From Missiles to Microbes

From Missiles to Microbes:

A Life of Invention

By

Solomon Rosenblatt

As told to Amanda Pisetzner

Cambridge Scholars Publishing

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To Vicky:
I'm so glad it was you that opened the door that winter night.
You have opened so many doors for me since.

And to City College:
Thank you for educating me and for the work you do to educate others.
It's made so much possible.

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FOREWORD

I heard about Solomon Rosenblatt before I met him. It was March of 2025. I was teaching a storytelling and legacy class for "advanced learners" (the elderly) at an independent living facility in Manhattan. Some of the residents had given me a heads-up that their new community member didn't like to eat with others and was fixated on "writing his book." I have met a lot of older people who are "writing their book," which is something we all should probably begin doing right now, regardless of our age. But I suppose I could understand how some may find a gentleman like this off-putting, in a "Who does this guy think he is?" kinda way.

For the prior fifteen years, I had worked in stressful newsrooms and "in-the-field" on high-stakes documentary stories. I had met more difficult people than is probably healthy, and so I wasn't too concerned when this "infamous" community member came to one of my storytelling classes, sat at the far end of the long table, and spent the entire session scribbling on a stack of disorganized-looking papers.

Solomon and I ended up speaking after class. As we settled into the game room, a spacious and warmly decorated meeting location right off the main lobby corridor, a fellow resident came over, introduced herself, and asked Sol if he'd like to join her for dinner. He declined, plainly, without any sugar-coating or explanation. It was easy to see how people might form snap judgments. Knowing what I know now, I think Sol just had some "new kid at school" nerves and was missing his wife, Vicky. Regardless, we moved on with our meeting.

I was happy to hear more about Sol's life (as an inventor, a chemist, a former NASA contractor) and thrilled at his desire to write a book. Storytelling is not only a defining characteristic of our shared humanity, it's also a powerful tool to process transition and to aid in meaning-making. I know this, because in addition to being a professional storyteller, I'm an end-of-life doula. (Imagine a birth doula, but instead of helping usher life into the world, I help people navigate the emotional complexities of leaving it.) But Sol didn't hire me as a doula. He hired me as a writer and storyteller to help cohere more than twenty handwritten stories, all scrawled on yellow legal

pads. They were nearly illegible to me but completely vivid and accessible to him. What he had were the beginnings of a book, each vignette filled with memory and voice. He wanted to shape them into something whole and possibly publishable. More than that, he really wanted to see his story in print. I knew I could, at the very least, help get him started.

I took on the project, not knowing where it would lead, or how (or if, to be honest) it would come together. We flew the airplane while building it. First, Solomon would dictate the stories to me. Never in any special order or chronology. It wasn't always clear to me why this story or that story meant something to him, though there were some common threads. They seemed to be a collection of his "greatest hits," stories and anecdotes that lodged themselves into his memory, for one reason or another.

Often, they focused on interactions with people he admired, like doctors, or on defining memories, like when he first met his wife. But most centered on something learned or a problem solved in some new, ingenious way. After he relayed the story and I transcribed it, I would ask questions, trying to understand the underlying theme or reason for this tale's inclusion. I added my notes from the conversations, and then I'd go home to take a pass at smoothing and unifying the story, including more of our shared discoveries, his "whys" and reflections. Afterwards, we'd go through the story together. Sol had many corrections, particularly around science and chemistry. We'd make these changes together, often over the course of many hours. Soon, the essays made their way through a series of folders: "Originals," "Amanda's First Pass," "Edited Copies", and "Sol's final sign-off." Over the next few months, more than thirty stories (he wrote more) passed through this process, and with each one, I learned more about Sol.

As it turns out, Sol is not difficult. He's just different. He is a soft-hearted and sensitive man who loves and misses his wife and is trying to make sense of what he's spent the last ninety-five years really doing and what it all meant. This book, I believe, is his attempt to discover this.

Together, through our chats and woven into these pages, is the legacy of Sol's life, which was deeply impacted by the poverty that he was born into. A painful blessing in disguise, Sol's insecurities ignited his ambition and tenacity, which he has to thank for so many of his incredible achievements. While he could not change his childhood circumstances, he did have control over two things: his educational development and his ambition. I've never met anyone who has taken either more seriously. Sol went from a sickly child, born shortly before the stock market crash of 1929 into a loving

husband, father of three, and holder of numerous patents, many for improving health outcomes for the rest of us, all over the world.

