bbc.com/news/health-28564607

no attempt to patent the formula—it never occurred to us; it would have been wrong in any case. Guess who made a lot of money.

One honor that particularly pleased me was being hailed by President Bill Clinton in 1993 at a White House ceremony in the East Room as an “American Health Hero.” As with most of such matters, there’s a backstory. UNICEF director James B. Grant was dying from liver cancer, and a Christmas event in the East Room was planned for him. He had been instrumental in convincing leaders around the world to take up so-called child survival as a cause, emphasizing key methods: Growth monitoring, ORT, breast-feeding, and vaccinations. (Infant and child mortality worldwide have been cut by half based on such strategies.) It was decided at high levels within the administration that several Americans be honored at the same time. Many nominations were submitted and a good deal of background jockeying went on. I was asked by an official in the US Department of Health, who happened to be a former employee of JSI, to submit my own record with respect to ORT. The chosen finalists were Warren and Gretchen Berggren for their work in community health and prevention of neonatal tetanus, Centers for Disease Control and Prevention (CDC) director William Foege for his role in smallpox eradication, Donald Hopkins of the Carter Center for his progress in eliminating guinea worm disease, and me. I joked that they had to choose me because I was the only Midwesterner (a Minnesotan at the time), the only Jew, and the only one representing diarrhea. I had photographs taken with the president and Hillary Clinton, and received a certificate. But something funny happened. My daughter was at the ceremony and it was the day the news of one of Bill Clinton’s alleged sex scandals broke. In order to find a video to cover the voice-over, they chose one with Hillary Clinton listening earnestly to what I had to say and my daughter standing close by. Oh dear.

Acceptance of our experience in using ORT wasn’t instant, nor easy. None of us at the CRL was a pediatrician, but this allowed us to think differently. Pediatricians in general were horrified that we would use the same ORS composition as that given to adults; that rehydration, whether by intravenous or oral routes, was rapid (hours instead of days); and that the gut wasn’t permitted to “rest.” Above all they feared hypernatremia, an excess concentration of sodium in the blood; they had seen too many children with convulsions, brain damage or death from that condition. When I presented our findings to a conference in Florida, sponsored by a pharmaceutical firm, I was accused by a physician from the company that I was killing children.

The eminent pediatrician and minister of health in Egypt, Mamdouh Gabr, was at the conference. He would enter my life at a critical moment some years later.

When my team introduced ORT to the Fort Apache Indian Reservation in Arizona, home to the White Mountain Apache Indians (see chapter V), I encountered another sort of blinkeredness: Michael Everett, the anthropologist we befriended on the reservation, adopted an Apache child and took him back home to Kansas. The child developed diarrhea, was losing weight, and was kept fasting and on IVs. Mike called me in some distress, asking me to speak with the pediatrician, who was using the less-than-ideal treatments of intravenous therapy and prescribed fasting. I told the physician of our work with oral rehydration therapy on the reservation. He replied, unctuously, “Oh, doctor, our children are different than your children.” It would take a couple of decades before ORT was acknowledged as useful in the United States. Even now, it’s not used as often as it should because insurance won’t cover it.

Practice is one thing, theory another. How was it that ORT in our experience could remedy both high and low sodium in the blood, bringing the levels back to normal in hours? First, I had to discover how the standard teaching about treating infants with diarrhea came about. I did this by tracking down published articles and unpublished works in archives, in which I found that the treatment protocols were derived from infants with diarrhea who had been fed milk, even salted milk. I also had to design an elaborate physiological model to explain how sodium load and volume in rehydration was associated with reduced mortality and a corrected electrolyte state. It’s a paper that took several years to complete and one I am especially proud of, published in 1980 [8]

We did, as we were promised, lead an easy life in Dacca with a big house, a car, and servants. Near the time of our departure, we held a picnic on our spacious lawn for all the CRL drivers and their families, who came beautifully clothed. Some played traditional instruments while the

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[8] “Treatment of Children’s Diarrhea - An Historical and Physiological Perspective,” American Journal of Clinical Nutrition 33 (1980): 637-63.)

children danced. It was so sweet. We had done good even while doing well. But it was time to return home.

IV. Boston Boston, Home of the Bean and the Cod

(Where the Lowells talk only to Cabots, and the Cabots talk only to God.)
("Boston Toast" by John Collins Bossidy)

In 1967 I was appointed as senior resident at BCH. Senior residents were the presences to be called on by the interns and residents for consultation and to join in rounds, but mainly they were supposed to stay out of the way. My hours were better. Under a Veterans Administration guaranteed mortgage plan, my wife and I bought a small house in Brockton, an outlying suburb of Boston, ninety minutes away by bus. Crazy, but I was a homeowner! It was a terrible winter; I could never get warm. Soon I found myself sitting down on rounds, totally fatigued. I thought it must have been the winter; it must have been the long commute; it must have been the moonlighting to earn extra money. But my fatigue had a more subtle cause. A fine internist, physician to the house staff, took me in hand and diagnosed hypothyroidism. I was started on thyroid extract, and some six decades later still take thyroid replacement. At the same time, my sperm count plummeted and I wonder if I was caught out by some virus from East Pakistan.

Intellectually it was a down-time year, and I itched to continue basic research on the mechanism of cholera. Why did I persist in trying to do laboratory bench work when I showed so little aptitude? Perhaps I could blame my mother. In her Jewish-mother, aspirational character, she thought I should be a brain surgeon because to her mind that was the hardest (i.e., greatest) achievement in medicine. Why not? Nobel Prizes awarded in the twentieth century have gone, disproportionately, to Jews whose family origins were from Eastern Europe. The Enlightenment in the 17th to 19th centuries released a latent Jewish genius in science, arts, literature and music, that for centuries had been bottled up in Talmudic studies, biblical exegesis, and Yiddish song and poetry.

Our years, a dozen altogether, in Boston and its surroundings, brought moments of great pleasure: concerts, museums, the grand Charles River, Walden Pond, Cape Cod, amateur theater, and the famous Boston Marathon. We lived in the city; we lived in a small-town, working-class neighborhood; and we lived in an 1890s Victorian in a tonier suburb, where my

children went to high school and where I'd ride into Boston in a carpool with lawyers and financial guys. The life I led there was not my own.

Based on my experiences with cholera and my publications at the CRL, I was accepted to work on electrophysiology at the Beth Israel Hospital in Howard Frazier's renal laboratory, with funding from an NIH research fellowship he made available at a less-than-handsome salary of $11,000 a year. Howard was gentle, supportive, and patient. He taught me how to make my own equipment: assemble a Faraday cage, design electrical circuitry, carve out Lucite chambers on a lathe, and draw out micropipettes. My assignment was to measure the intracellular electrical properties of individual cells in turtle-bladder and rabbit-small-intestine epithelium. Howard's principal ambition was to find a putative receptor for sodium transport across membranes. He never did, giving up a few years later to shift into research on health policy instead. He was never bitter, at least not on the outside, but I have always wondered whether he, too, dreamt of a great prize someday. He died from Parkinson's disease.

I did good work. I discovered that bladders from turtles harvested in the summer had greater electrolyte transport compared to those harvested from turtles in the spring, findings we published in the prestigious *American Journal of Physiology*. When I read that paper now, I understand almost nothing. In the rabbit intestine, I distinguished the different electrical properties between cells lining the finger-like projections (called villi) and the cells between the villi; both kinds responded to glucose, which stimulates sodium absorption. But only the intervillus cells responded to theophylline, which stimulates chloride secretion, the phenomena behind cholera and its treatment. It seems I'd discovered the exact location of cholera secretion. The results were published in the *Johns Hopkins Medical Journal*. I understand these results, but now scarcely how I got there. In the end, the singular obsessiveness of laboratory work—setting up, sitting at the dissecting microscope, reading off and photographing traces from the monitors all day (I soon began to see them in my dreams), closing down and cleaning up—it wasn't for me. A visiting professor had once advised me to continue work on Na-K ATPase (work that earned others a Nobel Prize!), but I recognized that I needed to work on many topics at once, to be on some bigger world stage. My then-driving motive was to heal the world. And, I grew appalled by killing rabbits—holding them by the legs and slamming their heads against a stone table edge. It reminded me of something dreadful, and I hadn't even said a prayer.

I should say that the NIH grant was barely sufficient to support a family, pay a mortgage, etc. So I turned to moonlighting. I made house calls on weekends when general practitioners signed out to an answering service. I called in to the service saying I was available. The operators were delighted. I would drive through Boston suburbs with my doctor's bag full of basic equipment visiting patients. I got to see them in their environment, often with family members who could supply the medical history. The patients, mostly elderly, didn't have to take off their street clothes, and I could explain matters unhurriedly; sometimes I needed to call an ambulance. I charged $10 a visit. On Mondays I'd report back to the GPs about their patients. Most were grateful.

Another time a surgical resident working weekends in a community hospital ER recruited me to provide internal-medicine wisdom. The surgeon, affiliated with the hospital, collected his fees through their billing system, counting stitches as he went: "Ten dollars, twenty dollars . . ." I had no real standing, so had to bill my patients separately; none ever paid up. I had no malpractice coverage either, a fact unimaginable today. That job didn't last long.

I also worked some weekends at the Walter E. Fernald State School serving so-called retarded persons. The institution, now closed, had a long and checkered history, reflecting the times of eugenics, unethical experiments, sexual abuse, and court battles over its value as a community or educational resource. Not all the residents were even retarded. I saw the better side of dedicated service by the staff caring for the most disabled adults and children. My late parents-in-law were founding members of the Fernald League for the Retarded, a potent advocacy group.

One time I was called to see a bedridden boy, the sort of child who had to wear a helmet because he kept banging his head on the rails. He had a small, hard ball to play with and one time swallowed it. The ball occluded his esophagus and had to be removed under anesthesia by a surgeon through an esophagoscope. The surgeon came to the bedside afterwards and proudly showed it off to the boy who, fantastically quick, grabbed the ball and swallowed it again.

It made me think of how caged animals develop a routine of stereotyped movements, like the panther going back and forth in its pen in the zoo, or prisoners banging their heads on the wall in solitary confinement. Has anyone done the obvious, bringing such persons out of their cages, stimulating them on walks, with sunshine and toys you can't swallow, using all the techniques of

behavioral reinforcement we use on performing dolphins, circus elephants, and dogs? Perhaps by now.

I passed the general Internal Medicine Boards in the days before specialty and subspecialty boards were introduced. One part was an extensive, multiple-choice written test; another part was an oral: examining a patient in a teaching hospital in another city where no one knows you. I was assigned to the University of Pittsburgh Medical Center where I had to take a history and examine two patients. The first seemed straightforward: an elderly woman with anemia (I could tell by her pallor). I had to gain her confidence in eliciting a history because she'd been warned by the medical residents not to tell me her diagnosis, which she misinterpreted as "not to tell anything." I managed it—a test of bedside manner! The differential diagnosis included Di Guglielmo Syndrome, a rare form of leukemia. I tossed off the name with confidence. Then I had to examine an old Black man who seemed confused. He couldn't tell me much about himself. I examined him closely and on auscultation of his heart heard a decrescendo murmur after the second heart sound. Aortic insufficiency and confusion in an elderly Black man can be signs of tertiary syphilis affecting the heart and the mind. The medical residents had chosen the patient and listened in during my presentation to the professor. Expecting candidates to fail, they were impressed. I was good at this stuff. Diagnosis that is, not surgery.

After two years at the Beth Israel Hospital, my post-graduate fellowship was up and I needed to get a real job.

V. I Do Good Work with the White Mountain Apaches

In 1970 I was recruited by my Johns Hopkins Calcutta colleagues to the post of assistant professor of medicine, with a joint appointment at the School of Public Health, offering $25,000 a year, which made me feel flush. We bought a nice row house near the main Johns Hopkins University campus. Our neighbor was a Swiss architect designing the renewed Baltimore waterfront.

I was assigned to Baltimore City Hospital, which stood in status to Johns Hopkins University Hospital as Boston City Hospital did to Massachusetts General Hospital. The JHU hospital is located in an African American neighborhood and is known sardonically as the "Plantation". Baltimore City Hospital (now the Johns Hopkins Bayview Medical Center) served the white population of east Baltimore, home to the shipbuilding industry, by then already dying. I was

meant to be an infectious disease consultant, but spent little time on the wards. I realized that I no longer measured up to, or even liked, making rounds on the wards of ill elderly and poor patients. After the CRL, something ached in me to get onto a larger stage.

I had spent the first year at Baltimore City Hospital in the lab completing my studies on rabbit intestinal transport with equipment borrowed from Howard Frazier, supported by an unused portion of Buck Greenough's grant. That largesse was about to run out. But by good fortune and timing I was asked by Bob Gordon, now at NIH, to reconnoiter Indian reservations in the Southwest for creating a treatment and research program for infants and children who suffered from diarrhea. NIH scientists had been doing basic research on gallstones and gall bladder disease in Pima Indians. There were complaints from the tribe and the Indian Health Service (IHS) that the Indians were being exploited with nothing given in return. Much as the CRL was founded in part to present immediate benefits to the local population, a diarrhea project among American Indians was meant to present a more human side of NIH research.

I was in my element, traveling from reservation to reservation. I chose the Fort Apache Indian Reservation in Arizona, where the infant mortality at the time was astonishingly high, seventy-five per thousand, due mainly to pneumonia, meningitis, and especially summer diarrhea. The administrator of the Indian Health Service Hospital was enthusiastic about the project, as was the lead pediatrician and the Tribal Council to whom I presented the idea, with additional prospects for employing young Apache women as field assistants. Our protocols on ORT and prevention of diarrhea had to pass muster of four review groups: the NIH, Johns Hopkins School of Public Health, the Indian Health Service, and the Tribal Council.

As part of the negotiated arrangements, we were to be totally self-sufficient. I recruited Brad Sack, then at University of Oregon, to set up a bacteriology lab; a Hopkins technician to set up a chemistry lab; Richard Cash of Harvard's School of Public Health to work with me on the pediatric ward; University of Maryland epidemiologist Bill Woodward (Richard and Bill both CRL alumni) to study the patterns and origins of diarrhea; and professors of nursing from Georgetown University (Grace Chickadonz and Lois Evans) to conduct the field trial of a nonabsorbable antimicrobial for the prevention of diarrhea. Bill's wife, Susan, and my wife, Mary Ann, helped the Apache nurses on the pediatric ward. Ann Lacapa, a skilled pediatric nurse, was an especially important interpreter of family dynamics. In addition, I organized rentals of

trailers for housing the staff from a supplier in Phoenix, finding space for them on the IHS trailer park adjacent to the hospital.

What I find remarkable now is that I became a good team leader. Coming from my troubled childhood and adolescence where I was unpopular among my peers, I found it exhilarating. It showed I could renew myself, an ongoing project even in my later years of life. But achieving leadership had a downside: an arrogance that tripped me up when the project ended and I was back to being . . . just me.

In the double-blind trial of a prophylactic antibiotic (colistin sulfate), nurses and their assistants made daily visits to homes, providing the doses directly. Signed, informed consent from parents was sought by the assistants speaking the Athabascan Apache language. Of 292 eligible children in three communities, parents of 101 refused permission; fifteen dropped out. A placebo effect of daily attention was seen: participant children in both placebo and antimicrobial groups gained weight over the course of the summer, on average, while nonparticipant children lost weight. The latter also had more serious episodes of diarrhea requiring hospitalization. The findings showed either the protective effect of attention (known as the Hawthorne Effect), or that those families refusing the study were already more vulnerable. In terms of diarrhea incidence, children one to six months old had over twice the morbidity from diarrhea if assigned to the drug compared to the placebo, while the toddler group (seven to thirty months) given the antimicrobial had, statistically speaking, less diarrhea. The outcomes we hoped for did not materialize, but we published the results nonetheless. (Too many so-called negative studies go unpublished, which retards research.)

As such things happen in field trials, rumors began that the drug was causing illness. When the Tribal Council's vice chairman's wife complained, he ordered a halt to the study. I went to his home, quietly explained the study and its design, and reminded him that it had been approved by the Tribal Council and the IHS. I noted that the young Apache women we hired would be laid off, losing welcome summer income. And thus, the study continued without further incident. Thinking back now, the vice chairman would have been justified in tossing me out ("Get out of my house, Ligai Ndeeń!") and suspending the entire program, field and hospital; another example of a white man's oppressive behavior. I was pleased with myself then; now I'm less certain.

Michael Everett, the resident anthropologist on the reservation, knew about our work. When we hit this snag and experienced some other incidents, Mike had us engage the tribe's spiritualist—we might call him a shaman. As instructed, our whole team of nurses and doctors brought the requisite gifts—cans of ground coffee and some eagle feathers (available at a price from the general store)—and, lined up in front of the shaman's house, went through a purification rituaafter that.

I did have a protector. Devore Thompson was the Tribal Sanitarian, visiting all the reservation communities and homes. He knew everything and everyone. He was my one Apache friend. We'd sit on his porch and drink beer together (when he belched, he'd say, "Not bad manners, bad beer"). I believe now that he had a hand in quieting things down.

We named the project *Chagasche,* meaning "children" in the Apache language. The acronym stood for "*C*ooperative *H*opkins *A*pache *G*overnment *A*ssisted *S*tudy of *Ch*ildren's *E*nteritis." Ornate, but effective. We commissioned local women to craft beaded necklaces and badges with a large *C* in the middle.

We were temporary guests in a foreign country. We attended the rodeos, ate butter-slathered fry bread and acorn stew at festivals, and watched the ceremonies celebrating the coming-out of young women that lasted well into the early hours. Our nurses socialized with the field assistants and their families. We had to learn how not to stumble. Someone had the bright idea to bring in a pinãta to liven up the children's ward. Unhappily it was in the form of an owl. Apaches, among other cultures, believe the owl's call portends death: "Owl calls my name" is an Apache saying.

One couldn't miss the alcoholism, suicides, domestic violence, or how school children began to fall behind from the third or fourth grade on. One terrible example affected us directly. B__, the daughter of an Apache wise woman who helped our field team to understand Apache culture. Notably shy, B__ was also an excellent student. On her graduation from high school, our Georgetown nurses recommended her to attend Georgetown University. B__ dropped out after a year, homesick, returned to the reservation, and married a violent man who later beat her to death. Did we go wrong to impose our hopes and expectations, perhaps a rescue fantasy, on the young woman?

The Apaches have autonomy both as a sovereign nation under treaty with the US government and in the control of most of their internal affairs. But living on a bounded reservation with the federal presence all about them—the Bureau of Indian Affairs, the Indian Health Service, and other US agencies—had to be a constant reminder of their defeat, the indignity of handouts, and their pervasive poverty. Even benevolent white folks, most who came and went, lived well while there, getting what they needed from the experience; my reward was research and publications. The alcoholism and violence we saw were signs, I believe, of a turning inward due to feelings of desperation and rage, a kind of self-mutilation. Parallel experiences exist elsewhere where indigenous peoples were overwhelmed by Europeans and decimated by diseases they brought: the Maori, Australian aboriginals, and South African Blacks.

The tribal land was beautiful in its forests, rivers teeming with trout, and mountains (one area became a ski resort, another housed a casino). It was known as a big sky country. I remember after a great thunderstorm, the sky to the east was shrouded by a black curtain of cloud while the setting sun projected a brilliantly hued rainbow on the canvas. Among the Indians there was a longing, it seemed, for the days when Apaches roamed the land. Not all Indian reservations are so salubrious, but the same poignancy of loss is found and written about by American Indian poets and novelists as well as Palestinians displaced from their land. It also reminded of how Jews of Eastern European descent are nostalgic for the idealized shtetl (think *Fiddler on the Roof*), cramped, diseased, and oppressed as it truly was.

Our project, conducted over two long summers, succeeded. With ORT infant mortality fell to near-normal levels, from seventy-five per thousand live births to fifteen, as deaths from diarrhea no longer occurred. Knowing of Dilip Mahalanbis's experience in India, we showed that infants and children could drink the ORS ad-libitum. Brad Sack and Bill Woodward found the cholera-like enterotoxigenic E. coli in streams used for drinking water, and also in many children with diarrhea. Making ORS available directly over the counter from the hospital pharmacy for children with mild diarrhea seemed to reduce the number of hospitalizations. Nine papers were published in peer-reviewed journals, and the results also were summarized in the tribal newspaper. One of the Georgetown nurses earned her doctorate, the subject of which was derived from the field work. I helped the IHS pediatrician gain a research fellowship at Johns Hopkins University School of Public Health.