In my documentary storytelling classes, I teach that stories are often about two things: what's happening—the specific plot and narrative arc—and, perhaps more importantly, what's *really* happening: the universal themes that speak to our shared humanity. I think that's true of this book, too. On the surface, it's a man's collection of unique memories, those "greatest hits" of his accomplishments. But underneath? It's the story of a man trying to make sense of the disparate chapters of his life, to reckon with his legacy, to feel like his life has mattered. Who among us can't relate?

I've learned so much from Sol. Not just about polymer chemistry (though I certainly have), but about how we're all, regardless of age, moving through the world hoping to feel like we matter. Often, we're unaware of the ways we already do. This book has been deeply meaningful for me. Sol is a remarkable man with a brilliant mind, an open heart, and an enduring drive to help others and be seen for it. He has helped. And I hope this book helps him know it.

Amanda Pisetzner
Storyteller

PREFACE

My name is Solomon Rosenblatt. Two weeks ago, I moved from my home in Pennsylvania to an independent living facility in lower Manhattan. I came here to write a book. This book, in fact. For the last ten years I've been living in Chestnut Hill, Philadelphia. I liked it there, but I was getting lonely, especially after my wife, Vicky, died. I was ready for a bit more activity. That whole "bright lights, big city" energy I thought would enliven me and help propel the book along. Plus, I thought it especially fitting since I was born, educated, and worked in New York City, why not spend some of my later chapters here as well? As a new writer, I thought it fitting to "bookend" my life in this way.

This business about my life ending here isn't meant to sound depressing. I'm not dying any more than we all are, with the exception that I am currently 95 and so, statistically speaking, I'm likely to go before many of you. It's a great motivator to write. And so, a few months back while sitting in my living room in Philadelphia, I—with equal parts reluctance and enthusiasm—moved into my new digs. It was sold to me as a 55+ active independent living community, but that's not the reality that I have found here.

I have compassion for my new community members, but it's been a depressive environment for me to move into. There is a bright side, however, aside from the daily reminders that I have much to be thankful for, in terms of my health, cognition, and mobility. I also have this book—my new companion—and you, dear readers, my new friends. There are other upsides to being here, too. While the coffee certainly leaves something to be desired, the location is already working its magic. On a drive the other day, I passed the very location of the chemical supply store where I outfitted the first lab that I created in my parents' basement in 1944. There was much going on in the world then, of course, and I—at 15—was beginning to explore the interests which would eventually have me working on nuclear-powered submarine projects and Apollo Moon missions.

Where possible, I have verified dates, checked facts, and consulted records to ensure accuracy. Yet much of what fills these pages comes from that most personal of archives: my own recollections. To honor the privacy of those

who shared in my journey, I have changed some names and identifying details. (Any name-resemblance, in those cases, is purely coincidental.) The families, friends, and acquaintances who appear in these stories deserve their own choices about how their lives are told. But I assure you that while some names may be different, the details of every story remain true to how I lived it and remember it.

My work has quite literally taken me to some of the furthest reaches explored by humans. And now I get to share it with you. Thank you for joining me on this journey that's been my life. At least, my life so far. I may be 95, but I have patents pending.

Solomon

CHAPTER ONE

AND SO IT BEGINS

I never thought I would be writing a book at my age, or at any age, really. I could write, technically (by that, I mean both that I could write about technical things and that I could write at all), but embarking on a project like this at this stage of my life is both new and surprising. It's also exciting. I find myself waking up in the middle of the night with a memory, a thought, or a story I feel compelled to write down. So, I do. Then, of course, comes the task of waking up in the morning and deciphering my own writing. I suppose this is part of my *writing process*. It's been some time since work has spurred me in this way, but it reminds me of being in the middle of an exciting problem to solve or a question to answer. This book, in some ways, is just one of my latest attempts to innovate and invent.