We were guilty of one thing: we left. How could you establish lasting ties to people if you didn't live with and among them, and for a goodly duration? The Apaches regularly experienced such disassociations, and were understandably reluctant to invest in friendships with the outsiders.

I learned a substantial lesson from our nurses in the field. If illness originated in the community, it had to be addressed in the community. In hospital I had been doing numerators, while they were doing denominators. This was the beginning of my international public health career. In later lectures I explained the difference between the two — between clinical medicine and public health—by the following metaphor: You're standing on the bank of a fast-running river and a person comes floating by, shouting for help. You throw a line and save a life: good. A while later, another person comes floating by. You throw a line and you save another life: better. But after a few more such incidents, you decide to go upstream to see why people are falling into the river, and work to prevent any more: best.

While at Baltimore City Hospital, I was asked by WHO to go to Burma and help U Tin U, professor of pediatrics at the main children's hospital, introduce ORT. He was dubious. He had tried it but it made diarrhea much worse. (Oddly, at the infectious disease hospital down the road the internist, supported by WHO, was using ORT for patients with cholera or suspected cholera without any difficulty.) I asked to see his stocks of chemicals, discovering that the glucose had turned into a thick, yellow cake after prolonged storage in the heat and humidity of Rangoon. I guessed it had become some kind of polymer, releasing an overload of glucose molecules in the intestine that drew salt and water out of the bloodstream by osmosis. When we used liquid from bottles of 5 percent glucose intravenous fluid, diluted by half, all went well.

I enjoyed my several-week stay, touring several areas of this beautiful if tragic country, land of pagodas adorned with gold foil, memories commemorated in poetry and song. I had a discreet minder with me at all times—a medical student in Rangoon, elsewhere a supposed tour guide. My visit was remarkable because it came shortly after the military took control of the country, brutally repressing any protest; foreign visitors were forbidden (I carried a laissez-passer issued by WHO).

The NIH grant lasted two years. I was hoping for a renewed project, but when I went back to the reservation the winter after the second summer, I found a whole new team of IHS pediatricians had come on who had no experience or interest in oral rehydration therapy. They thought it was dangerous, and were generally uninterested in anything people from Johns Hopkins had to

offer. ORT did not return to the reservation until seven years later, when Hopkins professor Mathu Santosham went to live on the reservation. ORT had not been used at all in the interim.

Mathu had the fortuitous opportunity to demonstrate ORT when a big epidemic of rotavirus diarrhea struck the reservation. Over three hundred cases with moderate to severe diarrhea came to the hospital over a three-week period, overwhelming the thirty-bed hospital, which had only ten beds for infants and children. Mathu set up an ORT corner in the Emergency Room, and packets of ORS were distributed in the community by Apache health workers, many from our Hopkins project the years before; the epidemic was managed without a single fatality. Mathu, a true "health hero," expanded his work to the Navajo Nation, there also introducing the vaccine against *Haemophilus influenzae* meningitis, essentially wiping out that disease so common among American Indian children.

Some years later, with WHO support put through by two cholera experts—Dhiman Barua and Yoshikazu Watanabe—I helped initiate research into ORT in the Philippines under the aegis of the infectious-disease unit in the national Ministry of Health, headed by Dr. Joaquin ("Jack") Sumpaico, who wasn't a pediatrician. A team was assembled in the district of Bacolod, led by Jack's chief nurse, Enriquetta ("Kit") Sullesta. Both became my good friends over the years. The research showed that ORS packets dispensed to mothers in community clinics and later by lightly trained village women could reduce hospital admissions for diarrhea and dehydration. Table sugar in place of glucose made diarrhea temporarily worse but also worked. Preventing dehydration at home via ORT given by mothers became as necessary for saving lives as treatment in hospital. When mothers were encouraged to also continue breast-feeding and give children boiled rice even as the diarrhea continued, the children's overall nutrition improved, strengthening them for the inevitable next bouts of illness. Three papers on the results were published in peer-reviewed journals. It's useful to note that the author of all the papers is specified as "International Study Group," with the principals listed in a footnote in alphabetic order. It surely helped our work that I wasn't an ambitious academic with the need to have my name at the head of every paper.

What I loved about the Philippines was the people's joie de vivre. At the close of a medical conference and its formal presentation of research papers, for instance, the chairs were folded up, a record player brought in, and, joined by nursing students from a nearby school, we all danced. I cannot imagine this happening at a US medical conference.

All through my career I was a better teacher than an academic. In later years, as a visiting professor at the University of Minnesota School of Public Health, and later as a lecturer at Yale, I had to learn how to teach full courses in international health, developing a syllabus, rehearsing and timing individual lectures, and keeping students both informed and entertained. I mostly used the Socratic method in order to have the students challenge assumptions and examine competing ideas. Student presentations were a feature ("each one, teach one"). I used literature and film as metaphors for public health. For example, *Arrowsmith* by Sinclair Lewis, on the conflict between medicine and public health; *Enemy of the People* by Henrik Ibsen, on the official denial of bacterial contamination of tourist spa baths and the vilification of the physician who sounded the alarm; *Distant Thunder*, the film by Satyajit Ray, on the political causes of famine in Bengal during World War II; and the opening scene of *Twilight Zone: The Movie*, with its great tag line, "You want to see something *really* scary?" to introduce emerging infectious diseases.

I didn't give formal tests. Even so, I felt ambivalent about grading students. It seemed to me a simple Pass or Fail would satisfy academic requirements while preventing some aggressive students from negotiating a higher grade. Grades, I believe, encouraged a kind of hostage arrangement: "Give me a good final grade, and I'll give you a good rating as lecturer." Of course, being embedded in a gossipy, backbiting, academic milieu made me further unhappy. I saw how some lecturers, having been at the job so long, never changed the content of their courses. For variety, the lazier ones depended on unpaid guest lecturers, while they sat in back. I've always thought of the apt definition of a university as a professor at one end of a log, the student at the other. In my own teaching, I would focus on the one student out of ten who seemed the most ambitious, intellectually engaged, and ready to make a difference. In *The Education of Henry Adams*, Adams wrote, "A teacher affects eternity; he can never tell where his influence stops."

When I interviewed for a professorship at the Liverpool School of Tropical Medicine, the committee members (dressed in resplendent, academic robes) wanted to know my specific research plan. I burbled on about waiting to see what was urgent in global health, how students could be engaged, waiting for the good chance, etc. The person who got the post presented a plan for a project about medical records equivalent to a catalogue. I encountered a similar experience in Indonesia when interviewing for a teaching post, describing how I would teach in

an open-ended style—the wrong idea for another traditional system. “Thank you, Dr. Hirschhorn” was the response.

Another time I was invited to give a class to Harvard medical students on nutrition by the community health professor, himself a nutritionist. Instead of a lecture, I prepared three meals to be eaten in class, the students randomly assigned to one of three. The dishes were a traditional Latin American serving of rice and beans; an Egyptian *koshary* made up of brown lentils, rice, macaroni, tomato sauce and caramelized onions; and a take-out from McDonald’s: hamburger in a bun with french fries. I made up the portions to be isocaloric and about equivalent in protein and vitamin A. The students eating the traditional meals couldn’t finish the full, bulky portions. Some eating the fast-food serving came up to ask for more, as the rapid absorption of carbohydrates stimulated a rapid rush of insulin. Then we discussed the experience. It all had the flavor of improvisational theater. I hope they learned something about nutrition, while I learned something about teaching. The professor was dubious, muttering something about research on salt in rats’ diets that affected appetite. I’m glad I didn’t enter academe; it was never a good fit.

With no follow-on grant to support my salary, I had to leave Johns Hopkins and find a job. Another lesson: in academic medicine you’re only as good as your latest grant, unless and until you get tenure. I decided that climbing that greasy academic pole was not for me.

VI. Now What? Into the Public Health Consulting Business

Near the end of my tenure at Johns Hopkins, by good fortune, I’d somehow heard of a new consulting firm in Cambridge, Massachusetts, Management Sciences for Health, emerging from the Sloane School of Management of the Massachusetts Institute of Technology: Management Sciences for Health. MSH emphasized business-style management to strengthen family planning programs. It got off to a good start with a no-bid contract awarded from the US Agency for International Development (USAID) to help the new, postcoup Afghanistan Ministry of Public Health set up national family planning. The project was meant, of course, to support Cold War policies around the world, as the United States angled for influence in central and Southeast Asia against the Russians and Chinese.

In the summer of 1973, I went for an interview with the two principals: Ronald O’Connor, a physician and president of the firm, and Joel Lamstein, a computer and logistics expert and

chief financial officer. The company had but a handful of staff, with an office located in Cambridge, on the Charles River near MIT. After some conversations, I was asked to handwrite a summary of my philosophy of public health. I supposed that Ron and Joel were just setting me off to one side while they conferred. Ron wanted another physician, while Joel was suspicious of physicians. Ron offered me a salary of $33,000. Joel overrode the offer and, with some embarrassment, Ron lowered it to $31,000. I accepted it on the spot. Joel to this day wonders if he could have gotten me even cheaper. Since I was not to begin until the end of the summer, when the MSH cash flow was sufficient to pay me, my family and I were strapped, one time even tenting in a public park.

Johns Hopkins professor Carl Taylor, grand old man of international public health, thought I was mad to leave a proper university for a dicey private corporation, even if nonprofit. MSH was an early entry into the health-consultancy business, whose consultants were pejoratively known as beltway bandits (the beltway being the one circling Washington, DC). It was a gamble even if forced upon me, but I got my chance to work on a larger stage. I joined the Afghan project as the expert, though I wasn't one yet, to examine the family planning supplies and medicines the ministry was making available to the scattered (and tattered) maternal and child health (MCH) clinics.

I went to Afghanistan several times, for six weeks each period, to help the ministry regularize its drug list. We computed how much was being spent on less-than-useful drugs, all trade-named. It turned out to be large percentage of the ministry's budget. My favorite example was an Italian medication called Pazuma, an herbal drug meant to improve men's potency. I'm sure the name alone would exert a potent placebo effect. We recommended a program of generic, essential drugs. I don't know whether, in all the turmoil that has gripped Afghanistan in years since, successive governments adapted our recommendations. A true story: I accompanied a well-meaning consultant from the Population Council in New York, who urged a packet of condoms on an Afghan village elder. He looked at them disdainfully and said, "I could burn through those," which leads to the truism that the best measure for reducing family size and child mortality is education of girls and young women, even at an elementary level.

On my visits to villages I would go to a private pharmacy. Many had on their counters those giant, glass apothecary jars filled with colored liquids. At one rural pharmacy I asked the proprietor, "What is in the blue liquid?" He said, "That's tetracycline." "And in the red?" "Also

tetracycline. If one doesn't work, I prescribe the other." Here was an example of the mighty placebo effect and the tincture of time at work. A small girl came in after the pharmacist had told us he never sells medicine without a prescription. "It's the law," he said. She asked for, yes, tetracycline. The pharmacist nervously tried to shoo her out: "No, we don't have tetracycline." "Then let me have some penicillin."

The idea of an official, essential drug list caught the attention of Dr. Hiroshi Nakajima, chief pharmacologist at WHO in Geneva. With MSH colleague Tim Warner, we helped him create such a list. It began with forty basic drugs meant for primary care in community clinics and small rural hospitals. The program took off, a major unit in WHO was established, and the list now numbers 460 items, including what medical and surgical specialists practicing at major urban hospitals wanted. This is a measure of bureaucratic success, I suppose, but it misses out on the original concept. We did manage to get oral rehydration salts onto the list, the first international approval of ORS. Meanwhile, Dr. Nakajima went on to head the WHO Western Pacific Region, later becoming director general of WHO.

Norbert Hirschhorn at a Ministry of Public Health pharmaceuticals warehouse, Kabul. Photo: Steven Fabricant, 1974

If one ever thought of Afghanistan as a dangerous place, consider what happened to me back home in Cambridge. As I did often, I went out to buy lunch at the health food store across the road: yoghurt and a power bar. As I stood in line waiting to pay, two young men entered and poked about the shelves, their shirts hanging out over their trousers. “Uh oh,” I thought, “they don’t look like the yoghurt types.” But not wanting to have such racist thoughts, I waited patiently at the cashier’s, until out came the pistols and we were ordered to lie on the floor, face down. I anticipated that the next thing I’d hear was a loud explosion and a terrific shock at my head. Atheist that I was, I nonetheless said a silent *shma*, the avowal of faith that Jews in peril are supposed to say, while thinking, “There goes my brilliant career.”

I took some time to travel to the country side. One such trip with friends was over the Hindu Kush (Killer of Hindus) mountains through the eleven-thousand-foot-high Salang Tunnel that penetrates the pass that connects Kabul with the northern plains. The tunnel is several miles

long, and if there had ever been a ventilation system it had long ceased working. Hundreds of people have died of asphyxiation and fires in that tunnel. We were headed for the cities of Mazar-i-Sharif to see the famous blue mosque, and to Kunduz to see a game of buzkashi, a sort of polo match in which a headless goat or calf carcass plays the role of the ball, with goals at either end. It is the national sport, but this match was the equivalent of village cricket or pickup basketball, with one goal only. No match was scheduled for that day, so I became the sponsor by buying the goat, seeing it beheaded, and finding two teams of horsemen to entertain us. The riders were fierce, their ponies fiercer, both hard and wiry. After the game I was honored by being placed on a pony whose slapped flanks made it take off down the dirt track. I held on so tightly, while the pony twisted its head trying to bite me. It turned about at the end of the track and raced back, toward the onlooking villagers. I screamed the equivalent of "I can't make it stop!" The pony pulled up just inches from the crowd. I sensed that had I fallen off, head slamming the rocks, they might have been amused. It was then I understood that Afghans are the toughest people on earth; their victories over centuries of British, Russian and American armies attest to this. Afghanistan became known as "the graveyard of empires." A Swedish doctor friend who worked in both Yemen and Afghanistan told me that Afghans made the Yemenis look like kindergarteners.

If any of this sounds jolly, I recommend reading "The Afghan Way of Death" by Luke Mogelson, published in the October 28, 2019, issue of the *New Yorker*. The subtitle: "Civilian casualties keep climbing. Afghans are suffering more than ever."

We had no photocopiers in those days. The first one I saw was in Nepal in the 1980s. A photo machine slid over the glass platen holding a single copy, much like a simple scanner, and slammed back. Watch your fingers. In Kabul we produced six copies of reports more efficiently: a skilled typist working with an old Remington read from a master copy, loaded the carriage with five carbons and five sheets of paper and the machine went *whackety whackety whack.* Then for multiple copies, the iconic blue stencil had to be typed, inked, and run through a mimeograph machine. Nothing went to waste. Sometimes we found pages of our reports used to wrap kebabs in the food market downstairs. We once sat for a picnic in a bucolic setting with no one in sight. Our tinfoil and sandwich wrappers lay on the ground next to us—we intended to take them back. Suddenly a small posse of children appeared from nowhere and gathered all the debris. The foil, especially, made good wall and window lining.

At MSH I was also put in charge of writing a proposal for assistance to the community health program of the Nepal Ministry of Health and Population. I recruited the essential team and, with Joel, presented our case to USAID. Our main competitor was already based in Nepal, Johns Hopkins University School of Public Health, directed by, of all people, Carl Taylor. We won. Suddenly we were players, and several schools of public health scrambled to organize nonprofit corporations to bid against the proliferating beltway bandits.

Things were not going well at MSH. Ron and Joel were too different in their personalities, their social perspectives, and in how staff should be treated. I also sensed a touch of anti-Semitism. Adding to the conflict was Ron's brother being made chief-of-party in Afghanistan, and not because he was the most competent person. Soon it was agreed that Ron would be in charge of the Afghan project, Joel of Nepal. Aligning myself with Joel, I was no longer dispatched to Kabul.

Joel formed a subsidiary company named John Snow, Inc. (after the famous nineteenth-century cholera epidemiologist), later JSI, to build a domestic portfolio. Contracts were won for information systems in regional family planning programs under the US Department of Health, Education and Welfare (DHEW), and we succeeded in bids to advise family planning clinics in Pennsylvania (Joel's knowledge, linkages, and reputation helping enormously) and community health centers in the Northwest. The centers served low-income, uninsured, and underserved persons with integrated health care. My task was to introduce and advise on quality-of-care standards set by DHEW. Out of these experiences my colleagues and I wrote a manual and published several papers on quality assurance.

I had a wonderful time. With Seattle, home of the DHEW regional office as my base, I toured the states of Idaho, Washington,and Oregon by car, traveling to many rural towns and farming communities. One northeast corner of Washington was so remote that there was no radio reception. I saw, but didn't appreciate then, the decay that was setting in on small towns, which would have notorious political consequences decades later. I liked the health center people enormously. They were unpretentious, serving patients with grace and being part of the community. Many physicians were discharging scholarship obligations through the US Public Health Service Commissioned Corps under the Surgeon General. Some stayed to live. I made good friendships that lasted for some years after.

In 1978, the two firms separated. By agreement, MSH would tend to international work, and JSI to domestic. I joined JSI as a cofounder and part owner with Joel. It was a risky step: we had one project left over, and a staff of five; Joel wondered anxiously if a market in public-health consulting even existed. I assured him it did. Neither of us knew what we were talking about. We went into business with just some funds from a buyout agreement and an equity loan Joel took on his house. My contributed risk was in staying at a low salary with no security. If we were going to survive, we would have to bid on every domestic contract even remotely in our line of experience. I even wrote a proposal for quality assurance for dental clinics (it required a quick study on what quality of care in dentistry meant). The reply came back that it was an excellent proposal, but did you notice the contract was a set-aside for dental schools, and was John Snow, Inc., a dental school? The enmity between the two firms lasted nearly two decades and fueled our drive to succeed.

That pressure brought out another aspect of my character: to be fiercely competitive, sometimes to the edge of recklessness. My intensity and long trips away from home were not always healthy, neither for me nor my family. It was said I went to save third-world children but neglected my own. Yet, I made that choice. I was determined to succeed and, by the way, to save the world. Passion is hard on relationships. Never mind: onward to my brilliant career.

V. My Brilliant Career Takes Off

After the noncompetition agreement between MSH and JSI lapsed, we bid on international contracts and quickly succeeded in winning one in Tanzania for a school health program. A few years later, in sweet revenge, we took the contract in Nepal, outclassing MSH. I was made vice president for International Programs. Those were heady years.

I traveled to Nepal several times. Our charge was to help build the community-based, primary-care system idealistically envisaged in the 1978 Declaration of Alma Ata. A cohort of male community health workers had to be trained to visit scattered households in every valley and on every mountain side. They were to “deliver services,” which is to say, encourage family planning; have children immunized against several diseases by the special corps of vaccinators coming afterwards; test for tuberculosis; treat suspected malaria; encourage prolonged breast-feeding and ORT; and refer seriously ill children to a “nearby” community health center often an

hours-long walk away, up and down hills and across streams. In addition to training the village health workers, the community health centers still needed to be built, medical staff recruited, and medical supplies assured. Logistical and information systems also had to be laid in. Under USAID rules, all had to accomplished in three to five years. We called it “riding the bicycle while building it.” It all looked good on paper laid out in Kathmandu.

In retrospect, it should have been an impossible task for all the obvious reasons. But remarkably, the mortality rate of children under five has fallen in a nearly straight line from 140 per thousand in 1990 to 34 per thousand in 2017. How did this happen? We can cite many factors over the decades: education of girls, transportation, urbanization, family planning, continued breast-feeding, country-wide distribution of vitamin A, on-the-spot treatment of pneumonia by community health workers, establishment of functioning routine immunization, with support systems laid in and strengthened. Development takes time and diligence; one must follow its winding and errant ways to make a difference. In Nepal, the government continued to work even during the 1996–2006 Maoist Revolution, with donors from international agencies and Western nations continuing their presence. JSI stayed on as an advisor in support of Ministry of Health’s public health goals in Nepal for over thirty years.

Another time I was tasked to evaluate Save the Children programs in Nepal, Cambodia, Bangladesh, and in the home office in Connecticut. I don’t have the specifics of my reports at hand, but my recommendations ran against the donor-mandated grain: 1) Avoid focus on targets; they’re easily fudged, take attention away from process, and take time and energy to track. 2) Train local staff first, bringing in short-term expatriates only for critical technical input and to leave behind a new skill (besides, drop-in, drop-out expatriates take up staff’s time). 3) Distrust elaborate management information systems that often skew what one really wants to learn; talk to people being served. 4) Leverage funds with those of other NGOs—that was a difficult recommendation in light of public relations back home and accounting to a donor. 5) Build a well-run, respectful service and people will come. That’s what I would do if I were czar.