For as long as I can remember, I've been curious and inventive in this way. At the age of fifteen, I built a laboratory in my parents' basement. Our home was modest and shared with other tenants (some of them my relatives), but there was still enough room for me to set up a small bench and basic equipment, away from the stressors of home, in the cool and damp basement. The house we lived in was in East New York, Brooklyn nestled against Queens, far from the train and bordered by Jamaica Bay, the Belt Parkway, and the swampy areas near what is now JFK airport. In a quiet corner, floors below my family, I made color-changing chemical concoctions and small (very, very small) explosive devices. I find it a bit charming to notice this connection now, tracing my work on the Apollo Moon mission or my innovations in medical biology back to such a young age, following my own curiosities and always questioning, "I wonder if…" or "How does that work…" They were frequent refrains in my developing mind.

Had I been born in a different decade, it would be accurate to say that my early childhood would have been, by most accounts, normal, at least at first. But the stock market crash of 1929, just months after I was born, fundamentally and profoundly changed the way my parents lived and the way I was raised. The impact of the Depression ensured that my early years,

and many of my earliest memories, were challenging. My father, like so many others, became unemployed. Arguments often erupted over how the few dollars we had should be allocated. It was difficult to witness those arguments, but the message underneath was far scarier: *There isn't enough*.

I try to think of my earliest memory. When I do, a vivid image comes to mind of seeing evicted families gathering on the street, leaving behind their belongings in trash bins to lighten their burden. I remember multicolored glass lampshades in garbage bins that I now recognize as designs by Louis Comfort Tiffany. But the most indelible image was that of discarded, dilapidated beds, their coils popping out of the mattresses, piled up along the street. Even at that young age, I knew beds belonged in homes, not on city sidewalks.

Down the street from those sidewalks was my neighborhood public school, which served as a haven for me during this time, a place away from the arguments about money, where there was consistency and routine. Each day, at 10 a.m., the teacher provided us with a half-pint of cold milk in a cardboard container, a straw, and a chocolate-covered graham cracker. It may as well have been a feast. Teachers took note of the kids whose faces clearly indicated hunger, in both expression and pallor, and would bring in little snacks, surreptitiously giving them out. I was happy for them, but wanted more for myself, too.

To ameliorate these conditions, I sought a way to make some extra spending money. First, I collected empty bottles for deposit, focusing on wherever they naturally accumulated: trash cans, outside apartment doors, outside restaurants. Returning these at two cents a pop (sometimes more for milk bottles) yielded decent money for a kid of barely ten years.[1] Later, with a slightly more developed business sense, I supplemented my bottle runs by hanging out at the payphone outside the corner candy store.

The operation worked as follows: Because very few people could afford a home phone, the payphone at the candy store functioned as a central communication hub. On Friday and Saturday nights, free from the demands of schoolwork and early bedtimes, I stood guard near the payphone and waited for it to ring. When a call came in, I'd answer it and, having

[1] Jasper Guy Woodroof and Guy Frank Phillips, *Beverages: Carbonated and Noncarbonated* (Westport, CT: AVI Publishing Company, 1974), 236, quoted in "America's Experience with Refillable Beverage Containers," GrassRoots Recycling Network, accessed August 5, 2025, https://refillables.grrn.org/americas-experience-with-refillable-beverage-containers/.

memorized the name and address of the intended recipient, would run to their apartment to notify them that a call was waiting at the candy store payphone. I was a mobile phone operator. Sometimes I received a five-cent tip for my efforts. On certain occasions, when the call recipient received exceptionally good news, I struck a bonanza of fifty cents or more.

Perhaps because of my business's proximity to the candy store, it became one of my favorite places to spend some of my earnings. It also provided me with some of the most vivid memories of my youth. The candy store was like a beacon for us kids in the neighborhood. At its entrance stood a penny nut-dispensing machine that offered a bouquet of choices. You inserted a penny and could choose from peanuts, sunflower seeds, or pine nuts—a "choose your own adventure" machine. The machine also served as a gathering point, giving us a place to linger and commiserate with each other while we snacked, littering the ground with our spent shells.

The candy store also had an ice-filled cooler stocked with exotic soda flavors like mango, chocolate cola, wild raspberry, and coconut. All were delicious, but they paled in comparison to my favorite: Mission Orange. It was strong and sweet and, somehow, the most satisfying of the lot. This ice-filled chest was also a source of surprise and entertainment, as, without warning, new flavors would suddenly appear. The owner of the shop was exceedingly kind; if we didn't have the requisite five cents for a proper-flavored soda, he'd supply us with cold bubbly seltzer for two cents. "Two cents plain" was the shorthand everyone used.

Sometimes, for the sake of nourishment more than anything else, families would send their kids into the shop with fifteen cents nestled in their little hands. This was for the *pièce de résistance*: a cold malted milkshake. I still remember the recipe, which was two healthy scoops of Borden's creamy ice cream, six ounces of half-frozen milk, a generous dollop of the syrup of choice, and two scoops of Horlicks Original Malted Milk Powder. This purchase yielded at least three large glasses of thick goodness, which we would enjoy and share with our friends. That was a bonanza of a treat, too.

After an afternoon of ice cream, the streets of Brooklyn were my playground. The Parks Department routinely installed recreational spaces such as basketball courts, handball walls, seesaws, monkey bars, and the like, but in East New York, still underdeveloped and very poor, fewer parks existed. We made do on our own, as kids tend to do. Stickball was our game of choice. The closest sewer to the crosswalk was home plate, the next sewer was second base, and the stone stoops on both sides served as first and third.

A fifteen-cent Spaldeen ball and the handle of a discarded broom ensured we were in business. Car traffic was infrequent, giving us the entire street as our stadium. A plain brick wall doubled as a handball court. The girls played hopscotch in countless variations, and box ball was another favorite; this was our version of tennis, using the natural grid of sidewalk squares as our court.

In the summer, when the heat was relentless, we found our salvation in the fire hydrants. The Parks Department, perhaps to make up for fewer green spaces, would open them, turning the streets into our own water park. The water came out cool, but the puddles warmed under the hot sun, and I remember the combination of rough concrete and warm water under my feet. When we needed to dry out, the open areas of new lots offered us the freedom to run and explore. These undeveloped lots were both a gift and a hazard. They were often used as informal dumping grounds, strewn with rusted metal and broken glass. Scraped knees and cut hands were the cost of our adventures. But we had Dr. Carnoff on our block.

Dr. Carnoff was the pride of our neighborhood as a local boy who had made good and gone to medical school. His mother, beaming with pride, converted her front parlor into his office, and he took care of us all. His standard fee for a visit was fifty cents, but he was generous with his care. He stitched our wounds, lanced our boils, administered shots, and even dispensed cough syrup at no extra cost. He understood our struggles because he had grown up just like us.

Adventures by bicycle soon because the preferred respite from the developing Second World War. These excursions were welcome escapes and opportunities to explore beyond my struggling neighborhood. The swamp area, within riding distance from home, boasted a culvert which was happily only half buried and provided an unintended pathway across the swamp over to the Shore Parkway bicycle path which terminated at Coney Island. These swamps were tidal, and at the right time, small bait fish would be washed up, wriggling into the grasses and proliferating in the shallow pools that surrounded us. Catching these bait fish was fun, but the large underground drain also served as a conduit for the eels that thrived in the bay waters. Occasionally, opportunistic eels would swim up through the culverts, cross under the boulevard and make their way into first-floor neighborhood toilets, triggering panicked calls to both the police and the Health Department. These scavengers seemed to enjoy themselves, able to explore freely with the changing tides. Sadly, this feeling of freedom didn't extend across species. Like water to a fish (or an eel, as it were) I wasn't

aware then of the peculiarities of my environment. And, in my case, the lasting scars that poverty would leave.

The awareness of poverty underscored much of my youth, wove itself into my psyche, and continues to manifest in my habits and patterns of thinking to this day. For example, it pains me to waste anything. I am abnormally conscious of cost, even though I can afford most things. I have difficulty elevating my lifestyle. Even now, at ninety-five I struggle to enjoy the freedom that financial independence provides and the luxury of a more carefree, enjoyable life. I consciously try to overcome this mindset and do succeed occasionally, but it runs counter to my nature, and I suffer accordingly from this true affliction. My financial independence came too late in life to heal the scars of doing without, though I still like to think of myself as a work-in-progress. I'm just now becoming an author, after all. Perhaps there are other things I'll learn yet, too.

CHAPTER TWO

THE WEIGHT OF WAR

The heaviest burdens of the Depression eventually lifted as jobs returned to the city, but it was quickly replaced by the stress of World War II.[2] It felt as though we had emerged from one crisis, only to be confronted with another. This weight of the war was always with us, delivered to our doorstep each day by *The New York Times*. There were constant reminders: reports of German submarines spotted off the Jersey shore, grim casualty headlines, air raid warnings, blackouts, tin-helmeted wardens, fire extinguishers in stairwells, gas ration stamps, food shortages, and, of course, the ever-present draft board. Yet, in some ways, growing up in the shadow of war felt inevitable. Afterall, my parents had gone through the same during World War I.