I mentioned another annoyance: the way certain international agencies modified the bowling mantra, to score a strike, aim better, by saying: If training isn’t going well, train better . . . if supervision is poor, improve supervision… coordinate better . . . promote better community participation. These anodyne words seemed like magical incantations, or a reification—say them often enough, then hope they might come true.

Development workers often cite the sweet mantra: Give a person a fish and you feed them for a day. Teach a person to fish and you feed them for a lifetime. I would add to this that when all the fish have been poisoned from factory toxic wastes, teach the people political action. NGOs funded by the usual donors don't go there. A neoliberal doctrine in certain development circles is: "A rising tide [an increase in GDP, say] lifts all boats." But what if you don't have a boat?

I was asked by the head of community health programs at the Nepal Ministry of Health and Population to bring out Cicely Williams, doyenne of maternal and child health for an annual MCH conference. The Nepali physicians working in MCH knew all her writings. According to Wikipedia, "Cicely Delphine Williams, OM, CMG, FRCP was a Jamaican physician, most notable for her discovery and research into kwashiorkor, a condition of advanced malnutrition, and her campaign against the use of sweetened condensed milk and other artificial baby milks as substitutes for human breast milk." She was a superb teacher who used simple messages such as, "If you learn your 'nutrition' from a biochemist, you're not likely to learn how essential it is to blow a baby's nose before expecting him to suck." [9] I located Dr. Williams in an independent-living center for seniors in England. She agreed to go to Nepal, but needed a companion and wanted to travel in stages. I negotiated all this mostly through her caregiver because it was soon obvious over the phone that Dr. Williams was in an early stage of dementia. A former student of hers was unable to sleep for three days in anticipation of her coming. After her arrival, physicians and nurses gathered about her, she resplendent with a crown of white hair, in reverence and adoration. She was less than lucid, but could have been reciting the telephone directory for all it mattered; she was simply there. But when it came time for a formal lecture, she was perfectly clear, even humorous. The word *grace* describes her presence. I wonder how impatient Western physicians would have reacted?

ORT had become a hot topic internationally, and the USAID mission in Egypt put out a bid to design a multiyear project to introduce ORT nationwide. The design phase would last six months, and then the full project would be put out for any contractor to bid on. JSI was selected for the first part. I had to recruit a team that included a logistics expert, an educator, an economist to cost out the details, an administrator, an anthropologist, and me as ORT expert

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[9] Baumslag, N, ed. "Primary Health Care Pioneer: Selected Works of Dr. Cicely Williams." APHA, 1986, p. 155.

and chief-of-party. The only other JSI staffer was an administrator. We worked closely with Dr. Lutfy el Sayyad, head of the MCH section of the Ministry of Health. He was delegated to work with us by the then-Minister, the pre-eminent pediatrician Mamdouh Gabr, whom I'd met in Florida in 1975 at my presentation of our work with Apache children. Professor Gabr and Lutfy made ORT a listed treatment in government clinics soon after.

In the design phase, I tasted the prospect of failure for the first time. I was too determined to succeed; I had to fend off pressures from the USAID officer who had her own ideas about the design; my home situation became more parlous; and the complexities of working in Egypt and managing a team of people who didn't know each other were daunting. I foundered. I drank too much potent Arabic coffee and took antihistamines to sleep at night. Joel had to send Tim Warner out to rescue the effort, which he did, admirably.

We met our obligations and waited for the final project to bid on. Chastened, I had to reflect on my own limitations. I understood that much of my arrogance and risk-taking were defenses against my anxiety of not measuring up. Anxiety and bouts of the "black dog" have followed me through my life, alternating with ebullience in company. The pattern is called cyclothymic, and a fellow sufferer whose life I've studied was Abraham Lincoln.

We did win the large contract, but the start of work was delayed by the assassination of President Sadat in 1981, and then by official protests lodged by MSH and Harvard, whom we beat out, with the curious argument that since JSI had designed the project it was unfair for us to implement it. It helped enormously that the Egyptians chose our bid. USAID funded the project to the tune of $26 million for a five-year period, and the Egyptian government contributed the same amount in kind.

It was a wrench to uproot the whole family, by now comfortably settled into a suburb of Boston: My two boys were starting high school, my daughter beginning college, and a widowed grandmother left behind. While in Egypt the boys had their own difficulties, yet even as adults they still remember with fondness their many adventures: camping in the desert, swimming in the shark-infested Red Sea, riding horses alongside the pyramids, Indiana Jones style, and learning Arabic. The environment became their education. On return to their suburban high school, they no longer fit in; the cliques had already formed, and their classmates were uninterested in stories about Egypt. They had painful adolescences.

What we all learned, and learned from, was the essential grace and kindness of Egyptians, a generosity in the face of chaos. Ask a man which track the commuter train downtown leaves from and he, noting you are a foreigner, insists on buying the ticket. A passport and wallet left on a counter is returned untouched. Despite mounds of accumulated garbage, failed electricity, poor workmanship, helplessness was eased by humor ("Egypt is an IBM country: *inshallah/ bokra/ maalesh":* It is God's will/ tomorrow/ ah-too-bad-but-not-to-worry.) Egyptians are famous for their wicked sense of humor, especially political humor where leaders are skewered by funny jokes. An Egyptian joke: an elevator cable snaps and the car plummets but no one is hurt because the many feet of garbage at the bottom of the shaft cushions the impact. Now, Americans would say how this shows the careless messiness of Egypt. Pious Egyptians would say it was Allah's will that allowed the trash to accumulate to save people's lives. Dear, sweet Egyptian friends would simply smile, shake their heads in sadness, and move on.

There's an insouciance born of carelessness and necessity. I saw two men on a motor bike, one riding pillion holding a great sheet of glass behind the driver. I saw a camel hit by a car, and its owner swiftly pull out a large knife and cut the beast's throat, a gush of dark red blood running down the gutter (the animal had to be alive when slaughtered so it would be fit to eat, *halal*).

In day-to-day interactions it could be easy to forget the hundreds of thousands of young Egyptian men killed in misbegotten wars in Yemen, and the Sinai. Egyptians show great patience, with rage boiling over only rarely, once in particular when food prices rose beyond what people could tolerate. The great uprising in Tahrir Square in 2011 gave hope that an authoritarian regime could be overturned. It was, only to be shackled by an even more oppressive ruler.

An entrenched bureaucracy is oppressive in its own way. To learn what ordinary citizens must encounter on a daily basis, I went through a twenty-three-step, hours-long process to retrieve a package from the airport. I was passed from clerk to official to clerk, with queues at each desk, to obtain the required stamps and signatures. Part of the system is to assure government employment; another part, I believe, is to intimidate and assure the docility of the people—holdovers from Ottoman and British rule. I learned from my experience several lessons, but especially to be patient with employees and colleagues trying to meet demands of a sophisticated project in a system that was clotted, even while trying to meet unrealistic WHO guidelines and USAID expectations. Any local professional who got something done was a

hero. What did I learn? “I’ll never rag anyone again,” that great line from *Bang the Drum Slowly*. And that foreigners should use commercial couriers.

I gained trust early, because I had to. At a hospital in Alexandria, I saw chaos, cats, and piles of trash topped by used-up bandages, needles and syringes. A doctor said to me, “We can show you this because you are now one of the family.”

The elements of the National Control of Diarrheal Diseases Project (NCDDP), an inelegant title that fit well into Arabic, included the following, here written in bureaucratese:

1. To educate the large Egyptian medical work force, especially professors of pediatrics.

2. To build logistics and administrative systems that assured manufacture, procurement, and distribution of what was needed for a national ORT program.

3. To equip rehydration corners in all hospitals and clinics treating children.

4. To develop a mass media campaign that taught mothers and health workers about ORT and how to use it effectively and safely.

5. To build a management information system.

6. To conduct on-going surveys and evaluation of the program as it proceeded so course corrections could be made, with reports of progress sent to the sponsors.

Introducing ORT on a national scale proved daunting. The prevailing practice among physicians (with five thousand new graduates each year) was to give injections, antibiotics, tranquilizers, and sodium-poor liquids (some being traditional herbal drinks). They would instruct the mothers to stop all foods, including breast-feeding, and they administered intravenous fluids even for mild dehydration. Here, fees for service were a consideration, but mothers also preferred and expected injections.

Egypt was littered with failed projects, like family planning, that were dominated by outside interests and donors. Unlike many other poor nations, Egypt had an impressive bureaucracy in health and education, a strong medical and scientific cadre of professors, and had made an effort to introduce ORT since the late 1970s. It was said about national projects that if you could

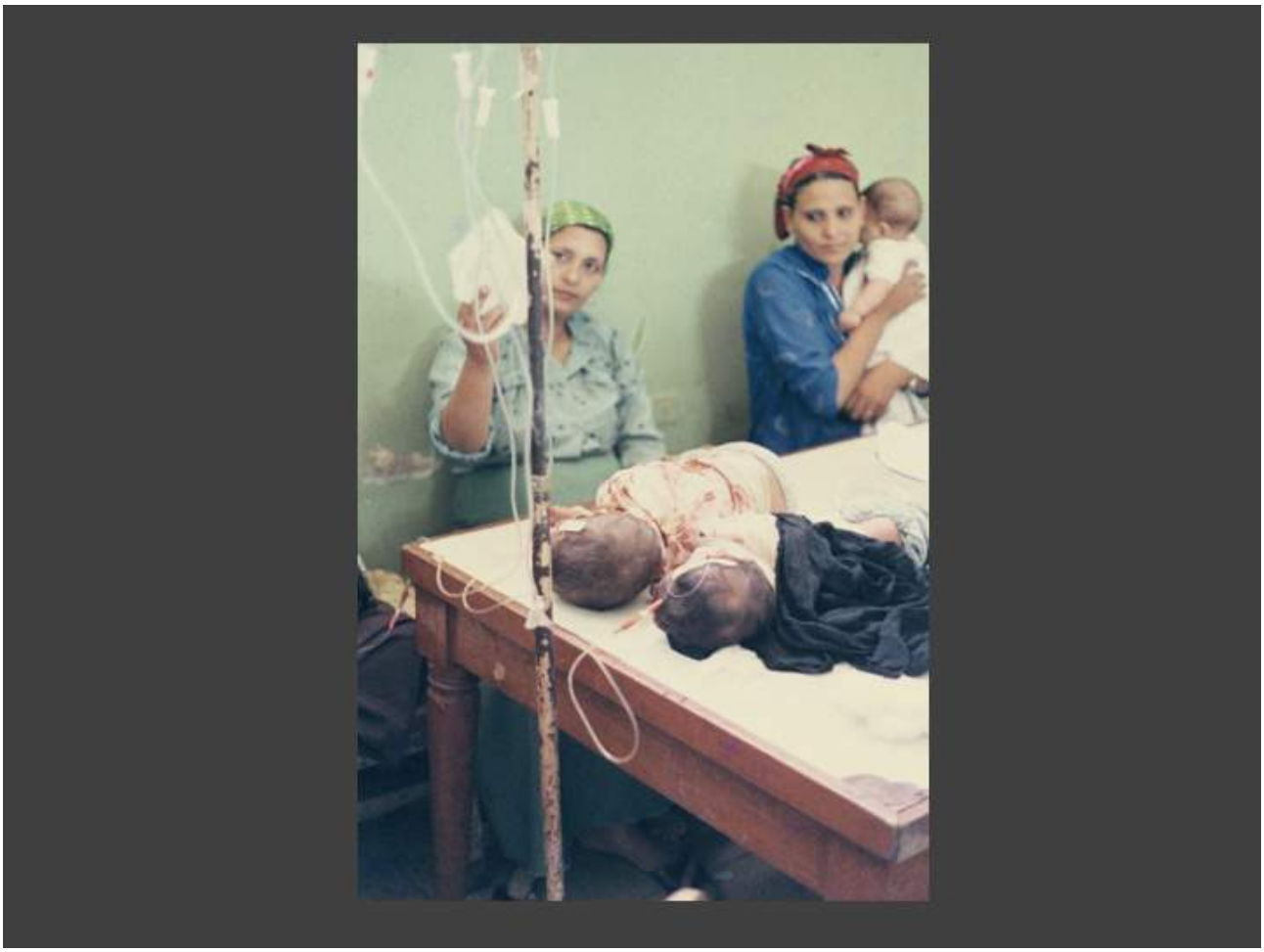
succeed in Egypt, you could succeed anywhere; and if you couldn't succeed in Egypt, you couldn't succeed anywhere.

On our American team was a genius at organization, Dr. Jerry Russell, who knew how to get around corners and obstacles. Susan Klein was our trainer, Farag elKamel (Egyptian American) our brilliant media advisor. The rest of the staff of NCDDP were Egyptian. JSI's office was embedded within the Egyptians' office to maintain daily contact.

All the NCDDP elements succeeded to a degree. But one strategy above all made this possible from the outset. Dr. Lutfy el Sayyad was appointed to head the NCDDP within the Ministry of Health. Lutfy had grown up in a rural village. No sophisticate, he was funny, deeply intelligent, open to new ideas, and ruled firmly. He was devoted to his two sons—one a champion swimmer, the other a violinist—and to his ninety-five-year-old father. With Mamdouh Gabr's support, Lutfy gained approval for NCDDP to be autonomous with its own budget, contract, and management systems. Otherwise, even procuring pencils would have required Ministry approval. Its undersecretary did assign an auditor who could scarcely comprehend the huge amounts of money needed to be spent. Worried about being put in jail, the auditor refused to sign off on expenditures. Lutfy staged a coup, fired the auditor, and regained signing authority, with his friend and ally, the training coordinator, as cosigner. Project oversight rested with a broad-based steering committee chaired by Professor Gabr.

Lutfy and I were good friends, riding to work together each morning. He called me *habibi,* that sweet, Arabic phrase meaning "dear friend." The other hero was Dr. Gamal Abdel Aziz, a community health physician retired from the Ministry. He visited every one of the twenty-seven Governorates to promote ORT, speaking to gatherings of pediatricians, general practitioners, and nurses. He helped set up and equip rehydration corners with basic supplies: cups, spoons, Coleman multiliter containers from which to draw the ORT solution (ORS), specially fitted grocers' scales to weigh infants on, and grade-school chairs with retractable desk lids for the mothers to sit comfortably. The school chairs came from a surplus warehouse of the Ministry of Education, which was glad to be rid of them. I often traveled with Dr. Aziz, and watched and learned. I was most enchanted by the egalitarian spirit I met on our journeys: our drivers always ate with us and slept in the same budget guest houses. Perhaps Islam is the source of the spirit, where people of all classes pray in mosques side by side. Dr. Aziz's efforts contributed mightily to the acceptance of ORT and a subsequent drop in children's deaths.

For example, at a Governorate main hospital, a treatment room for children getting intravenous fluids was converted to an ORT center with mothers feeding the ORS instead of looking on helplessly. Now they could exchange experiences (“each one, teach one”). Nurses and doctors were oriented to the method; once seen, the old practices vanished. The two photos below were taken by me, two days apart.



The Egyptians I knew were always alert to the nuances of facial expression and body language. In a confrontation, one is seldom direct, but the body language reveals how one feels. Maintaining social harmony is important to Egyptians, even if it masks deviousness. Outright rudeness is unforgivable. I had to learn to adjust my American style and to understand the Egyptian. One time, an artist contracted to produce posters on how to give ORT brought in what he thought was the final version. It was terrible. I insisted it be rejected and done over, and I berated the artist, who had a sudden fainting spell, maybe even a heart attack. People found me heartless: “look at the poor man,” one said, “he’ll lose his job . . .” My professionalism, ambition, and drive had conflicted with inherent humanism.

My better traits were my playfulness, a touch to the arm or back, an exuberant handshake, and humor. Dr. Gamal Abdel Aziz told me, “I love your smile.” I’d heard that earlier from a medical resident when I was in medical school, and later from a deputy commissioner when I served in the Minnesota Department of Health who said I had “a presence.” But I also carried an air of authority and knowledge, attributes much respected in a hierarchy. At steering committee meetings, I learned to be quiet and respond to technical questions professionally — “Tell us, doctor, how does this machine work you are trying to sell us?” At one meeting, the director of a parastatal pharmaceutical company wanted to make only enough ORS packets to fill demand—i.e., when pharmacies and clinics ran out; otherwise he could be criticized for being a spendthrift. I pointed out the need for a surplus, for overstocking, so the ORS was always available. I got emotional, asking him to think of the child in Assiut who dies because the pharmacy has run out. The argument won, and my colleagues patted me on the back.

Here is how an official runs an office: You’re ushered in and offered tea; others are seated who came ahead of you; handshakes are taken all around. While you wait your turn, you exchange information and gossip with the others. It often happened that the latest person to come in, with a look of urgency on his face, got immediate attention. So, I sometimes tried leaving and coming right back in! An important official has more than one phone on the desk, all of which ring and cause interruptions. Conversations between the official and a visitor are indirect, often whispered with a mouth to an ear. It seemed to be a courtly style of communicating, redolent perhaps of Ottoman days when information moved slowly and depended on innuendo, and when decisions were deliberated and deliberate, often made behind the scenes. I liken Egypt to a walnut—one cracks it open with effort, but is rewarded by the sweet bits.

In a visit to a village, the mayor, realizing I was a physician, asked for advice about his son with rheumatic heart disease who had been to many specialists. I demurred, saying it was not my field. My translator put my answer this way: “Well, have hope, it will take a long time, you are in good hands, *inshallah*.” It was a lesson—to comfort always—I once knew and needed to hear again. At another village I noticed a pretoddler sitting in the dirt playing with a camel turd and I carelessly commented on the epidemiology of the scene. When translated for the farmer, he noted that the 1984 Olympics Egyptian silver medalist in judo came from this very village. I apologized profusely, and my doctor-guide, a village GP and farmer himself, assured me the man wasn’t upset but happy that I was enough concerned about his child to notice.

We began the diarrheal control project with a one-year pilot in Alexandria, testing all the components of the design. Whatever the textbooks say, most often everyone expects things to go well in a pilot, so you can then scale up from what appeared to be a success. Good results in pilot projects are often achieved by using unrealistic resources; having a charismatic person lead the project; and putting a spin on the data. Failures or errors certainly should not be rewarded. I insisted on using the term, rehearsal, exactly the opposite of pilot: as in theater, one wants to make mistakes, find the wrong approach, and reward openness in learning, which lead to a revised script and staging. The idea of the pilot project as a rehearsal took the pressure off us and our colleagues to look good, when looking not so good was necessary to eventual success. And we sure did find out what not to do.

We learned, for instance, that a celebrity could lend authority to a mass-media campaign, but it had to be the right person. The comedian-actor chosen for the Alexandria launch manifestly was not. The rehearsal media for the campaign were radio, billboards, and personal appearances. These were manifestly insufficient. One radio program during the Alexandria rehearsal was called *The Clever Mother*. It bombed because its judgmental tone made poor women feel worse about themselves (“I’m not clever”). Then came a stroke of luck! With the *infitah*, the economic opening brought on by President Sadat, nearly 80 percent of households now had television sets. We revised our plan to use television. A USAID official opposed the idea, saying you could sell soap on television but you couldn’t teach mothers about ORT. He was wrong.

Given the mistakes, our strategic concept became one of “rolling design,” keeping one’s eye on the prize but not slavish adherence to a predetermined blueprint. In the common top-down

approach, blueprint plans fail to consider that planning is a continuous process that requires adaptation, one constantly in line with local realities. This is not a new observation, but it's critical to keep in mind as projects scale up and the variables become more numerous, complex, and harder to control. From the beginning, we also built in multiple and duplicate pathways to the same end, whether in research, evaluation, and training, or in production of the oral rehydration salts, ORS. It was what engineers call a "robust design."

Another strategy we used from the start was to create small but visible successes. Egypt had been a country where, we were warned, "nothing works." We never believed this self-defeating cynicism. But what was needed were demonstrations that things *could* work in order to build confidence and spirit. One example was nothing more complicated than a nice-looking, small, bimonthly magazine with feature stories, stories about the personalities involved in the project, photos, research results from professors, and even case reports from junior doctors. The magazine was circulated widely by the thousands to health centers, local health officials, medical schools, and hospitals. If we hadn't yet gone to scale, that is, to a national program, we sure looked the part. Later, articles accepted by international, peer-reviewed journals created—no, demonstrated—the same aura of success.

While in Alexandria we worked with the Director General of Health for the Governorate, Dr. Samia Riyad, who several years later would become JSI's final chief-of-party. Dr. Ahmed Samir Kassem was the eminent professor of pediatrics at Alexandria University's El Shatby Hospital, who pioneered the rehydration clinic model that came into use in nearly all the Egyptian university hospitals. We built on his and others' successes, publicizing them in the magazine.