My father, Abraham, grew up in a shtetl not far from Kiev. He was one of five children, three girls and two boys, but he was closest to his brother, Samuel, my Uncle Sam. (With a name like that, it seems fitting that he would eventually end up in the United States.) The pogroms came to Kiev around 1919. In total, there were over 1,300 pogroms across Ukraine around that time, resulting in the massacre of nearly 100,000 Jews.[3] Thousands more were left homeless. That was true for my dad's family, for a time, until they made their way to the U.S. My dad, an artist at heart, only found work in the garment industry. My Uncle Sam, who back in Ukraine drove a wagon team of horses for the family's grocery business, upgraded his cartwheels, becoming a New York City taxi driver.

My mother's story is not much different from my dad's. Instead of Ukraine, she grew up in Romania, the only daughter alongside her three brothers. However, she faced the same devastation of war when pogroms came to her village, too. She was fourteen years old when the Jewish members of her

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[2] "Works Progress Administration: WPA & New Deal," History.com, accessed August 5, 2025, https://www.history.com/articles/works-progress-administration.
[3] Nokhem Shtif, *The Pogroms in Ukraine, 1918-19: Prelude to the Holocaust*, trans. Maurice Wolfthal (Cambridge: Open Book Publishers, 2019), https://www.loc.gov/item/2019452966.

town were driven out (and often worse), but through luck, hard work, and the fervent desire to improve their lives, her family emigrated to the U.S. She didn't often speak of her bleak childhood and focused her attention on caregiving instead. After she arrived in the U.S., her parents went on to have two more sons and a daughter. With a brood of siblings and, eventually, kids of her own, she had her hands full with domestic duties. Over time, I came to see and understand the impact that my parents' overlapping experiences had on them, primarily in their shared commitment to never bringing it up. It would take me longer to understand what growing up during the war did to me.

At the time, I was twelve, maybe thirteen. I remember preparing for my bar mitzvah, an event I looked forward to and dreaded in equal measure, which seems to still be par for the course for most young American Jews. When I wasn't in school or studying, I was on my bike, often visiting my Uncle Sam in his taxi garage. He had taken a special liking to my mom's brother, my Uncle Jack. Jack, the youngest of my mother's brothers born in Romania, fought hard to shed the label of "immigrant" after arriving in the U.S. He was a disruptor, charming, for sure, and did not hesitate to spearhead conflicts between the Italian neighborhood gangs to show that he was a contender, often coming home damaged from such conflicts.

I admired Jack. He was a proponent of "learn as you earn," a lesson which I took to heart, and therefore he had numerous short-term jobs. He was a very good-looking young guy, tall and muscular, with a healthy glow of youthful exuberance. This worked in his favor and was often his ticket to others believing in him and giving him opportunities. Around January 1942, opportunity was replaced by an order. Jack was drafted into the U.S. Air Force and became a tail gunner on a B-17 Flying Fortress. He was happy to go on the adventure. His only regret, I believe, was leaving his neighborhood girlfriend behind.

Their young love was unmistakably sweet; even at thirteen, I could see it. He had initially been the neighborhood flirt, but once in a loving relationship, he only had eyes for her. At the time, the Air Force had a rule: after about twenty-five missions, a crew member was temporarily relieved of duty and reassigned to less harrowing tasks.[4] Determined to quickly reach

[4] Moreno Aguiari, "WWII B-24 Liberator 'Hot Stuff': Setting the Record Straight," Vintage Aviation News, accessed August 5, 2025, https://vintageaviationnews.com/warbird-articles/wwii-b-24-liberator-hot-stuff-setting-record-straight.html.

that milestone, Jack volunteered to fly with other crews whenever a tail gunner was lost, ensuring his mission count would climb faster. Yet even between bombing missions, his mind was on his girlfriend, always scheming for a way to see her.