A side story about Dr. Samir Kassem, who became a good friend during and after my years in Egypt: In 1990 I was given a Charles A. Dana Award for my work in oral rehydration therapy. In 1991, on one of my return visits to the NCDDP, I went by El Shatby Hospital and showed Dr. Samir my award certificate. His face fell, even as he mumbled a congratulation, and I knew I had blundered. Here was an Egyptian pediatrician daring to introduce ORT when other professors were dubious or even hostile to the practice. And here was I, an American, showing off my award when he had taken even greater risks to his reputation. Later that day I went to his clinic to apologize, saying I came to speak from my heart about that moment. He replied, with a grace I would die for, "This is always your home, we have done this together, your award is like an award for all of us. I am truly glad you spoke from your heart." We became heart mates.

Part of our ongoing luck in this project was hiring Farag Elkamel. He had just returned from the University of Chicago, an expert in social marketing (advertising used for the social good). Over the following decade, he produced some six dozen television spots, many using an actress who often played motherly or good neighbor roles in movies. Karima el Mukhtar performed for the campaign without pay in a series of minidramas. Here she advised a distraught mother (and father!) coming to her with a sick child on how to prepare ORS safely and administer the fluid, then on how to recognize signs of dehydration that required immediate attention (cut to shots of real children in a rehydration clinic), emphasizing that ORT could *prevent* these signs. She also discussed continuing feeding the child and washing hands before preparing food. Farag dared to use ordinary, everyday language, which met with initial objections from some television officials who claimed that only "proper," classical Arabic could be used on-air, which of course would not be understood by the very large audience we needed to reach. Advertising on television was also a new phenomenon, made acceptable when the soft drink Schweppes coined a jingle, *shwayya shwayya, Schweppes ha gayya*—wait, wait, Schweppes is coming—that had even long-faced parliamentarians repeating it as a political joke.

Contrary to the results of many other social marketing programs and to the "Knowledge Gap Hypothesis," the less-educated segments of the Egyptian population adopted the new innovation of ORS faster than more educated groups. After the first rounds of spots in the national campaign, over 90 percent of mothers knew about ORS, and actual use in cases of diarrhea rose to over 60 percent.

Recognizing dehydration required a new taxonomy. Dr. Lutfy came up with the word, *gafaf*, meaning drought. Images of withered crops made the connection between well-known events in farming and the seriously sick child. The term became so well known that when some school children were asked to compose an essay on drought, they referred to children's dehydration and its treatment. Mothers began to wonder if *gafaf* was a new disease. This was a useful mistake because ORT was a new treatment, and it was necessary to give the new treatment a name. After much focus-group work, the simplest name was (in Arabic), "the solution [to "solve"] for the treatment of *gafaf*." In English, the Egyptian pharmaceutical manufacturer chose *Rehydran*, because it had a proper medical ring to it. The logo that appeared on all advertising materials was reduced to the simplest elements, a mother in indoor clothing giving a child the solution by spoon. In surveys, the logo became the most recognized, ahead of soft drinks and others. ORS began to appear in nursing school curricula and on medical student exams.

We had a problem. WHO was pushing for the use of UNICEF's one-liter packet, a standard that came out of experience with cholera in adults whose daily stool losses amounted to liters. NCDDP designed a packet of ORS suitable for an eight-ounce cup, one-fifth of a liter, because research by NCDDP consultants had found mothers were familiar with cups and soft-drink bottles of this size, and not with any liter-size container; ever thrifty, they would dislike "wasting" the solution anyway by making up such a large portion. The matter was settled when, during the rehearsal, Dr. Lutfy went on television to demonstrate the use of the UNICEF packet. He had great trouble opening the aluminum foil and finally tore at it with his teeth. White powder spilled over his blue jacket. The controversy with WHO would come back to haunt us during a midterm evaluation. The project also produced thousands of eight-ounce plastic cups to be distributed for free at rehydration centers, and at a nominal price at pharmacies.

Of course, we had to contend with the keepers of Governorate warehouses who wouldn't release the Rehydran packets until the old UNICEF packets were used up, a several year's supply! From their point of view this was prudent management. A later sign that Egyptian production of the packets was adequate was Sudanese merchants buying up large numbers at retail to smuggle south at a markup.

Another obstacle was the insistence of some development experts that we should teach mothers how to make up the solution at home using ingredients from their kitchen shelves: a pinch of table salt, a palmful of sugar, and a squeeze of lemon for the potassium, all mixed into a liter of water. That method had been widely promoted in Bangladesh and seemed to work there. But in Egypt, NCDDP research showed too many mothers making dangerous errors, especially adding too little water; they were accustomed to small portions of medicines bought from local pharmacies. A prepared packet was safer and more attractive.


MIXTURE FOR
ORAL REHYDRATION SOLUTION
Rehydran – n
10 Sachets

One innovation introduced in the rehearsal stage of the project was the Depot Holder. In selected villages, mothers were asked who in their community they would go to in the middle of the night if a child was ill. The answers varied by village: a teacher, the mayor, a traditional healer. Then these people—Depot Holders—were shown how to administer ORT and when to refer the child to the local health unit. They were given a starter supply of cups, spoons, and packets. This was a win-win-win-win-win situation: Depot Holders could charge a small fee and could buy new supplies from the local pharmacy; doctors got referrals; the child got the fluid; and the mother saved time and was relieved of anxiety. At the end of the NCDDP, three thousand Depot Holders served in eight Governorates, but they couldn't be blended into the standardized ranks of the Ministry. Perhaps the system continues on its own.

There was a darker side. Once certain Egyptian officials realized a well-funded project was underway, attempts were made to muscle in on it. A First Undersecretary wanted Lutfy's job and arranged to transfer him to be Director General of Health in Lutfy's home Governorate. My friend was conflicted: the project was his baby but he also wanted his sons to be proud of having a father at such a high rank. "It gives prestige even to my sons," Lutfy explained. Who would succeed him? Once again, our patron and guardian angel, Mamdouh Gabr, worked the behind-the-scenes politics to have a replacement appointed who was committed to the work. We were able to gain adherents by judicious use of subcontracts for training and research both to public and private sector agencies. About a dozen research papers were published, most with Egyptians as senior authors.

A key paper had as its senior author Professor Ibrahim Fayad, eminent pediatrician at Cairo University's Abu el Reesh Children's Hospital—he worried one summer that ORT was the cause of hypernatremia in children arriving at the hospital. NCDDP sponsored a study of its incidence and cofactors. Summertime, feeding of cow's-milk formula, and sugary soft drinks were the main related factors. With proper use of ORS, the incidence of hypernatremia dropped, and Professor Fayad was convinced to introduce ORT on the wards. He became senior author of the paper published in *The Lancet*, February 1992.

Setting up ideal ORT units at Ain Shams and Al Azhar University Hospitals was made possible by the presence of knowledgeable professors open to new ideas: Sami Khalifa and Mahmoud el Moughi. At Ain Shams we saw one death a day before the unit was in operation, but no deaths in the first week out of 122 admissions, even though 75 percent came in seriously dehydrated;

only two needed intravenous fluids, and ten received ORS by nasogastric tubes to allay vomiting. Not long after the NCDDP finished as a special project, the Al Azhar unit saw very few dehydrated children, a result of the national use of ORT at home and in outpatient clinics.

I must speak of my young friend, a junior pediatrician named Ahmed Youssef Ezz Eldin. He was a country boy, unwelcomed into academic medicine, and ethical, hardworking, and intelligent. He found his way to the NCDDP, from where we seconded him to manage the Abu El Reesh rehydration unit, which became a brilliant success. A few years later, Ahmed Youssef moved to Saudi Arabia to practice pediatrics and earn a good income. Soon after his return to Egypt, his son was accepted to study medicine at London's Great Ormond Street Hospital for Children.

We had three foreign physicians helping us demonstrate ORT in university hospitals with training of junior physicians (and their professors, looking on) and nurses. Mathu Santosham, who reintroduced ORT to the White Mountain Apaches, came from Johns Hopkins. Mathu's nationality and gracious demeanor gained him instant respect. The same occurred with my Bengali colleague Abdul Majid Molla, later a professor at the Aga Khan University in Lahore. Mary Lou Clements from Johns Hopkins provided training at women's medical schools. All were fine teachers, all with quiet authority. (Mary Lou and her husband, AIDS expert Jonathan Mann, died tragically in the 1998 crash of Swissair 111, known as the "WHO Shuttle," on its way from New York to Geneva. I was on the same flight the next day.) Lutfy el Sayyad, Mamdouh Gabr, and Gamal Abdel Aziz have all passed on. Ibrahim Fayyad died when a rebar slipped off the truck in front of his car and crashed into his windshield, killing him instantly. Ahmed Youssef was struck down by sudden septicemia. *Allah yarham hum*, may they rest in peace.

Another obstacle was dealing with two bureaucracies, the Egyptian and the US governments. Frankly, the former was easier to work with, as there always seemed to be a work-around, while the rigidity built into USAID oversight threatened our work. My colleague Dr. Jerry Russell was brilliant at threading the needle, as was my successor as chief-of-party, Dr. Reginald Gipson. Reg is an imposing, blue-eyed African American, perfectly suited for Egypt in looks and temperament. He went on to manage several more JSI projects in maternal and child health and family planning. The USAID health officer was Dr. Bill Oldham, a urologist with a Johns Hopkins degree in public health. I had worked with him in Nepal and got to know well. We respected each other, and he was totally supportive.

Our greatest adversary, oddly enough, was the Diarrheal Control unit of WHO, headed by Michael Merson, who also had worked at the CRL following my time there. We had challenged the received wisdom of an international standard packet size for one liter of fluid, and our stance did not go down well. During a midterm evaluation, WHO brought on demographers to cast doubt on our early results of decreased mortality, even accusing one of our research consultants of fiddling the data. Around the table, it became WHO versus USAID. We survived the onslaught, and not long after the same demographers accepted the results, obtained in many different ways from national data and local demonstrations. In 1995, a long article was published in *Social Science and Medicine* summarizing the program and its results. [10]

The Egyptian infant mortality rate in 1985 was one hundred per thousand live births, forty from diarrhea alone. Ten years later, at the close of the NCDDP, infant mortality rate was fifty per thousand, with a reduction in diarrheal deaths leading the decline. Now it stands at just under twenty. In the meantime, successful projects have been carried out in national immunization of children and maternal mortality, among others. It is my belief that the success of the NCDDP gave courage and credence to the Ministry of Health to embark on other national programs.

In development we speak of “going to scale,” when a local, said-to-be successful program induces policy changes and resource allocation to permit substantial expansion. We should recognize two components of this concept: scaling as expansion in space, and sustainability as maintenance over time. They are both critical because at the end of the day we want to have impact, to have made a difference. The NCDDP showed how scaling up to a national program could be achieved. Was going to national scale sustained after the NCDDP closed up shop as a special, well-funded project? Only if one can answer yes” to each of the following questions about oral rehydration therapy today:

1. Are ORS packets manufactured locally?

2. Are ORS packets prescribed by doctors?

3. Are ORS packets sold by pharmacies and available at health centers and rehydration rooms?

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[10] P. Miller and N. Hirschhorn, “The Effect of a National Control of Diarrheal Diseases Program on Mortality: The Case of Egypt.” Volume 40, 1995.

4. Is some form of oral rehydration used, and used properly, by mothers in the majority of episodes?

5. And are deaths attributable to diarrhea declining, or at least not increasing from their initial declines?

From the most recent data I've seen, the answer is yes to all. They show the routinization of ORT. But it is a qualified yes. Over the past ten years there has been a decline in the use of ORS packets from about 40 percent of cases to about 30 percent (used mostly for serious diarrhea), at a time when other new MCH projects were coming on line and less specific attention paid to ORT. Needless prescription of antibiotics still goes on. Decades later it was proved that addition of the element zinc further reduced the volume and duration of diarrhea in children.

I paid many visits to the project over the years until its required end in 1990—checking in, kibitzing, and offering suggestions. A wise Egyptian sociologist said the project had succeeded when it was fresh and able to engage with many other programs and across disciplines and departments, sharing leadership roles. "Sustainability" and its bureaucratization weakened it. Committees and subcommittees, forms and more forms, rules and more rules, and more administrators than frontline workers. This happens everywhere, even in large corporations. Bureaucratization should be for accounting and payments only; creativity and freshness require reinvention.

But to be realistic about the sustainability of typical development projects: if donors and international agencies keep introducing new programs, whether for politics or fashion and however much needed, and the number of workers and local resources stay the same, something has to give. New big money diverts from existing efforts. The challenge is both geographic and temporal. We can scale up from a rehearsal or demonstration project to a national level especially if external resources are brought to bear. The external resources are used to shift paradigms and practices and get them embedded and continued, anticipating a time when there will be proportionately fewer resources and external, top-down support. It should not be surprising then that a project's earlier great successes are diminished, even slipping backwards. Consider the attempt to eradicate malaria with DDT in Sri Lanka. Once the disease seemed defeated, the program ended. A few years later the disease rebounded, affecting the new cohorts of susceptible children when the parasite was reintroduced. The pie

seldom gets bigger, or it gets bigger only to feed other needs. Consider the frustrated attempt to eradicate the poliovirus, a WHO-driven program, now twenty years past its goal and over one hundred times its proposed budget, mistakenly modelled on the experience of eradicating smallpox. The biology and epidemiology of the two illnesses are dramatically different, and polio was never as fierce an affliction as smallpox. We can only hope that the early intensity, indeed the passion, of a successful campaign will quite literally “shift the paradigm” and mature into a more settled and enduring, even if less thrilling, routine.

(Yes, I did once see a ward full of patients with smallpox. Shortly before its elimination from Bangladesh in the early 1970s, an epidemic struck Dhaka, and patients were sent to a quasi-hospital near the ICDDR,B. It was horrible. People were moaning or deathly quiet, the foul air full of infectious viral particles shed from their pustules. Many would not survive, others would be scarred for life. Though I’d had my inoculations against the disease, I hurried to get a booster.)

Another tiresome debate is about an over-reliance on technology and medicalization (i.e., ORT, vaccination, essential drugs, maternal and neonatal techniques of care, etc.) that ignores the social and economic determinants of disease, and governments’ failure to address the environmental hazards of modern life (dirty water, air pollution, poor housing and crowding, etc.). Indeed, medical interventions may make it easier for governments to ignore the social causes of disease and death. In the United States, for instance, medical attention to the opioid crisis is clearly necessary, but it is insufficient without addressing the social and economic underpinnings. The prevalence of smoking in the USA has been reduced from nearly half the population to fifteen percent or less by public health laws and public information (bans on smoking, taxation, and counter advertising) and only marginally by nicotine replacement with drugs and electronic cigarettes so vigorously promoted by the tobacco industry.

The failure to build sustainable and responsive health care systems was made worse in my own time by what is called neoliberal economic policy, driven by the World Bank and the International Monetary Fund and leading to austerity programs that beggared basic health structures.

Nepal and Egypt (and Kerala in India) demonstrate an exceptional moral lesson: a government that cares for its people will build the routine, nation-wide primary and community health structures by which technical and medical advances can be supported and routinized by its own

citizens. It is necessary to have governments not be suborned by corporations that damage the environment, or cause obesity with cheap, sugary processed foods. It's a struggle.

I have to acknowledge that in my work in Egypt I had to reconcile multiple loyalties. Above all, I wanted to show that ORT can be scaled up nation-wide, and therefore world-wide. Then, as a co-owner and employee, I was loyal to JSI. I wanted it to be seen as doing good, honest, and essential work; and yes, that it could parlay its good reputation into winning new contracts. I was also loyal to my Egyptian colleagues who worked hard in a politicized and unforgiving bureaucracy, and to USAID officials to the extent that we had to be aware of their pressures and requirements, and to be clear when we differed. Finally, I stayed true to my own ambition for personal success.

My life wasn't all work. Egypt is the land of the Nile, the temples at Aswan, Luxor, Dendera, the great pyramids at Giza, the riverside villages and pigeon roosts, Suez, the Alexandria of Cleopatra and the poet C. P. Cavafy, the town of Sharm el Sheik and the Red Sea (where we swam with sharks), medieval Islamic Cairo with its mosques and the Khan el Khalili emporium in whose Fishawi Café the Nobelist author Naguib Mahfouz would hold court, and street foods of *fuul* (stewed beans), *tamayya* (falafal) and that soul food, *koshary*. Thousands of years of civilization and culture before us.

A childhood memory, from about the time I was nine or ten: My father and I were in a New York City Horn and Hardart automat restaurant. A man came up to our table asking to use our salt cellar and I said, "No, we're using it." The man returned shortly with three salt cellars, muttering, "Selfish people." My father said nothing, but I remember that moment with chagrin even to this day. Decades later I sat at an open-air café in summery Alexandria, looking over the Mediterranean, and two parents with a toddler in arms came up to me and asked for water from my glass. I gave it to them, of course. The worst crime in the Middle East is depriving someone of water. I am so enraged that Israeli settlers on the West Bank have limpid blue swimming pools while neighboring Palestinians are denied permission to dig wells.

It is said that if one drinks from the Nile, a return to Egypt is guaranteed. Shortly before I left, I took a ride on a felucca, filled a small jar with Nile water, and drank.

X. JSI Enters the Major Leagues

In a reorganization of its programming, USAID issued multimillion-dollar contracts for worldwide technical assistance in health, from which USAID missions in individual countries could draw. In 1985, based on our success in Egypt, JSI was chosen for the Resources for Child Health (REACH) project that cobbled together work in immunization and healthcare financing (the latter ostensibly to help countries pay for national vaccination efforts). Suddenly JSI was a major player among agencies contracted to USAID. We established offices in Alexandria, Virginia, across the river from the nation's capital and adjacent to the USAID home office (all the better to supervise us). Our old rival MSH won the contract on diarrheal disease control.

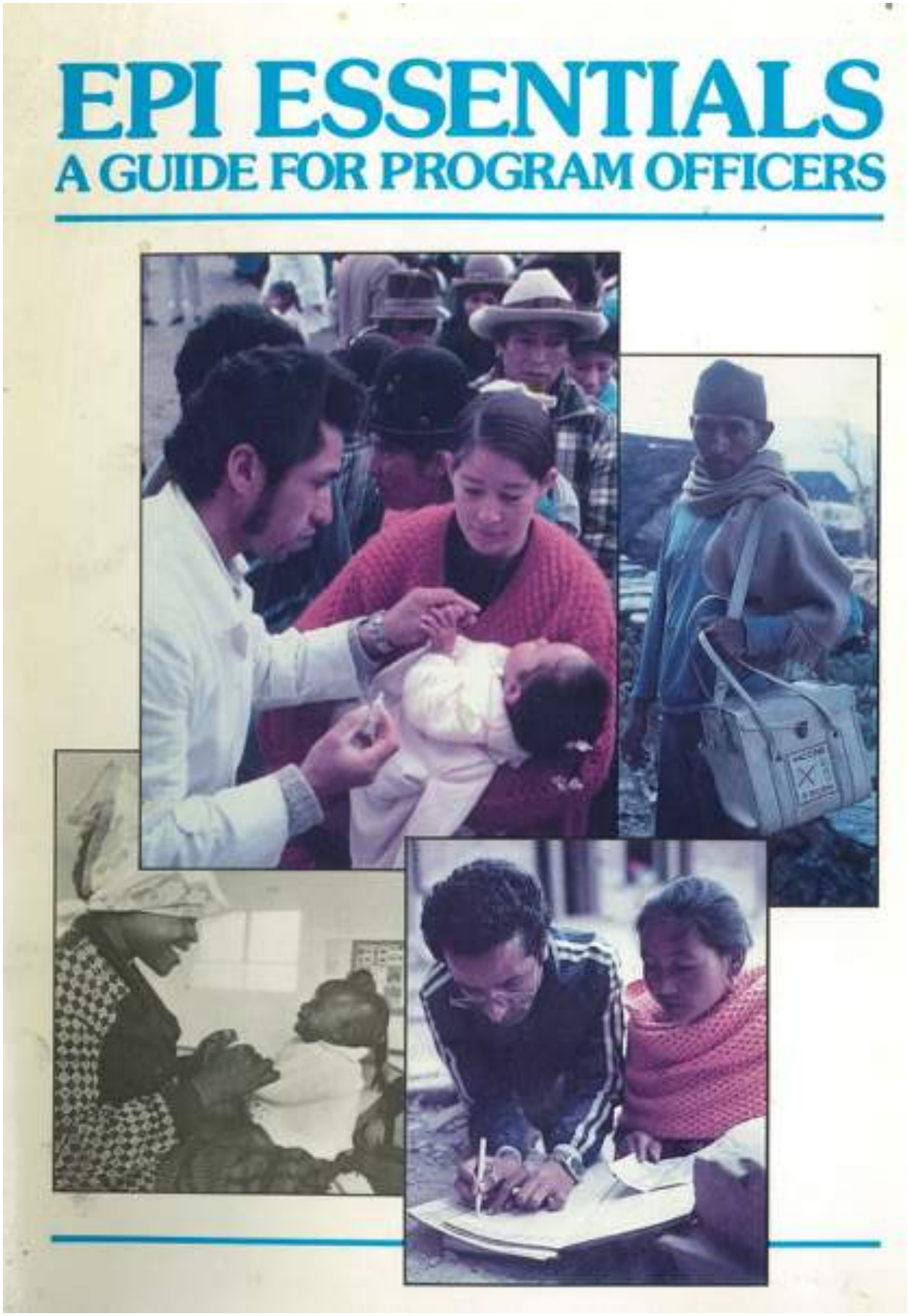
I moved to Washington, DC, even with my personal life in turmoil—separating from my wife and leaving her with two adolescent boys in difficulty.