Jack, therefore, went AWOL as often as he could without getting caught, sneaking onto military flights back to the U.S. with his parachute in tow. No matter the hour, my Uncle Sam (whose aggressive approach to life was matched only by his soft spot for Jack) would pick him up from Floyd Bennett Field in his yellow cab. Whenever I could, I tagged along for the ride. Uncle Jack looked every bit the air warrior with his trousers tucked into gleaming boots, a jacket adorned with ribbons and Air Force insignia, and a hat cocked at just the right angle to complement his easy smile. He never stayed long, just one night, and the next day, I'd join my "taxi service" uncle for Jack's return trip back to the airstrip.

It probably goes without saying, but the return trips were always harder for me than the arrivals. Watching Jack say goodbye to his girlfriend left an ache in my heart. It's been over eighty years since my taxi rides with Jack, but witnessing those moments of young lovers departing has stayed with me. They were an easy blend of affection, and silence. Their shared hand-clenching, holding on tight until they could no longer, was hard to witness. It all felt sacred. His plane waiting on the runway, its engines idling loudly, and Jack jumping aboard the huge Constellation cargo plane. This is how it went. I'd watch as it lifted into the dark sky, banking left toward Europe, often wondering if this time would be the last time.

A few weeks later, I got my answer. My grandmother received a visit from a captain on Jack's mission. Jack's bomber was shot down over the Italian Alps. The entire crew parachuted to safety, but Jack panicked and ran. He was shot in the back by Fascists and killed. I've always believed his fear came from his childhood, growing up among the neighborhood Italian gangs. Maybe, in that moment of panic, the experiences of his early years made him too afraid to be captured. The circumstances of his avoidable death made the loss even harder to bear.

With Jack gone, my childhood ended, not with a rite of passage, but with unspoken grief. My bar mitzvah was canceled, but in truth, I had already been ushered into adulthood by loss. Only later did I realize that, like my parents, war had left its own indelible mark on me, too.

CHAPTER THREE

THE EDUCATION OF AN INVENTOR

As I write this, I am reasonably healthy, and my long-term memory is (surprisingly) pretty good. I should be happy; I've enjoyed a lengthy, productive history of accomplishments and have a legacy of inventing both engineering and helpful devices, as well as antimicrobial dressings that will have a lasting, beneficial effect on healthcare, surgery, and wound management. I could pack up my tools, slow down, and enjoy the luxuries most would say I've earned. But I can't. I try, but my mind refuses to be quiet. It's an ongoing battle. For now, my mind refuses to throw in the towel.

For example, I have a patent pending that is a vast improvement over my first-generation solid-state iodophor dressing, now in broad public use. This new patent specifically addresses venous leg ulcers—terribly exudating ulcers produced by, for example, diabetes. This new invention is called I-Sorbe, because it's a super-absorbent iodine-source dressing.[5] The patent is in the prosecutorial phase. A second project is the invention of a reusable antimicrobial iodophor wiper, called IoWipe, for consumers, much more effective than alcohol-based sanitizers.[6] A third project involves a licensee that I feel is cheating me on the royalties he owes, necessitating a pending arbitration. What a headache! All of these require my attention, and my mind incessantly spurs me on to addressing these matters, so I do (or I try). For a time, my coffee table in this one-bedroom apartment on the fourteenth floor of my new "active living community" was covered with white file folders of my products and ongoing patent work. Now these folders sit alongside pages of yellow legal paper on which I write this book. It makes for a bright, albeit occasionally messy, display.

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[5] Solomon Rosenblatt. "I-Sorbe: A New Iodophor Which Redefines Wound Care." Plas-Tech Co. Inc. Accessed August 17, 2025. https://www.plastechco.com/i-sorbe/.

[6] IoWipe is developed, but patent pending. Rosenblatt, Solomon. "IoWipe: The Next Generation of Personal Hand and Face and Surface Sanitizers." Plas-Tech Co. Inc. Accessed August 17, 2025. https://www.plastechco.com/iowipe/.

Surrounded by these white file folders and yellow legal pads, I can't help but reflect on where this relentless drive began. Creativity, problem-solving, and invention didn't just appear overnight; they were shaped by the men in my life.

This compulsion to create—the need to tinker, improve, and build—started with my father, Abraham Rosenblatt. My dad was a very gentle person, with a serious artistic bent. He would paint, sculpt, and, with his pinkie, blend pastel colors to produce beautiful scenes and expressive portraits. He was a talented man, and his art has graced every home I've had since he passed. When I was young, he would take me to the Brooklyn Museum to critique the modern paintings, lecturing me that they were all irrelevant, while prodding me toward the Rembrandts, Dalís, and other masters.