I knew almost nothing about immunization programs (especially the WHO Expanded Program on Immunization, EPI), and less about health-care financing. My job foremost was to recruit good people and give them the means and direction to do good work. I had to be bold enough to ask obvious and sometimes stupid questions of the long-time experts. As one of the latter said on hearing about our award, "What the [bleep] does Hirschhorn know about immunization?" But that was catnip for me; the learning curve had to be steep for me to do well, to be happy. My best teacher was also my best hire at REACH: Robert Steinglass, the most field-experienced of us all and with a keen sense of social justice. He keeps teaching me even in our retirements.

As for the theory that the way to learn a subject thoroughly is to write a book, I helped do just that. Our USAID program officer tasked us to write a field manual for the EPI and showed us what MSH had produced on diarrhea. It was not good—a dull, unillustrated textbook with a thin, paper cover. One day, on checking out at a supermarket cashier, I noticed a spiral-bound, colorful rendering of the Bible, with real photographs from the Holy Land interspersed with floating paragraphs from the Old and New Testaments. I went back to my staff with a copy and said, "This is our manual." At first they thought me crazy, and we had to convince our USAID overseer, but we went ahead, commissioning photographs from the field, text and charts by experts, and an enthusiastic book designer who brought the manual to life. I love the photo of the beatific Nepali on the trail with his bag of vaccines marked "Rush." Over the years, *EPI Essentials. A Guide for Program Officers*" has gone through several editions, including ones in Spanish and French and, it is said, even one in Korean. Fifteen years later it was thoroughly

updated and is now called *Immunization Essentials. A Practical Field Guide*. Both have reached tens of thousands of health workers.

EPI ESSENTIALS
A GUIDE FOR PROGRAM OFFICERS



The Nobelist Daniel Kahneman said, “Science is a conversation and you have to compete for the right to be heard. And the competition has its rules. And the rules, oddly enough, are that you are tested on formal theory.” [11] I was tested and passed.

I was blessed with a good team with a deputy director, Diane Hedgcock in particular, to manage the program, personnel, and me. Also, we had real experts in immunization: Robert Steinglass and Cindy Rawn (both of whom remain long-distance friends). But for the first time in my career I had to discipline or fire people: an economist prone to rages, a temperamental epidemiologist, and a subcontractor not up to the mark. It is one of the responsibilities of a good manager and leader, but a pity when it comes to that.

(Diane died a few years later from a brain tumor. I visited her at home as she lay in her hospital bed. She was astonished that the cancer had happened. She thought the cause might have been the years of second-hand smoke she was exposed to when she worked on family planning in Turkey. I kissed her forehead — goodbye.)

Through the project, I was privileged to travel to Vietnam with a USAID-sponsored team expert in family planning; and later, in 1991, to be on the first USAID-team visit to Cambodia since the overthrow of the Khmer Rouge. It was a wonder that we encountered no animosity in either country. In Vietnam we were a team assessing prospects for family planning in the country. We met with Nguyen Co Tach, Vietnam’s foreign minister (known in diplomatic circles as the Silver Fox), a pragmatist trying to wean his government from strict communist ideology. He spoke often with his eyes nearly closed, like a cat sunning. We wondered at our reception. He told us, “We understood how American families suffered missing relatives. If you suffer you can understand the suffering of others. You come here and see no hatred and animosity because you have contributed to ending the war and ending the suffering of our peoples.” A counterpart, when asked the same question said, “We’ve fought the Chinese for one thousand years, the French for one hundred years, you Americans for only ten years.” I’m not sure why the foreign minister thought we were an important delegation that would bring his message back to high

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[11] Michael Lewis, “The Undoing Project. The Friendship that Changed Our Minds.” W.W. Norton & Company, page 287.

authorities. We were small potatoes, but perhaps he wanted not to miss any chance to influence US policy makers.

Physical evidence of the wars was evident: in Vietnam, great, water-filled craters from US bombs were turned into fish ponds. Fifty-eight thousand Americans died in the war and many veterans still suffer post-traumatic stress, among other disabilities. Perhaps a million Vietnamese soldiers and civilians were killed, with many more injured, and monstrous disabilities were caused by Agent Orange as an agent of war. We saw deformed children at a pediatric hospital. In Cambodia, farmers came to an emergency room, even as we visited, with limbs torn apart by ubiquitous landmines. The Khmer Rouge was still active in rural areas, planting silver-dollar mines that would force the government to move whole villages to internment camps. Nonetheless, in Vietnam and Cambodia, I was impressed by youthful resilience and even joy. A team of epidemiologists in Hanoi was learning to use computers from outdated manuals, which they then rewrote.

In Cambodia, I was a leader for a team of three that prepared a lengthy report, “Critical Needs Assessment in Cambodia. The Humanitarian Issues.” It was well considered and well written. We understood that monies coming in from outside donors would have to be divided up between ex–Khmer Rouge fighters on the borders and Cambodians in Phnom Penh. We were told that the Khmer Rouge knew of our visit. I have no idea whether our report made any difference to the people, but even today human rights continue to be violated, violence against women is unabated, and high-level corruption is rampant. Many ex–Khmer Rouge still serve in the government.

I could barely suppress tears during the obligatory visit to the Tuol Sleng Museum of Genocide. The Khmer Rouge, like the Nazis and the Assad regime in Syria, meticulously documented the torture and murder of persons brought to the Tuol Sleng prison along with photographs of their victims on the eve of death. Whips, tongs, electric cables, wires, water boards, and other instruments were displayed, and heaps of skulls.

In every project I undertook in my career, I made an effort to publish research or observations or commentary. If you are part of a project, I believe its results should be published and taught. At JSI, publishing was and still is encouraged, making the company a much more rigorous organization compared to other firms.

The REACH project and its successors were hugely successful on a global scale, working in three dozen countries to raise immunization rates and mobilize in-country resources. REACH was part of the large, global effort that boosted immunization coverage by 1990 to over 70 percent. Our objectives were to lend technical assistance to worldwide programs for immunization of infants and pregnant women. Rates of completed immunizations had been as low as 5 percent in some nations, and the global target set by WHO and UNICEF was 80 percent by 1990. The drive to eradicate polio was just getting underway, and the principal strategy for rapid achievement of the targets was repeated, mass-immunization days. Our other objective was to provide thinking and analyses of how immunization and MCH services in general could be paid for when, as we used to say, “the donors went home.” The prevailing theory was to depend on user fees and government re-allocations to sustain the programs. As our economic analyses showed, getting poor countries and poor people to pay for essential services was untenable, particularly when it is the poorest of the poor who suffer the most illness. We pointed out that it was not possible for every country to go to scale without outside help. Given the concept of the global village, going to scale requires a continuing partnership between developed nations and the poorest nations to bring health to all. Microbes don’t honor national borders, so we should transcend them. The downside, of course, is creating dependency, made much worse by corrupt and unfeeling governments who prefer to spend their resources on the military and the security forces; everything but health and education.

I was once invited to an international nutrition conference in Haiti, a country well-known to international public health workers as a heartbreak nation, full of despoliation, cholera, earthquakes, malnutrition, and with terrible governance. But it is also a country whose origins were in the most successful slave revolt in history and whose people are incredibly artistic and resilient despite earthquakes and epidemics. The conference venue was at a five-star hotel, reached by van traveling through Port-au-Prince slums, and so on principle I refused to go. I was once invited to give a keynote address at a pediatric conference in Nepal. On the way in to the auditorium I noticed a rack of baby-formula displays and salesmen giving out free samples to the doctors. I told the organizers I absolutely would not give the talk until the exhibits were taken down. After some hurried negotiation, down they came (probably put back once I’d left). Both times, I acted from a sense of justice, and also a sense of theater.

It had occurred to me sometime before that I much preferred working away from the JSI office in Boston—far away, where I could be my own boss. (My father, forced to work for his brothers-in-

law, always said, “Never work for a boss.”) In truth, it was hard being second to an alpha male, Joel, who—in old-fashioned terms—kept a close eye on the work floor and the cash register. Anything requiring expenditure not covered by a grant or contract had to be approved by him, as it ate into the overhead, an accumulating fund necessary for hard times, of which there have been several. I still feel diffident in his presence, seeking his approval. But I recognize that JSI did good work while prospering. It was because of our partnership, where Joel supported me and I provided an intellectual heft that continued after I left. JSI was and continues to be a company with a culture of ethical conscience, “expertness by experience”, a place where young staff stay on and move into senior roles.

VIII. I Become My Own Boss

In 1990 I married Cynthia Myntti in London. I then became the trailing spouse, following her to her job with the Ford Foundation in Indonesia. I found my own employment, introduced by JSI’s sister organization, World Education, Inc., which had been working with the UN’s Food and Agricultural Organization’s (FAO) farmer training schools. The training was about eliminating the use of pesticides on rice and shallot crops. Pesticides were meant to control pests, but the FAO team found them also killing natural insect predators (spiders and others), making pest outbreaks worse by insect resistance, leading to even greater use of the chemicals, and poisoning the farmers themselves. The schools followed Paulo Freire’s philosophy and methods in *Pedagogy of the Oppressed*, to teach the rational agricultural method called Integrated Pest Management, which emphasized good crop husbandry with a minimal use of chemicals. The approach proved to result in no loss of crop yield. Joel arranged it that I was paid via overhead, reimbursing the FAO budget in local currency. I remember carrying wads of rupiahs to the American Express Bank to convert to dollars.

The work was headed by Russ Dilts, a man larger than life, a fan of professional boxing, married to an Indonesian woman with whom he adopted several orphan children. He had a passion for justice, defending the oppressed and the poor, and faith in education as a revolutionary tool; and he was loyal to those who shared his vision. His Indonesian colleagues emulated Russ, an especially brave act under a dangerously oppressive dictatorship.

Russ and his colleagues had already shown that farmers were using chemical pesticides under pressure from both the Western corporations producing the poisons and their local distributors. The scheme was a pyramid: the more the farmers bought from the motorcycle-riding field

salesmen, the more the latter earned on commission, kicking a portion back up the supervisory chain. It was my first understanding of the role commercial interests played in causing illness for profit. I would encounter this again in my later research on the tobacco industry. (Sadly, Russ was addicted to smoking, which would shorten his own life. Nicotine, not so coincidentally, is a pesticide.) The corporations exercised undue influence on the FAO headquarters in Rome. They argued that any illness was due to farmer carelessness, and said farmers should wear protective garb that look like the hazmat suits worn by health workers combatting Ebola. These of course were too costly and too debilitating to wear in tropical conditions. For the farmers, illness was an unavoidable cost of their livelihood.

Russ asked if I could help design a field research project to show that the pesticides were harmful to the farmers, beyond anecdotal evidence. Such a result would help convince the government and even the FAO that many of the pesticides should be banned from use. I asked, “What if the research shows no harm?” Russ, showing absolute integrity, said he would accept the result, and what’s more, would encourage publishing such a negative outcome. Russ made sure that the project had all the support needed, from the head office to the field offices, and he offered his best people.

Joko Moeliano, an Indonesian epidemiologist, and I worked out the protocols for direct observation of farmers while they sprayed their crops: how they mixed the multiple ingredients, how their clothing became soaked with the solutions, how they smoked at the same time, and took lunch in the field. Joko was a poet, an isolated intellectual in the mold of a Graham Greene character.

Our Indonesian associates, many themselves ex-farmers, documented every step farmers took in handling the potent pesticides, from mixing to spraying to cleaning up. They interviewed the farmers afterwards about signs and symptoms of physical ill effects (neurobehavioral, respiratory, and intestinal). The chemicals, unhappily, were stored in their homes, with much unguarded exposure to family members, including children.

Being a farmer is being your own boss: up at 4:30 a.m., pray, eat a quick breakfast, arrive in the field at dawn, work to nightfall, in bed by 8 p.m. But the kinds of pesticides and their prices are always determined at corporate headquarters. The situation is the same in other Asian nations, Latin America, Africa, and the United States.

As it turned out, the research proved definitively the harm caused by the pesticides, and the results were published in a prestigious journal of occupational health. The government of Indonesia soon banned the use of several of the most poisonous pesticides. I made a presentation of our findings to staff at FAO in hope action would be taken. The campaign against pesticide use continues, in the United States as well, against big corporate interests.

What I learned was the impact food, drinks, and chemical corporations make on people's health. They market and distribute the way the international tobacco industry operates. They obfuscate and deny that their products cause ill health. They use many of the same public relations and law firms as the tobacco industry to defend themselves, and when internal documents are made public their hypocrisy is revealed—a subject I took up at the Minnesota Department of Health when we returned home.

Indonesia outside the dreadfully polluted capital Jakarta (with its cars and motorcycles spewing exhaust in traffic jams and its residents burning trash) is a stunningly beautiful country: dialects of green, rice fields on terraces, dramatic mountains and active volcanoes, and the sea and thousands of islands on the spread-out archipelago. We worked hard, but took our pleasures staying in countryside bed-and-breakfast *loesmans,* with other respites in Bali and Singapore. The Javanese people we met and knew had a grace and quietude; my ebullient nature must have seemed discomfiting to them. They practiced *halus,* refined behavior. Any behavior disturbing an interaction was *krass,* denoting crudity, vulgarity. The Indonesians' stiff formality was as much a part of the oppressive societal environment as an internalization of character. Dilts would lead his team in cheers (in Indonesian): "I will win! Why? I'll tell you. Because. I have knowledge, courage, enthusiasm. I cannot lose!" How liberating.

But oh, Jakarta. Like all megacities in southern countries, one had to get used to the fancy shopping malls backing onto the open canals bubbling black sewage; acrid smells of burning garbage; trash-pile gleaners; and cardboard hovels in view of McMansions.

In Indonesia I began a long-distance learning program leading to a Master of Fine Arts in poetry. Enthusiastic as ever, I looked out for Indonesian poets and invited a number of them to our house for a poetry salon. They all graciously accepted the invitation. None came. Only a bit later did I realize that a police post was located across the street from our compound. Under the brutal regime of President Sukarno, the poets would have been identified, arrested, and probably tortured. They had four strikes against them: they were poets, they were mostly

Chinese, some were gay, and they were visiting a foreigner who was himself surely under regular surveillance. I learned some years after that our landlord was a government contact with the CIA. He had supplied the names of labor activists who were among the million-plus murdered in the 1965–66 mass killings of communists, leftists and ethnic minorities. Indonesian poets, actors, and artists bravely rang the banner for freedom. An adaptation of *One Flew Over the Cuckoo's Nest* became a devastating critique of the regime.

We appreciated our time in Indonesia, a culture so different from the Middle East where we feel so much at ease. In the end, however, we were glad to leave.

IX. I Become an Academic After All

In 1993 we moved to Minnesota, Cynthia's home state, where her parents and other relatives lived. It was a coming-home for her, and I the naturalized citizen. She got a post at the University of Minnesota's Hubert Humphrey School of Public Policy to work on women's issues. I was recruited by the new dean, Stephen Joseph, to create an international health program. (Joseph, a former commissioner of health of New York City, had been a USAID health officer whom I knew from when JSI began to work internationally.) I was to be appointed visiting professor, but first had to gain approval by the faculty, which I did with a scientific presentation to the faculty of my Indonesian research, ending with the caveat, "The limitations of this study are . . .", which passed muster. Another, informal, test came when the true-blue Minnesotan associate dean asked me what I thought of the university president's intention to "increase the quality" of students admitted. I replied in Minnesotan dialect, "Rural people sure wouldn't like that." Bingo.

My salary was covered by Joel, again generous, by contract with the university reimbursing JSI. I created two courses and I taught well, but I discovered the kind of nasty politics rife in academe. Here's a joke: "Why are academic politics so vicious? Because so little is at stake." I was assigned to the Health Policy Division, and I got my first taste of the toxic environment when its director asked me to report to him about (i.e., inform on) my colleagues. After two years, Joseph left to join the Clinton administration as a US undersecretary of health, making the deanship vacant. Here I made a mistake when encouraged by a good colleague to apply for the post. In my fantasy, I imagined myself as a firm but kind and beloved leader. Fat chance,

I never even got to the interview stage. My fault was not understanding that as a *visiting* professor I should have had no stake in academic politics, nor be part of any team or initiative. When I raised a question about a program in progress I was told, “The train was already moving when you got on.” Given my reputation, what I said was taken seriously and thus was threatening.

In truth, I would have been terrible in the job. Another colleague observed that I was “too nice” to be a dean. The new appointee was someone with little imagination, becoming known pejoratively as the Director of Administration. The school’s locus of power lay with the Epidemiology Division and its alpha-male leader. In any case, the new dean had no interest in international health, and she asked me to wind up my work.

It reminded me of the time I was being recruited by smallpox-eradication hero D. A. Henderson of Johns Hopkins to head the ICDDR,B. Some years back I would have sinned for the chance. Now I realize it would have been a bad fit, trying too hard to be a good guy and getting sucked into the blood sport of Bengali politics. That happened to two of my dear colleagues who did take the job, one after the other. Years later I served on a USAID team to recommend the directions the institute should take, a better fit for my experience and analytic abilities.

I taught my courses in my own style, incorporating some film, some drama, and lots of participation. In the beginning some students worried how I would grade them on their case studies. “One page or five?” they would ask. “Double space or single?” I said, “Hey, this is graduate school, you’ll all get As, just come and be prepared to lead coherent discussions. Yes, work in groups, this is how it’s done in real life. On questions I pose, you teach me.” My hope in teaching was to find the one or two outstanding students and speak out to them.

I had one such student, Cecile (“Cecie”) Goetz. She was curious, lively, and devoted to social justice in world affairs. I became her mentor even after I left the school. After Cecie obtained her master’s degree in public health, she joined an NGO, the Minnesota International Health Volunteers, on whose board I served, to do village surveys in Uganda. She was brutally murdered in Kampala by a serial killer. What a waste of a good life.

I’d seen Cecie blossom into a confident professional woman, thoughtful, generous to others, good-humored. She carried herself with grace and dignity. She always understood things at their core. She knew what was authentic: in people, in places, in science, in situations—a rare

gift. She had not gone overseas on a lark, or merely for adventure. It was the good and necessary work with good people that drew her to public health, and over to Africa. We all understand the risks in leaving the ease and familiarity of our own communities, and we take all the necessary precautions; Cecie did no less. But I can tell you that had Cecie heard about a tragedy like this one, she would have stayed with the work, she would have returned to Africa. I know this to be true because at one time she came down with a serious illness while there, and she did return. It was good and necessary work, and that came first.

I realize now that I've probably influenced other young people whom I came across in various projects. How necessary that is. The good we do comes long after, to us mostly unknown.

Despite difficulties, Minnesota was now home. We were embedded, making friends in the arts and public-health communities, visiting Cynthia's family, and welcoming my children's visits. We made excursions to the fabled Boundary Waters, explored the source of the Mississippi River (a creek running out of Lake Itasca that one could walk across), many small towns, and neighboring Wisconsin. We went cross-country skiing and rode our bikes around Minneapolis lakes. We liked the winters—the sky often a bright blue, with a crispness in the air that stimulated the senses. We learned to "speak Minnesotan." If you got a bit too boastful, the reply might be, "Well, that sure is different." I had to learn to dial it back; yet I was always known as someone coming from "back East," vaguely New York. I'd lived in so many foreign cultures that it was a bit of a shock to realize I was in another, even though the natives spoke a passable English and were nice and made eye contact. Never did I feel less at home in a place where I felt more at home.

I also learned about Minnesota's traditional foods: the "Hotdish" is a casserole made from potatoes or pasta, a meat or tuna fish, and canned vegetables and canned soup (usually cream of mushroom)—the ultimate comfort food. The frugal casserole is a constant feature of church suppers, and continues to warm families during the dreadfully cold winters. Jello salad originated at the start of the twentieth century. During the Great Depression, to make one showed you had a refrigerator. The salad is made with flavored gelatin into which are embedded fruit, grated carrots or other vegetables, and other ingredients such as cottage cheese or cream cheese, marshmallows, nuts, or pretzels. Minnesota's comfort desserts include all kinds of fruit pies, strawberry rhubarb my favorite, and "bars," which are more than cookies but less than cakes, cut into squares. Garrison Keillor's radio program Prairie Home

Companion entertained and educated us in Minnesotan ways and culture—a bit “white bread,” of course. And Bob Dylan and Prince, of course.

One of our good friends was the eminent historian, Paul Nagel, and his wife, Joanne. Paul was a great conversationalist and an author of several books about the Massachusetts Adams family. Paul introduced me to the editor of the *St. Paul Pioneer Press*, and I began to write a series of columns under the rubric, “A Voyageur,” the appellation given to the early French traders who established communities in the Minnesota territory. Thirty-six essays covered a wide range of topics (see www.bertzpoet.com) and ran from 2006 to 2014, that is, well after we had left Minnesota. I’m proud of them; they honed my writing. I was even paid, $100 a shot.

X. I Become a Bureaucrat After All

In 1995, with my crashing out of the University of Minnesota School of Public Health, I needed to find a new job. I was offered a half-time position, at what I’d consider full-time pay, to head up a quality-assurance coordinating company that sold its services to hospitals. Ah, I could have written poetry the other half of the time. But I always thought of my learning curve—where would I learn the most in public health? Luck came my way again when I heard from a tuned-in colleague that the director of the Division of Family Health at the Minnesota Department of Health (MDH) was leaving her post.

One of the grand old persons of public health was Alex Langmuir, founder of the CDC’s elite epidemiology corps, the Epidemic Intelligence Service (EIS), members of whom were dispatched as a rapid response to outbreaks of disease. For instance, when a few days after 9/11 a disaffected scientist mailed out packets of anthrax spores to politicians and journalists, an EIS team was sent to Washington, DC, to investigate. As it turned out, some of CDC’s leading epidemiologists at the time came from the Arab world, many graduates of the American University of Beirut. They led the anthrax investigation and, noting the irony, referred to themselves as the A-Team. Only in America.

Alex taught me that you are never good at public health until you climb into the dirt pile (he used a more colorful epithet) of government. And so, I applied for the MDH position. The interviews and my talk to the division’s staff went well. I told the search committee that if they wanted visionary leadership, creativity, a scientific perspective, and wide experience, I was their person. It was a “slam dunk,” an associate commissioner told me later. I became responsible for a staff

of nearly two hundred people working on a great range of topics, among others: maternal and child health, family planning, children with special needs, cancer, violence, nutrition and breast-feeding (the Federal WIC—Women, Infants and Children—program), and tobacco control. The latter would educate me about a topic I later became expert in. My learning curve tilted sharply upwards.

By joining a public agency, however, I was required to resign from JSI and sell my shares. In truth, I had run out of projects that I would do with JSI.

Looking back at my career, I was lucky to have joined JSI, an ethical and idealistic organization, run like a good ship with Captain Joel at the helm. I was lucky that I could in essence be my own boss in the various projects I undertook. I was lucky that at each juncture of my career, when something came to an end, another opportunity arose, renewing me, and each time letting me learn something new and reinvent myself. Socialist in spirit, like my father, I would never have joined a big corporation. I found the strictures and department silos of academe too unintellectual, too fraught with petty conflicts to want to make a life of it. Now it was time to try my hand as a civil servant.

When I joined MDH there were perhaps three persons of color out of one hundred eighty in my division. While Minnesota had been one of the least diverse states, it now had an increasing number of African Americans, Hispanics and the newer refugee populations from Southeast Asia and East Africa (and of course its original communities of American Indians). I insisted that there be more diversity in our new hires. When I left three years later, we had eighteen. Since this wasn't an explicit MDH policy, I was a bit out on a limb. My management style was to walk around daily, checking in on what people were doing, what support they needed, and letting them know I was both curious and interested. Sometimes my brainstorming was taken as a directive, and this confused people until they got used to me. People in the WIC program were especially hostile, even after mediation. Early on, I had to fire an employee in another section for cause, but their response was, "Who next?" I think also a class element intruded: I was one of only three physicians in the department. When a thorny problem came up for me to solve, one of the WIC team said, rudely, "That's why we pay you big bucks, doc." ($100,000, perhaps twice as much as a senior worker might get.) Not letting go of my entrepreneurial self, I helped bring in new grants from a variety of sources until the division had the largest budget of MDH.

This did not go unnoticed. My friend and mentor, Paul Nagel, advised this morning prayer: “Give us daily a measure of prudence—if not shrewdness.”

I was pleased to recruit a proud African American woman Atum Azzahir, who still leads the Cultural Wellness Center, to advise on how nurturance of one’s culture can lead to healing and health. Much evidence shows that people who are disrespected and persecuted have more illness and lead shorter lives. Under a proper contract, we designated her as a “fellow” of MDH, which gave her credibility. Atum spoke to my staff in group conversations, leaving them spellbound. She emphasized that bureaucrats and activists were all part of the same mission to improve health and work for social justice, and that we shouldn’t regard one another as enemies from whom you cannot learn.

I had a friendly but complicated relationship with Atum. I took part in her center’s activities. We visited each other’s homes; but she admitted to having mixed feelings in becoming close to white people. At a noisy Thai restaurant, she let out her resentment at this do-good white liberal who had more than once compared Jewish experience in the Shoah to that of African Americans in slavery. It was a terrible moment. But after I was fired and ready to leave Minnesota, she called to explain, and did so graciously. She had been trying to work out a relationship with a white person. “We are a wounded people,” she said. But what this meant, I realize now, is, you shouldn’t be trying to cure us, to prove one’s bona fides, that kind of racism. I was once punched by a young African American man *because* I’d shown I was afraid of him, thus disrespecting him. Another kind of racism.

I was greatly supported in my work and leadership by a wonderful deputy, Pati Maier, who knew the ins and outs of the bureaucracy and how to work with and through them. She was a sensible intermediary whenever I ran into difficulties. Her mantra was always to try to solve two problems with one solution.

In my job I enjoyed visiting many clinics and social services throughout the state that our division worked with and funded, including Indian reservations in Bemidji, Red Lake, Cass Lake, and Leech Lake. There, diabetes (and all its complications), alcoholism, despair, and suicide were rampant. Reservations are where bright, Native American children suddenly grow dull in the fourth grade. Of eighth-graders, only 8 percent passed state exams in math, and 13 percent in reading. I was told by an elder that if we focus on bad habits, diabetes, and self-abuse, disrespecting traditional medicine and ways of coping, we only add to their misery and loss of

self-worth. I realized that what this means for us in the so-called helping professions is not to do less but to be less pressured; not to focus on targets of health but on moments of opportunity. Let the person with the illness begin to own the problem and consider a solution, e.g., foot care in cases of diabetes to lessen the risk of amputation. Take the time.

I would have to commit a lifetime to carry forward such ideals. But my life in public health was more like dropping in from another planet, staying a while, and then going off elsewhere. I think this is part of being Jewish, and a refugee from the Nazis to boot. The story goes that Jews are better as violinists than pianists because you can carry a fiddle when you flee the pogrom.

Towns in rural Minnesota were becoming depopulated, leaving the elderly behind. Think of those black-and-white photographs of grain silos, empty streets with a dog lying in the roadway, a saloon, a lawyer's office, a closed-up cinema. Obviously, new immigrants were (are) needed to bring life back to the small towns that lost jobs in farming, mining and small industries. I enjoyed the privilege of attending hearings in the Minnesota legislature, on call to testify about a particular issue from my division. I enjoyed the heady feeling of being invited to lunch at the governor's mansion—picture gold-rimmed cups, silver plate, oriental carpets, and chandeliers. The governor's wife, a children's court judge, was exceedingly interested in fetal alcohol syndrome, the disease more commonly found in Native American children. I provided her with much information that my staff had prepared. That proved my undoing.

The governor's wife held the view that alcoholic women who were pregnant should be put in protective custody (i.e., jail), a notion abhorrent to the humane, public-health approach of education and community engagement, and unlikely to ever work. My staff felt strongly about this. The governor's wife wanted to tell my expert staff how to orient their work, and sent her staff assistant over with the message. I objected strenuously to her interference, wanting also to protect my staff's integrity, and told the assistant not to come back. The governor's wife told the governor, who told my commissioner, "Get rid of that doctor," or words to that effect.

That wasn't the only difficulty I'd got myself into. Our division had an active tobacco control unit, supportive of the attorney general's lawsuit against the tobacco industry. The trouble was, the AG was a Democrat, son of the legendary Hubert Humphrey, and ready to run against the Republican governor who strongly opposed the lawsuit. Not only that, our commissioner was asked to testify before the US Senate Commerce Committee, speaking against Senator John McCain's pending tobacco control bill. Given how my staff and our colleagues in the Smokefree

2000 Coalition felt, I spoke out publicly on the necessity of tobacco control. (One time, to convince the governor's staff of the evils of tobacco, I brought lung specimens borrowed from the University of Minnesota Medical School's pathology department, ones riddled with cancer or emphysema. I showed them in the Capitol rotunda and his staff was impressed.)

Firing me would be difficult, as my personnel reviews, even one a few months earlier by my immediate supervisor, the deputy commissioner, showed me to be an exemplary employee and leader. The commissioner simply rewrote the review. She had "lost confidence" in me, which was her prerogative.

She first tried to assign me to a make-work job in another division, whose supporting funds I suspected might disappear shortly thereafter. Anyway, it wasn't the job I'd signed up for. I refused the offer after great worry and hesitation (and consulting an attorney), but it was only after I went to an exhibition of Gordon Parks' photographs of the black civil rights movement—showing the risks people took, the injuries they sustained, and the honor and dignity they achieved—that I knew what to do. I chose to be fired for insubordination, a small-potato event by comparison. I took being fired that way as a badge of honor in public health, but it took a couple of years to get over the hurt and disappointment.

Even before that dustup, I'd been crosswise with the commissioner before, when I jocularly greeted her with "Hi, Commissioner." She didn't do jocular. She stiffened visibly, and I knew I was in trouble. At my last meeting of division chiefs, my firing now an open event, I calmly read out a pointed statement:

> Although we like to think of public health as nonpartisan and science-based, we know realistically that politics often intrudes, recently and painfully around tobacco and fetal alcohol syndrome. How do we then protect the integrity and morale of our professional staff when politics seem to override? We need to discuss this recurrent problem openly and honestly.

And I added:

> On a personal note, my two-and-a-half years at MDH have been a crowning to a wonderful career in public health. I've been privileged to work on some of the most important issues of our time, with thoughtful and skilled colleagues, and appreciate the

> courage many have showed in carrying out their mission. I have no regrets; these are the memories that will prevail, these are the memories that count.[12]

A sweet reprise came some months later, just after a new governor entered office. I met with the newly appointed commissioner of health. I had prepared a briefing paper and essential documents describing the work of our division, and told her what had happened. She replied in a follow-up email, “I hope you are proud of your old colleagues getting things moving again—I know I am. You remain a great source of support and encouragement to many of us.”

As Alex Langmuir would have predicted, I now understood what “public health” really means. Politics do matter in public health, sometimes even when overriding the evidence. The nineteenth-century physician, Rudolph Virchow, founder of social medicine, famously said, “Medicine is a social science, and politics nothing but medicine on a large scale."

For instance, at MDH, I encountered the right-wing perspective on public health: stick to infectious-disease outbreaks; sex education and teen pregnancy are family affairs; programs on injury and violence are forms of government interference (gun control, especially); and heart disease, diabetes, diet, and cancer are best left to the medical profession. Tobacco control is *control*, an anathema. I met a number of Minnesota citizens in my office, urging me to listen to such concerns. To work in public health is necessarily to keep saying, “Do this, don’t do that, you’d better not”—which conservatives disparage as scolding from a “nanny” state. It’s like that comic scene in *The Life of Brian* when John Cleese, a Hebrew insurrectionist, asks bitingly, “What have the Romans ever done for us?” and his followers suggest straight roads, water from an aqueduct, peace, etc. “Oh,” he says, “except for that . . .” Similarly, many ask, “What has public health ever done for us?” The answer: vaccinations, clean water and sanitation, removal of lead from paint and gasoline, fluoridation of water, regulations for clean air and seat belts, education and promotion of healthy life styles, taxes on tobacco and sugary soft drinks, rapid detection and response to epidemics, campaigns against toxic chemicals in manufactured goods, warnings about the effects of the climate crisis, study of gun violence, and promoting equity in health care. Stacked against public health are the large corporations and that libertarian orneriness against government, abetted by self-promoting charlatans—the anti-

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[12] E. Emerson, “Public Health is People: A History of the Minnesota Department of Health from 1949 to 1999,” chapter 12, https://www.health.state.mn.us/about/history/index.html

vaxxer movement is a prime example. (At this time of writing, the emasculation of public health by budget cuts and anti-government policies have severely damaged the response to the Covid-19 pandemic.)

In the summer of 1998, after my firing, I made a desultory effort to organize a project funded by the university's urban extension program; I even had business cards printed up stating "Community-University Partnership" (CUP). I paid myself from my redeemed state pension, accumulated over the three prior years. My heart wasn't in it, and I was even frustrated by the odd word-processing system used by the extension office. But a sudden turn of fortune came in late summer, when my wife was asked to fill in for a friend taking a six-month leave from the WHO Reproductive Health Program in Geneva. Our move to Geneva coincided with the release of secret, tobacco-industry documents.

XI. A Document Detective at WHO

During my tenure at MDH, the astonishingly bold lawsuit of the state of Minnesota against the tobacco industry had been taking place. Hubert "Skip" Humphrey III, son of the famous senator and vice-president Hubert Humphrey, led the effort. (As state director of the tobacco unit that was in my division, I was deposed by the attorney representing Philip Morris, an experience I'd prefer not to go through again.) Just as I left the MDH, the lawsuit was settled with six billion dollars paid to the state—a model for the rest of the country—and with the proviso that previously secret, industry documents were to be made public—ones describing "what the industry knew and when they knew it" about the dangers to health and addiction; about designing the cigarette for maximum nicotine delivery; about marketing to children; and other topics. The first tranches of documents were housed in a Minneapolis business-park warehouse, and soon after were digitized and put on line (fifteen million are now in the Truth Tobacco Industry Documents archive at the University of Southern California).

At the same time, the new director General of WHO, Gro Harlem Brundtland, made tobacco control a high priority, creating the Tobacco Free Initiative (TFI) whose goal was to organize an international treaty on tobacco control (which, as a UN agency, WHO was empowered to do). I made myself available to the new TFI director, the South African physician Derek Yach, and was hired as a consultant to research the tobacco industry documents. What a remarkable confluence of events.

We had a lovely time in Geneva, staying six months. From our quirky, rented apartment on the open area called Plainpalais, we could take a brisk walk through the Old Town to reach a tram going up the Appian Way to the resplendent WHO headquarters. Cafeteria lunches there included fine wines. The paths around Lake Geneva, surrounded by grand, historical mansions, became our favorite places for walking and jogging. Weekend excursions to the mountains, elegant restaurants and cafés, and museums of art, all made even our work, hard work, seem like a prolonged vacation, providing much relief from the last, dreary year in Minnesota.

But I didn't want to make a career at WHO. A dear friend who almost stayed on wrote to say employment at WHO was too comfortable and not the right place for someone with energy, passion, ideas, and some smarts; that WHO squandered its privileged position too often at country level; that its uniform policies suppressed local initiatives; and that national, public-health persons and agencies too slavishly adhered to global and regional guidance, often as a matter of career self-interest. Finally, in order to support its expanding work, WHO has joined with wealthy foundations and international agencies in public-private partnerships. Perhaps WHO is too much influenced by its funding. Years ago, 80 percent of its budget came from annual contributions from nearly two hundred member states, and 20 percent was extra-budgetary; the ratio is now reversed. Gavi, the Gates Foundation-funded Vaccine Alliance (*Gavi* was formerly the abbreviation of Global Alliance for Vaccines and Immunizations), is a principal example. Much discussion has gone on about whether WHO should return to a more normative and leaner function (providing information, advice, and exhortation) as opposed to its current, over engaged role in donor-driven implementation such as polio eradication.

Some experts, veterans of the smallpox-eradication campaign, had promised that another, single-focused effort would eliminate the poliovirus altogether and rapidly. Thirty years on, polio cases still occur, albeit down from 350,000 worldwide in 1988 to a few hundred in just Afghanistan and Pakistan. In 1988 it was estimated the disease would be completely eradicated by the millennium at a cost of $150 million. By 2021, the cost has run up to $25 billion dollars, many times over budget and counting. The end is tantalizingly in sight, but, like chasing a will-o'-the-wisp, there are insurmountable obstacles to eradication:

- the chaos in war zones and poor health infrastructure
- deep suspicion by families about the multiple visits by vaccinators (reinforced when the CIA used such a person to identify Osama bin Laden's hideout)

- rumours that the vaccine was a Western plot to sterilize Muslims or, among African Catholics, contained contraceptives
- terror attacks on health workers generally, and vaccinators in particular
- reversion to virulence of the live oral vaccine

To combat the last event requires introducing an inactivated virus vaccine, invented in the 1950s by Jonas Salk, and given by injection, whose rollout and implementation will take years. Couldn't the money be better spent to build up vaccinations and other routine community health programs? The architects of polio eradication had indulged in excessive confidence, their hubris leading to nemesis. To mix metaphors, we are caught riding the tiger of the eradication mind-set, dictated by wealthy funding agencies.

(Jonas Salk [1914-1995] was born in New York City to Ashkenazi Jewish parents; became a physician and virology researcher at a time when polio was one of the most frightening of epidemics, striking down children and adults everywhere, including Franklin Delano Roosevelt. I well remember the 1954 pandemic of polio and the great anxiety it caused my parents.

Salk became my mother's hero; she taped his photograph to the refrigerator door. I met him once and told him so. He was an American health hero, but was distressed by the public adulation. He thought deeply about the human condition.[13])

Nevertheless, too many have groused about WHO, and I have no great purchase on the subject. But from what I could see in my brief association, WHO is the single United Nations institution leading the way on global health, both technically and intellectually, and should be supported and strengthened.

Derek Yach's career provides an interesting comparison to mine. He was always a charging, dynamic, powerful public health hero, beginning in South Africa where he was born, successfully challenging the academic and political establishment to make tobacco control a necessity even in the face of the industry's deep-pocketed political influence. An MPH degree from Johns Hopkins was followed by the position at WHO to move the organization and its 193

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[13] https://en.wikipedia.org/wiki/Jonas_Salk

member states to enact a binding treaty—the Framework Convention on Tobacco Control (FCTC)—confronting the scourge of smoking and the moneyed, influential industry behind it. He took a high political and personal risk. With the treaty in place, Yach was then put in charge of an initiative to engage with food and beverage industries to address the rising incidence of obesity and chronic disease. Here he encountered very stiff opposition from these very companies, necessarily concerned for their bottom line: "Is WHO coming for us next?" When WHO Director General Gro Harlem Brundtland didn't stand for a second, five-year term—her son had committed suicide and she felt great guilt for having put her work first, missing vital clues—Derek was relegated by her successor to a tiny office, no longer with a view of Lake Geneva. From a staff of 250, he now had one, and answered his own phone.

Derek was always a man who, in the words of the Greek mathematician Archimedes, needed a long enough lever and a fulcrum to place it on in order to move the earth. There were elements in personal life that mirrored mine: a sickly mother (his from smoking!), a Jewish desire to heal the world, great ambition, and arrogance. The difference was that in his own hard-charging way he broke rules, and his choices of "the long enough lever" were unlucky. From WHO to Yale to the Rockefeller Foundation to Pepsico, Yach failed to find his sweet spot until Philip Morris International offered him his own foundation, a ten-year eight hundred million dollar "Foundation for a Smoke-Free World." [14] FSFW has become Derek's hoped-for fulcrum, and he no longer works for a boss. But in so doing, he has become a pariah among tobacco control activists, even no longer welcome at WHO. Excommunication, which in Judaism is called a *kherem.* We've lost contact.

Tobacco control may provide an example of going to scale, sideways, based largely on work by local, nongovernmental organizations. Tobacco control essentially began in the United States in the late 1960s, spreading globally since. For the past two decades, I've been engaged in both local and international efforts at tobacco control. My research into the tobacco industry documents put me in close touch with NGOs all over the world who work locally and internationally for tobacco control. We are able to communicate with one another at light speed

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[14] Yach narrates his pilgrimage in "Project Unthinkable: A Doctor's Gamble to Save Millions of Lives." Toronto: Barlow Publishing, 2018.

through the Internet. We help each other with all kinds of information and data, share results of research and strategies to combat the local cigarette company's tricks, and "out" tobacco industry consultants posing as legitimate scientists. Local NGOs are now well armed to appeal to their journalists, legislators, and leaders. I've published a half-dozen papers based on what I found in the documents, and also a manual for WHO on how to research them. One achievement was praised by Director General Brundtland, responding to the International Advertising Association, that argued for the tobacco industry's freedom to advertise. A paper on the role of the German tobacco industry (abetted by US companies) to subvert tobacco control accompanied Brundtland to her meeting with German Chancellor Gerhard Schröder. I wrote a substantial monograph about when Philip Morris understood nicotine was addictive but withheld that fact from the public. Finally, I prepared an internal study on the infiltration of tobacco-industry–linked consultants onto WHO and FAO policy boards, which led to a tightening of WHO rules to guard against nefarious influences. Derek gave me the springboard for all this work.

The NGOs' finest moment came when organized as the Framework Convention Alliance — a coalition of many civil society and public health organizations from all over the world — to lobby their own countries to sign up with the FCTC. Without the NGOs' efforts, the tobacco industry would have succeeded in getting a toothless treaty. In fact, the tobacco companies are still working, country by country, to weaken required national legislation and policy. What is learned in one country to combat the industry's efforts is almost immediately transferred to another. Let's call this transfer of information and skills scaling up by reverberation. Instead of thinking of a local pilot program going to larger geographic scale, think of multiple clones, more and more points dotting a map until a critical mass of activity, a confluence of many small movements, creates the one that becomes global. Influencing politics, policies, and social perceptions—locally, nationally, and internationally—is how to go to scale.

What about the sustainability of this global effort? Tobacco-control activities by NGOs and dedicated unpaid individuals are bake-sale funded, so to speak, particularly outside the United States. In 2002 I helped prepare a lengthy report for the Rockefeller and Robert Wood Johnson Foundations on how international tobacco control could be funded, an idea that later found support from Michael Bloomberg and Bill Gates. Much as such support is necessary, being an NGO dependent mainly on one's own resources leads to a certain sustained freedom of action. I believe tobacco control will require another fifty-year effort beginning now; it will need sustained renewal of public health workers dedicated to this purpose and strong advocacy for

the cause at all levels of government and population. It is now threatened by the cunning of the tobacco industry in introducing electronic cigarettes, which ostensibly are not as poisonous as combustible tobacco but which initiate and sustain addiction in new cohorts of young people. Smoking prevalence has already been markedly reduced by government-led, population-based interventions of increased taxes on tobacco, bans on smoking in public places, counter advertising, graphic warnings, and plain packaging of cigarettes. Electronic cigarettes can provide only marginal gains for the minority of smokers who are unable to quit without them.

But now my career had come to an important turn. Instead of leading big projects and being thoroughly engaged with people, I turned inward to be a scholar at a desk, with the computer and the internet as my library portals, analyzing and discovering truths and events, weighing one piece of evidence against another, and making recommendations for change or action. I recognized the similarity of this activity to Talmudic studies, that in another life at another time I might have engaged in. Over the following decade, I produced a half-dozen commissioned papers on the tobacco industry documents; helped write proposals; and as an avocation wrote papers on illnesses of historic personages. Some of the work was paid for with small stipends, others I did pro bono. Despite the economic insecurity of not being fully employed, I liked this work. Perhaps this is what an elder should be doing, generating some wisdom without the handicap of being a cog or player inside an organization. Perhaps this is the aim of this memoir, written in my late life.

XII. From New Haven to Helsinki

Cynthia, at age 50, decided to study architecture. She had just published a best-selling photo monograph about Cairo (*Paris Along the Nile*, American University in Cairo Press, 1999). This was a good reinvention for her, given her design sense, and having done enough in anthropology and public health she was accepted into the three-year master's program at the Yale University School of Architecture. I taught a course on international health at the school of public health, but was increasingly drawn to poetry, auditing courses with world-class professors: Harold Bloom, John Hollander, and Paolo Valesio. I took the Metro North train to New York to attend poetry readings at the 92nd Street Y, or to study with Lucie Brock-Broido and Marjorie Welish. I was an original member of an alternative-poetry group, meeting weekly. Teaching public health began to pale. My learning curve had begun to flatten, which has not ever been the case with poetry. There, the more I know, the less I seem to know.

New Haven, midway between the academic and cultural paradises of New York and Boston, has a less-than-salubrious reputation, with the university carving out an expanding green zone against its neighborhood. Nevertheless, I enjoyed running through the campus and the wilds of East Rock Park, and especially up and down the lanes of the tree-lined Grove Street Cemetery that holds the graves of founding fathers and mothers, and Yale professors and presidents. The caretakers were an ancient, troll-like couple living on the grounds in a brick cottage. I stopped often to ask about the monuments and also the trees, many of which the old man had planted. When I told him on my last run that I was leaving New Haven, he said, “We’ll miss you. You’ve been an asset to the cemetery.”

After graduating in 2004, Cynthia was awarded a one-year postgraduate fellowship sponsored by the American-Scandinavian Foundation to study the design of social housing in Finland. Her grandparents had come to the United States from Finland in the 1920s, and cousins were still there. I’d had a love affair with Finland that began in childhood, when my favorite book was from one of those series about children in foreign countries, *Little Laurie of Finland*. And so, both of us were eager to go.

I loved being in Finland, with its dour people who open up with a little alcohol (the national dance is the Finnish tango!). Finland is a nation based on fairness and social justice, valuing both education and efficiency but with heart. The people are sweetly naïve and wickedly funny, mixing reserve, irony, and sentiment (see any film made by Aki Kaurismäki). Finns also like to speak of having *sisu,* which means toughness, resilience, and daring. A person with sisu will break open a great rock to see what’s inside. The Finns’ restive melancholy also speaks to me (think Sibelius, whose Second Symphony evokes freedom for me), as do the country’s open landscape, dark woods, and streams and rivers, as well as an architecture that is designed for human comfort and functionality (think Alvar Aalto). I could make Finland my bolt-hole from life. We made many friends there whom we visit regularly.

At Helsinki Cathedral (the diocesan seat of Helsinki’s Lutheran church, built 1830–52) I achieved yet another fifteen minutes of fame when I discovered that the chiseled Hebrew lettering for God’s name (Yahweh) high up on its lintel contained a mistake! Instead of a yod י , a daled ד was the first letter. Some carver working from a script but not knowing Hebrew had made the error. Had no one ever spotted this before? At least I reported it to the bishop (through my friend Heikki Hiilamo, a journalist who worked in the Lutheran Evangelical Services), and in

turn it got widely reported in a morning newspaper and in the Church and Town magazine of the Lutheran church, seen by over three hundred thousand families. My name was in bold, the story was in Finnish. It was another instance of my “afflictive disease” for setting things right.

The Finns were nominally allied to Germany in WWII because they had a common enemy, Russia. Unlike those of other European nations, the Finnish government refused to hand over any of its eight thousand Jewish citizens for annihilation, even when Heinrich Himmler made a personal visit to demand it. How could I not love the country? Finland came out of two brutal wars with its neighbor Russia during World War II (winning the first) and had to rebuild itself even while paying reparations. It created a society where free education, free health care, and a strong sense of social justice have brought it to the top rank of happiness and well-being.

Finland set the example for community-based health improvement with the North Karelia Project. In the 1960s, citizens there were alarmed by the high mortality rate from cardiovascular disease (the highest in the world), striking young men in particular, and petitioned the government to intervene. A comprehensive program was begun for the whole population to reduce fat and salt intake, lower blood pressure, and reduce smoking. The project engaged ordinary citizens, nurses, teachers, social workers, and food manufacturers. Major declines in blood cholesterol, blood pressure, and smoking resulted, with about two-thirds of the resulting drop in mortality due to reductions in these risk factors. The benefits spread throughout Finland and beyond [15] Finland goes further in stressing preventive health care for children by providing free and nutritious lunches in schools, and facilities for cycling, swimming, and running. The government distinguishes between “health care” for the sick and “care-of-health” for the whole population.

I managed to support myself with commissions from WHO on tobacco industry document research. I also volunteered at the National Institute for Health and Welfare headed by Dr. Pekka Puska, who conducted the North Karelia Project. Heikki Hiilamo and I researched the private papers donated by a Finnish public-relations man whose work for Philip Morris bothered his conscience. A published paper resulted. As another result, Heikki went on to do a PhD

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[15] A good summary is by Erkki Vartiainen, “The North Karelia Project: Cardiovascular disease prevention in Finland,” Global Cardiology Science and Practice*, June, 30, 2018.*

based on industry documents under the supervision of Stanton Glantz at the University of California, San Francisco, where all the documents are stored online. In this as in in other instances, I was like a bumblebee—a pollinator. The year ended too quickly.

XIII. I Shuttle Between Beirut and London

Where previously, due to circumstances, I had gone from country to country, project to project, each lasting three years or fewer, I would now become embedded in a place I came to love and regarded as another home with dear friends: Lebanon. After our sojourn in Finland, Cynthia was appointed professor at the American University of Beirut (AUB), Faculty of Health Sciences, working directly with the university president to create and direct the Neighborhood Initiative. Its mission is to engage with citizens and businesses, creating new bonds between the cloistered university (with its stone walls, barbed wire, and armed guards) and its wider neighborhood of Hamra in West Beirut. It is a challenge many great universities embedded within decaying surroundings have had to face. AUB had come out of a fifteen-year civil war whose scars are still visible in Hamra and elsewhere. The war came to AUB directly when one president was kidnapped and held hostage for a year and another assassinated; where a suicide car bomber blew up the iconic 1880s College Hall; and where Israeli tanks sat on campus. The program continues at this writing, well over a decade old now.[16] The Neighbourhood Initiative is AUB's way of engaging with its surroundings as a good citizen, mobilizing the university's resources for the public good. I became a visiting senior lecturer. Dean Huda Zurayk, in welcoming Cynthia to the faculty, described me as "the bonus." I was pleased.

I'd lived and worked in the Middle East for nearly two decades—now among Lebanese whose resilience and love of life continues despite the terrible wars inflicted on them, from outside and within. They understand how life is contingent: one never makes a definite statement of intent or prediction without adding, "Insha'Allah," God willing. I now never say, for instance, "I will be coming on Tuesday"; instead, I say "I expect to come," "I hope to come," or some similar circumlocution. Why tempt fate or attract the evil eye? Being Jewish in Lebanon posed a certain risk, and it became an unfolding surprise to many of my colleagues over the years who by then knew where my sentiments lay. Israel has invaded and bombed Lebanon for decades, causing

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[16] Its achievements may be seen at the website www.aub.edu.lb/Neighborhood/Pages/default.aspx.

thousands of death and casualties, and was responsible for abetting the massacres in the Palestinian refugee camps carried out by their Christian “allies” during the civil war.

I spent the following ten years shuttling back and forth from our flat in London, living two months in each place as I became more and more engaged with my poetry and poet friends in London, an opportunity less likely in Beirut.

About life in London: Samuel Johnson said it well. "Why, Sir, you find no man, at all intellectual, who is willing to leave London. No, Sir, when a man is tired of London, he is tired of life; for there is in London all that life can afford.” [17] London is a huge city made up of multiple smaller communities surrounding High Streets, tied together by the network of Underground lines, railways, and bus routes. It became a game to stand at the right place on an Underground platform to affect a quick transfer to another line. The city is replete with world-class music venues, museums, parklands, walks along the Thames, and restaurants ranging from the ritziest to the basic “caff” (even the latter now serve cappuccinos and paninis; the canard, “English food isn’t as bad as it tastes” is now mostly untrue).

I’ve not related the story of how England saved me. My parents and I had escaped Nazi Austria and found parlous haven in Italy. Then, because England needed domestic help, my parents were given visas to work for a British colonel. We lived in London all during the war, enduring the Blitz, air raid alarms, and shelters. I came as a one-year-old, and left for the United States at age seven, my formative years. Even today my accent is slightly mid-Atlantic.

However, once again, I was an outsider looking in. We recognized the inherent racism and class resentment in England that helped bring about Brexit and allowed shoddy construction of public housing— the cause of the Grenfell Tower disaster, a fire that destroyed a high-rise building housing mainly immigrants living in the richest borough of London. We witnessed the latent anti-Semitism of the Labour Party, and the deliberate destruction in 2010 by the Home Office of documents that proved the legitimate entry of Jamaicans who arrived—indeed, were invited—in the 1950s, many of whom are now being deported, even those born in the UK. We shared the

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[17] James Boswell. “Samuel Johnson*, The Life of Samuel Johnson LL.D.”Vol 3*.

dismay our dear friends felt, but we weren't part of it; we had enough troubles of our own back home.

Jingoists would call us Rootless Cosmopolitans (another anti-Semitic canard). The ex–Prime Minister Theresa May said that "to be a citizen of everywhere is to be a citizen of nowhere." Cynthia and I take pride in being "citizens of everywhere."

While in Beirut I helped AUB colleagues prepare research proposals; edited chapters of a book, *Public Health in the Arab World*, published by Cambridge University Press; circulated tobacco-related articles and news to a list I created; helped students organize a campaign to make AUB smoke-free (which it became in 2017); analyzed an NGO health program among Palestinian refugees (my visits to the camps at Shatila and Bourg el-Barajneh were a necessary education); and taught short courses on poetry and memoir writing at the Neighborhood Initiative's University for Seniors.

Lebanon was, and remains, a deeply conflicted place: a fifteen-year civil war that killed tens of thousands; rulership by Syria; invasions by Israel and a ministate controlled by the PLO; absorption of millions of refugees from Palestine, Iraq, and Syria; and rule by corrupt factions and a kleptocratic government that cannot, and will not, regularly provide basic services such as electricity, garbage disposal and water supply because contracts for these essential services are let to the friends and family of the various religious factions who rip off the system. The situation grew out of the end of the civil war, where each faction received its share of government and, with portfolios in the cabinet, gained the chance to pay off its followers with jobs and influence. Meanwhile, the gap between the rich and poor grows ever wider. At the time of this writing, the Ponzi-scheme banking system is collapsing and people are taking to the streets in protest. Lebanon's intelligent and civilized people deserve better. Members of the Lebanese diaspora return for visits for "food, family and friends," as we do, often. Even as guests in Lebanon we feel the same.

Lebanon's natural beauty lies in the mountains, snow-covered in winter, and on the Mediterranean Sea, whose waters cover thousands of Phoenician, Greek, and Roman ships and artefacts going back to the dawn of civilization. The alphabet I use to write this memoir originated here. My experience is best encapsulated by my poem:

LEBANON MON AMOUR

Because the man in his BMW stops at the crosswalk and waves,

Welcome, go ahead, I won't hit you

Because young people call me Uncle, *Ya Am*

Because of Civil War warlords and bullet-pocked buildings—still here

Because of two hundred thousand dead, twenty thousand missing

Because Abu Ali, over eighty-five, harvests trash in his ancient truck –

Where are my children?

Because of mezze, mouneh, tabouleh, mujaddara, mankoushe, kibbe, and arak

teslam edayk—bless your hands

Because the electric company's neon signs are out

Because friends worry if I look sad although they have more reason

Because the muezzin's first call echoes through my dreams –

come to prayer, come to salvation

Because soldiers on guard fiddle with smart phones

Because fierce-looking bearded men cuddle infants to their chests

Because a woman in veil and long coat walks beside a stunner in stilettos

Because loving Lebanon is like swimming in honey

Because each time I leave she won't leave me

After Lebanon, I withdrew almost completely from public health. After London, we returned home.

XIV. Ave Atque Vale

My career in public health has spanned six decades. When I began, it was known as tropical medicine, which grew out of Western missionaries bringing so-called enlightenment and modern

medical care to the “heathens” in Africa and Asia. We were then taught to refer to it as medicine in the tropics, which was to say, it was still about good medical care for illnesses, even in remote countries afflicted by exotic diseases that sometimes invaded our shores. It is no coincidence that great schools of public health are based in Western port cities: London, Liverpool, Boston, Baltimore, New York, and Amsterdam. Soon we called what we did geographic medicine, then, international health, and later, global health. More recently, acknowledging the interaction of climate, geography and human debasement, the term planet health has come into use.

In the 1960s, we contended mainly with infectious diseases, malnutrition in children, and deaths from pregnancy. A movement arose out of the missionary experience to create primary care that would deliver services such as maternal child health, family planning, vaccinations, and essential medicines at the community level. In 1978 a bold statement came out of the WHO-sponsored International Conference on Primary Health Care held in Alma-Ata, USSR (now Almaty, Kazakhstan). The “Declaration of Alma-Ata” defined public health to mean “health for all,” and asserted the importance of primary health care to achieve “a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity.” It called primary health care a “fundamental human right,” and stated “that the attainment of the highest possible level of health is a most important world-wide social goal.” [18] The Declaration led to WHO’s lofty ideal of “Health for All.” Sadly, primary care in villages and urban communities has always been a neglected orphan—underfunded, mismanaged, and with scant resources, and disrespected as dispensary medicine for the poor. Soon WHO itself, while still paying lip service to the Declaration, embarked on a series of targeted programs that came to be called, pejoratively, “vertical”, which address single issues such as vaccinations and family planning; in contrast to “horizontal” (community-based) programs. The former are delivered through repeated national rounds of mass visits to households, delivered by a separately trained cohort of workers and funded mostly from outside sources: hardly a way to strengthen community-based primary care, at least not one that cares and sticks around. Yet vertical programs have indeed cut infant, child, and maternal mortality by half in the years of my career. Birth rates have come down in nearly all countries, due both to better education of women and

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[18] https://en.wikipedia.org/wiki/Alma_Ata_Declaration

availability of contraception. The downside is the threat to existing programs in favor of any next big fashion, polio eradication being a prime example.

From the 1980s on, noncommunicable diseases came to dominate public health efforts, even in the tropics: obesity, diabetes, and heart and lung disease affecting mainly adults in middle age, even while malnutrition continues to afflict women and children. The causes are complex, but surely playing a role is commercial marketing of sugary beverages and highly processed foods that provide inexpensive calories in bulk to poor people. We may call it “commerciogenic malnutrition.” Artificial milks marketed to poor mothers contribute to infant malnutrition, which then, curiously, predisposes a child to obesity in adulthood. And then there’s smoking. The tobacco epidemic has lasted from WWI (“cigarettes for soldiers” are more important than bullets, said General Pershing) until now. Lung cancer was once so rare that surgical residents in teaching hospitals were called to see a case. Only recently, based on global tobacco control (led by WHO), have smoking rates and consequent mortality come down.

“Man proposes, nature disposes.” Infectious disease has come roaring back with outbreaks of Ebola, cholera, measles, HIV/AIDS, and Covid-19. New and deadly respiratory viruses emerge from animals and spread through ever-increasing populations on the move. The tobacco industry is reviving by addicting a new generation of young people to nicotine through electronic cigarettes. The climate crisis will bring both predictable and unforeseen epidemic threats to human health and well-being. Mental health is listed by WHO as a number-one problem globally. Human population has increased from three billion when I began my work and will reach almost nine billion by the time I pass on. Even so—especially so—work in public health is ever more necessary, although at times I despair of what public health workers can really accomplish in the face of seemingly inexorable forces. My colleagues from the American University of Beirut and Birzeit University in Palestine (Samer Jabbour, Rita Giacaman, et al.) asked in an editorial published in the British journal BMJ in 2006: “Can action on health achieve political and social reform?” They believed it could if public health workers use their skills in research, epidemiology, and education to mobilize health professionals, the public, and politicians. Their action on health requires alliances with social activists to combat corruption in government and dominance of economies by greedy interest groups.

Models of illness or health distinguish between proximate determinants—life style, fitness, and diet—and distal determinants—principally socioeconomic—to limn a linear relationship. In much

of public health practice, proximate determinants are dealt with by health education and information. The Coca-Cola Company would like us to believe that its sugar-laced drink is innocent in the obesity epidemic; people should exercise more, it says. But what if there aren't sidewalks, either in slums or well-to-do suburbs, or playgrounds or green space? The US Department of Agriculture's food pyramid promotes eating five fruits and vegetables a day. But what if in poor neighborhoods no supermarkets exist, only small shops selling snack food, soda, and measly, unaffordable produce? Baby-milk companies aggressively market their formulas to pregnant women and new mothers, claiming them to be at least as good if not better than breast milk. But what if the water to dilute the expensive formulas is contaminated by foul sanitation systems in favelas? Distal and proximal determinants aren't linear, but interwoven; and people cannot have agency in their own health when governments and politicians are corrupt, careless, and would rather spend money on weapons or gaudy palaces. Tobacco companies—don't get me started—sell a powerfully addicting product that *kills when used as intended*, causing eight million deaths each year, and mostly in poorer nations. In many families where men control the budget, more goes to tobacco than to food for the children. Beyond health workers' inputs, one of the most effective public health interventions can come from government: raising taxes on tobacco and sugary drinks.

Perhaps we should turn Jabbour and Giacaman's question around and ask: "Can action on social reform achieve health?" In my view, absolutely, either by democratic action or by revolution. I even despair about that hopeful formulation. I've spent time in places where the horrors of war or genocide came before or after my visits: Sudan, Yemen, Cambodia, Vietnam, and Afghanistan. How does one provide any kind of health care? The cruelties are unfathomable, except they do happen. The poet Carolyn Forché has written, "There is nothing one man will not do to another."[19]

Worse: The neo-liberal selfishness of the past few decades has caused a dramatic rise in the cost of health care, while funds for public health and disease control have been cut to the bone. With the Covid-19 pandemic upon us most countries were found unprepared both in care and control. The gods must be crazy.

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[19] *"The Visitor"* in "The Country Between Us." Harper and Row Publishers, 1981.

What helped me most in my work internationally was to embrace ambiguity, to take intellectual pleasure in the serpentine, to see what happened when a system is perturbed, then settles, which is the way evolution works. The long view is essential; it requires humility, even while remaining passionate. If I had to write my own epitaph, it would say, “He had moral intelligence.” Yet, after years of believing strongly in *Tikkun Olam*, I’m uncertain. To heal the world is an exceedingly optimistic (or should I say, arrogant?) view in the face of dirty politics, war, corruption, willful ignorance, climate crisis, and corporate greed. Perhaps the forces against us are too great. The last line of F. Scott Fitzgerald’s *The Great Gatsby* expresses my sentiments when feeling lowest: “So we beat on, boats against the current, borne back ceaselessly into the past.”

On the other hand, a Cambodian MPH student at Columbia, Chung Leang Lip (himself born in poverty), succinctly defined the mission of public health: “A field that often works with overlooked populations. In public health, research and interventions often focus on achieving the overall wellbeing of a community at large using data-driven efforts to make changes.” [20]

I can live with that.

Recently, at a Chinese restaurant, my fortune cookie message read, “You could make a name for yourself in the field of medicine.” I’ve had a lucky life.

A Poet’s Epilogue

So, who could want any more than this? I do. I just want to write fine poetry, and also to be *recognized* as a fine poet. The first ambition is an interior struggle; the second a public struggle. The first is a noble effort, a craft driven to perfection as much as language will allow; the second a mug’s game. As the Irish poet William Butler Yeats said, “We make out of the quarrel with others, rhetoric, but of the quarrel with ourselves, poetry.”

In the Bronx High School of Science, I wrote a sonnet for Mrs. Epstein’s creative writing class, something about a knight refusing to rescue a damsel in distress —“Your situation is quite dour, because you see it’s my lunch hour.” I never wrote another poem for years. In 1971 I published a medical essay on cholera (with Buck Greenough) in *Scientific American*, and in the small,

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[20] Columbia Public Health, Fall 2019.

biographical paragraph I mentioned, “And I write poetry.” But it was crazy; I wasn’t writing poetry, not since that time in class. Twenty years later, in preparation for another article (on ORT) in the same journal, I looked back at the 1971 squib, where to my surprise I saw I’d made that claim. I had no memory of ever writing that squib, much less believing it. It must have been a fantasy, delayed by my career. By 1994 I was beginning my improbable path as a poet with a Master of Fine Arts degree from Vermont College. Since then I have published six collections, with poems printed in several dozen journals and anthologies, some prize-winning. Sheer stubbornness, love of the craft, and reading thousands of poems written from ancient to modern times, have carried me along. That, and the undoubted fellowship of dozens of other poets who, like me, want each next poem, each next line, each next word to be the best it can be. Most poems fail because language is inadequate to express our deepest feelings and to convey those feelings to readers, who look at a poem flat on a page; success in poetry is harder to achieve than in public health. Analogous to my career in medicine and public health, I’ve been privileged to study with the best poets of our time: laureates, and winners of National Book Awards, the Yale Series of Younger Poets competition, and the Pulitzer Prize. My happiest recent time, however, is collaborating with my Syrian-doctor-poet friend, Fouad M. Fouad, in translation of his poems from the Arabic.

Consonant with my training and inclination, I approach poetry in a scientific way. (I’m proud to be of the tribe of doctor-poets.) When I read a great poem—the kind you’d kill for—I ask, “How did they *do* that?” There is a skill, a magic, in the structure, sounds, and evocations of place and feeling. The craft of poetry. Beyond skill, which sometimes I think I manage, is a necessary *interiority* welling up, unplanned for. As Robert Frost explained, “No tears in the writer, no tears in the reader. No surprise in the writer, no surprise in the reader.” [21] I feel I can now justify that *Scientific American* description, “I write poetry.”

But can poetry heal the world? W. H. Auden wrote, “For poetry makes nothing happen.” [22] Yet people turn to poetry at times both of celebration and catastrophe. Auden continues, “In the

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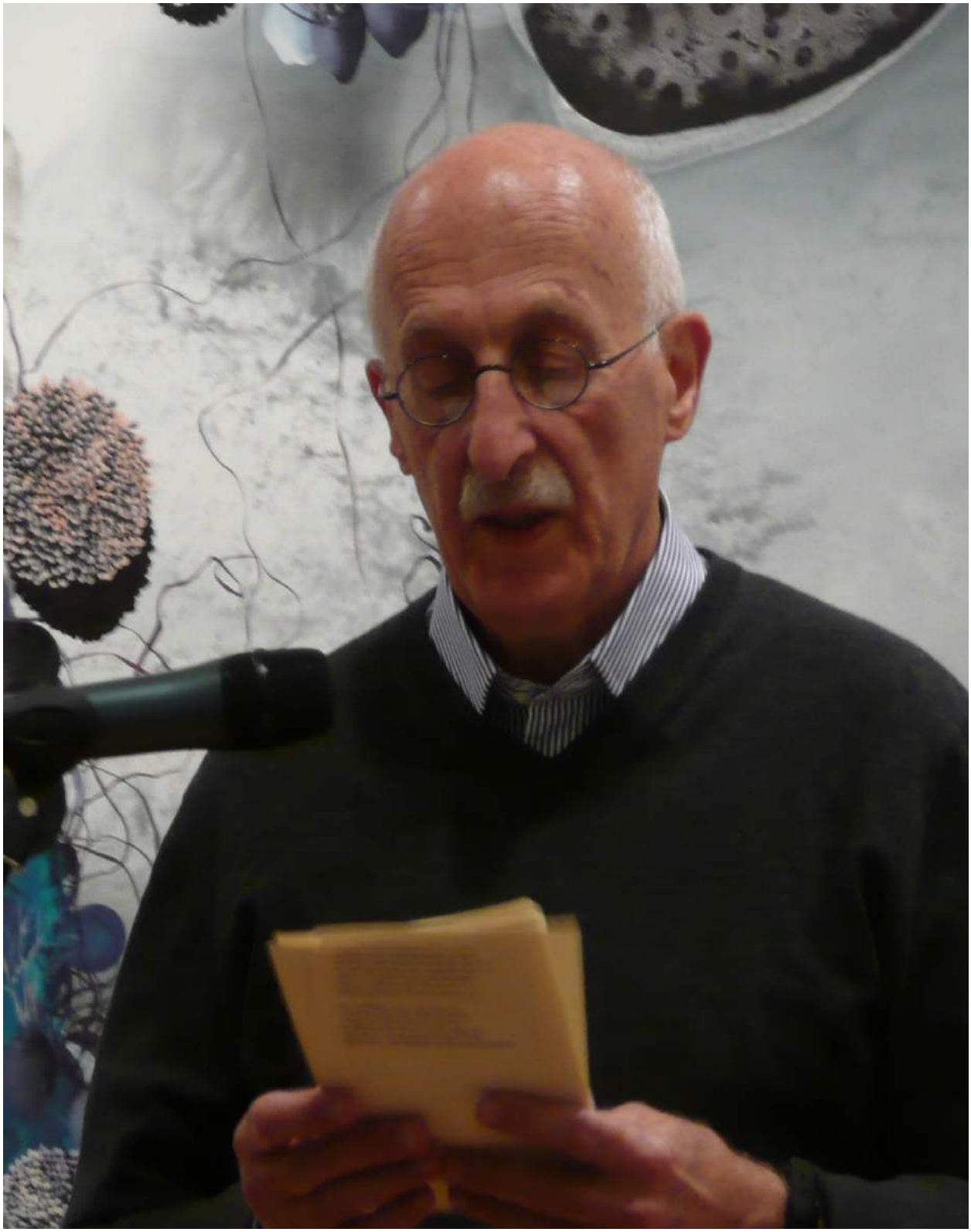
[21] *The Figure a Poem Makes.* https://www.poeticous.com/frost/the-figure-a-poem-makes

[22] *In Memory of W. B. Yeats.*

deserts of the heart/ Let the healing fountain start.” If not to heal the world, then to comfort always.



Reading from my poetry. Photograph by Shelagh Weir

SELECTED CLINICAL AND SCIENTIFIC PUBLICATIONS

Hirschhorn, N., Kinzie, J. L., Sachar, D. B. Northrup, R. S., Taylor, J. O., Ahmad, S. Z., & Phillips, R. A. (1961). Decrease in net stool output in cholera during intestinal perfusion with glucose-containing solutions. New England Journal of Medicine, Vol. 279.

Hirschhorn, N., & Greenough III, W. B. (1971). Cholera. Scientific American, Vol. 224.

Hirschhorn, N. (1972). Genocide in Bangladesh. Congressional Record, 118: S6491-S6493.

Hirschhorn, N., & Frazier, H. S. (1971). The intracellular electrical potential of the epithelium of the turtle bladder. American Journal of Physiology, Vol. 222.

Hirschhorn, N., & Frazier, H. S. (1973). The electrical profile of stripped, isolated rabbit ileum. Johns Hopkins Medical Journal, Vol. 132.

Hirschhorn, N., McCarthy, B. J., Ranney, B., Hirschhorn, M. A., Lacapa, A., Woodward, S. T., R.A. Cash, R. A., & Woodward, W. E. (1973). Ad libitum oral glucose electrolyte therapy of acute diarrhea in Apache children. Journal of Pediatrics, Vol. 83.

Woodward, W. E., Hirschhorn, N., Sack, R. B., Cash, R. A., Brownlee, I., Chickadonz, G. H., Evans, L. K., Shepard, R. H., & Woodward, R. C. (1974). Acute diarrhea on an Apache Indian reservation. American Journal of Epidemiology, Vol. 99.

Hirschhorn, N., Woodward, W. E., Evans, L. K., Chickadonz, G. H., Gordon, R. S., Sack, R. B., Broitman, M., Cash, R. A., & Zieve, P. D. (1975). Attempted prevention of diarrheal disease in Apache children with a non-absorbable broad-spectrum antimicrobial. American Journal of Tropical Medicine and Hygiene, Vol. 24.

Sack, R. B., Hirschhorn, N., Brownlee, I., Cash, R. A., Woodward, W. E., & Sack, D. A. (1975). Enterotoxigenic Escherichia Coli - Associated diarrheal diseases in Apache children. New England Journal of Medicine, Vol. 292.

International Study Group (Co-Author). (1977). A positive effect on the nutrition of Philippine children of an oral glucose-electrolyte solution given at home for the treatment of diarrhea. Bulletin of the World Health Organization, Vol. 55.

Hirschhorn, N., Lamstein, J. H., Klein, S., McCormack, J., & Goldberg, R. (1978). Quality by objectives: A self-instructional manual for ambulatory health centers. G. K. Hall, Boston.

Hirschhorn, N. (1980, March). Treatment of children's diarrhea - An historical and physiological perspective. American Journal of Clinical Nutrition, Vol. 33.

International Study Group (Co-Author). (1981). Beneficial effects of oral electrolyte-sugar solutions in the treatment of children's diarrhea. (1) Studies in two ambulatory care clinics. Journal of Tropical Pediatrics, Vol. 27.

International Study Group (Co-Author). (1981). Beneficial effects of oral electrolyte-sugar solutions in the treatment of children's diarrhea. (2) Studies in seven rural villages. Journal of Tropical Pediatrics, Vol. 27.

Hirschhorn, N., Brier, J., Plager, B., Bell, P., Goldy, S., Robbins, J., MacIntosh, N. (1981). A focused approach to quality of care assessment in family planning. American Journal of Public Health, Vol. 74.

Abdalla, S., Helmy, N., Essaily, M., Nasser, S., & Hirschhorn, N. (1984). Oral rehydration for the low-birthweight baby with diarrhoea. Lancet, Vol. 1(9431).

Fabricant, S. J., & N. Hirschhorn. (1987). Deranged distribution, perverse prescription, unprotected use: the irrationality of pharmaceuticals in the developing world. Health Policy and Planning, Vol. 2.

Nassar, S., Nossair, N., Riyad, S., Nagaty, A., Nasser, N., Hirschhorn, N. (1988). The clinical epidemiology of acute diarrhoeal disease in Egyptian children. Journal of Tropical Pediatrics, Vol. 34.

Gomaa, A., Mwafi, M., Nagaty, A., El Rafie, M., Nassar, S., Kielmann, A., & Hirschhorn, N. (1988). Impact of national control of diarrheal diseases project on infant and child mortality in Dakahlia, Egypt. Lancet, Vol 2 (8603).

Rawn, C., & Hirschhorn, N. (1988). EPI Essentials: A Guide for Program Officers. JSI/USAID (Arlington VA).

El-Rafie, M., Hassouna, W. A., Hirschhorn, N., Loza, S., Miller, P., Nagaty, A., Nasser, S., & Riyad, S. (1990). Impact of control of diarrheal disease activities on infant and childhood mortality in Egypt. Lancet, Vol. 335.

Hirschhorn, N. (1990). A bandaged secret: Emily Dickinson and incest Journal of Psychohistory, Vol. 18.

Hirschhorn, N., Haviland, L., & Salvo, J. (1991). Critical needs assessment in Cambodia: The humanitarian issues. Report to USAID. John Snow, Inc. (Washington, D.C.).

Hirschhorn, N., & Greenough III, W. B. (1991). Progress in oral rehydration

therapy. Scientific American, Vol. 264.

Fayad, I. M., Hirschhorn, N., Abu-Zikry, M., & Kamel, M. (1992). Hypernatremia surveillance during a national diarrhoeal diseases control project in Egypt. Lancet, Vol. 339.

Miller, P., Loza, S., Terreri, N., Nagaty, A., Bayoumi, M., Hirschhorn, N., & Gipson, R. (1994). Diarroea and mortality in Menoufia, Egypt. Journal of Diarrhoeal Disease Research, Vol. 12.

Kishi, M., Hirschhorn, N., Djajadisastra, M., Satterlee, L. N., Strowman, S, & Dilts, R. (1995). Study of the occupational health of Indonesian farmers who spray pesticides*. Scandinavian Journal of Work, Environment and Health,Vol. 21.*

Miller, P., & Hirschhorn, N. (1995). The effect of a national control of diarrheal diseases program on mortality: The case of Egypt. Monograph, Social Science and Medicine, Vol. 40.

Murphy, H. H., Bari, A., Molla, A. M., & Hirschhorn, N. (1996). A Field Trial of Wheat-based Oral Rehydration solution among Afghan refugee children. Acta Paediatrica Scandinavia, Vol. 85.

Hirschhorn, N., & Longsworth, P. (1996). Medicine posthumous: Emily Dickinson's health. New England Quarterly.

Hirschhorn, N. (1999, March) Was it tuberculosis? Another glimpse of Emily Dickinson’s health. New England Quarterly.

Murphy, H., Sanusi, A., Dilts, R., Djajadistra, M., Hirschhorn, N., & Yuliantingsih, S. (1999). Health effects of pesticide use among Indonesian women farmers. Part I: Exposure & Acute Health Effects. Journal of Agricultural Medicine, Vol. 6.

Hirschhorn, N., & Feldman, R. G. (1999). Mary Lincoln’s final illness: A medical and historical reappraisal. Journal of the History of Medicine and Allied Sciences, Vol. 54.

Murphy, H., A. Sanusi, R. Dilts, M. Djajadistra, N. Hirschhorn, & S. Yuliantingsih, (2000). Health effects of pesticide use among Indonesian women farmers. Part II: Reproductive health outcomes. Journal of Agricultural Medicine, Vol. 6.

Hirschhorn, N. (2000). Shameful science: Four decades of the German tobacco industry’s hidden research on smoking and health. Tobacco Control, Vol. 9.

Hirschhorn, N., Greaves, I., & Feldman, R. G. (2001). Abraham Lincoln’s Blue Pills: Did our sixteenth president suffer mercury poisoning? Perspectives in Biology and Medicine, Vol. 44.

Hirschhorn, N, Bialous, S. A., & S. Shatenstein, S. (2001). Philip Morris' new scientific initiative: An analysis. Tobacco Control, Vol. 10.

Hirschhorn, N., & Bialous, S. A. (2001). Second hand smoke and risk assessment: What was in it for the tobacco industry? Tobacco Control, Vol. 10.

Hirschhorn, N. (2003). Mary Lincoln's 'suicide attempt': A physician reconsiders the evidence. Lincoln Herald.

Hirschhorn, N. (2004). Corporate social responsibility and the tobacco industry: Hope or hype? Tobacco Control, Vol. 13.

Hirschhorn, N, Bialous, S. A., & S. Shatenstein, S. (2006). The Philip Morris external research program. Results from the first round of projects. Tobacco Control, Vol. 15.

Hirschhorn, N, & Greaves, I. A. (2007). Louisa May Alcott: Her mysterious illness. Perspectives in Biology and Medicine, Vol. 50.

Hirschhorn, N., & Longsworth, P. (2013). Was it epilepsy? Misdiagnosing Emily Dickinson (1830-1886). Perspectives in Biology and Medicine, Vol. 56.

Hirschhorn N. (2018). Another perspective on the Foundation for a Smoke-Free World. Lancet, Vol. 391, 2018.

Nakkash R, A., Ali, H., Alaouie, K., Asmar, N., Hirschhorn, N., et al. (2020). Attitudes and practices of public health academics towards research funding from for-profit organizations: Cross-sectional survey. International Journal of Public Health, Vol. 65, 2020.

Hirschhorn, N. (2020, Spring/Summer). Return to Bard Hall. Columbia *Medicine.*

MY POETRY

1999 A Cracked River (Slow Dancer Press, London)

2008 Mourning in the Presence of a Corpse (Dar al Jadeed, Beirut)

2012 Monastery of the Moon (Dar al Jadeed, Beirut)

2013 To Sing Away the Darkest Days. Poems Re-Imagined from Yiddish Folksongs (Holland Park Press, London)

2018 Stone. Bread. Salt. (Holland Park Press, London)

2020 Once Upon a Time in Aleppo (bilingual, co-translated from the Arabic with Fouad M. Fouad) (Hippocrates Press, London)

ACKNOWLEDGMENTS

To Elisabeth, John, and Robert, and their mother, Mary Ann, who had to put up with my many absences.

To Robert Steinglass and my brother Larry for their meticulous reviews of the manuscript in draft.

To my sister Linda for loving the work.

To Charlie Catania, my college mate, long-time friend and chess partner, for his encouragement and exceptional work in editing the manuscript.

To my poet partner, fellow physician and dear friend, Fouad M. Fouad, who made me finally get going.

To Cynthia.

Cover photograph, Cynthia Myntti.

“The Poet Dies by Drowning Age Seven”, Norbert Hirschhorn in “Monastery of the Moon”, Dar al Jadeed, Beirut, 2012.

“Lebanon Mon Amour”, Norbert Hirschhorn in “Stone. Bread. Salt”., Holland Park Press, London, 2018.