He also enrolled in night school at PS 202, and for a time, I went with him. They offered an odd, but lively, art class. I remember watching him in those classes, using pastels and blending colors to create pictures that were, to my eyes, truly beautiful. There was a distinct energy in the room, a mix of seniors and younger participants, all immersed in their creative pursuits. There was also an art teacher who paid a lot of attention to my father, and, in retrospect, I suspect there may have been a certain attraction between them. It's funny what you realize only once you look back.

Aside from his art assistant, I was also my father's plumbing apprentice. I watched him plunge and clear clogged toilets, repair leaking pipes, and fix whatever needed fixing. Through those jobs, I learned to recognize the tools of the trade, and more importantly, I inherited his fix-it mentality. (Once I became a father myself, it didn't take long for my children to catch on. Any unexplained crash from the next room was quickly followed by their confident, almost rehearsed, chant: "Don't worry. Dad will fix it.") Watching my father work, and watching him talk about the work of others, instilled in me a deep appreciation for creativity and observation. These, I've come to believe, are the forefathers of invention.

My dad also encouraged my own artistic expression. Instead of a paintbrush, I picked up a camera. At first, I saw photography as simply an art form. But the more I experimented in the darkroom, the more I became fascinated by the invisible forces: the chemical reactions that transformed light into image. Much to my surprise, this was the very process that would inspire some of my more "advanced" work in my home laboratory during this era.

I was in high school when I came across a flyer for high school science experimenters. In it there was an article about how chromate salts, when mixed with certain resins, will insolubilize the resins when exposed to ultraviolet light. This was intriguing to me, as it reminded me of the process by which a chemical reaction is used to fix a silver image in photography, just with less light sensitivity. That was the observation. Creativity would come next.

This idea sent me across the East River to my favorite chemical supply house on 23rd Street in Manhattan, where I purchased some of the resins described. I already had the chromate (potassium dichromate, to be specific). I dissolved the resin in water, added the chromate salt, dissolved it in the resin solution and, with a piece of an old shirt stretched over a broken tennis racket frame, tacked in place. Then I coated the "screen" with the chromated resin solution.

I dried the gelatinous mix, traced the figure of an animal on opaque paper, cut it out, and placed it onto the stretched, coated cloth. Following instructions, I exposed it to the sun for a few hours. I found that wherever the cut-out pattern was located on the "screen," the resin remained orangey. The area that received the sunlight was dark brown. Upon rinsing the cloth with water, the orangey area washed out, and the brown areas were insoluble. Upon running ink over the now-patterned cloth, you would be printing the animal pattern, and this printing capability was repeatable.

I didn't know it then, but this is the basis of silk screen printing today.[7] Later, I adapted my grandfather's ultraviolet lamp, used for his arthritic knee, and found that hours under sunlight could be reduced to minutes under the UV lamp. I enjoyed this physical change brought about by light, I guess because it connected chemistry to a kind of photography and because I was proud of myself for embarking on a successful experiment outside of a traditional "educational" setting. I was also proud of myself for taking the product and improving it further. It turns out some of my best learning came from unorthodox classrooms.

Take my Uncle Sam's taxi garage: another man and another classroom that looked quite different from that of PS 202. As a kid, I could ride my bike to my uncle's garage. It was a happening place with much activity. Drivers

[7] "What Is Photo Emulsion Polymer? A Deep Dive Into Screen Printing," ScreenPrinting.com, accessed August 5, 2025, https://www.screenprinting.com/pages/what-is-photo-emulsion-polymer-_sp240036.

came in and out. Sparks flew from the welders replacing fenders and engines of broken-down cabs, and experienced mechanics rebuilt them. This work was even more necessary given the production stoppage during the war. The garage was a point of pride for my uncle who, by then, had become a successful taxi-related entrepreneur. Here's how that happened. This is a quick aside or, rather, an origin story within an origin story that helps explain my own.

After Uncle Sam transitioned from "horse-drawn cart grocery deliveryman" in the Ukraine to a bone fide New York City taxi driver, he began to really hustle. After a few years, he owned more than a dozen taxi cabs and hired drivers from the readily available pool to maintain his fleet, twenty-four hours a day. A driver would end his shift and, with the engine still running, be replaced by the next driver. The driver's seat was never cold.

It was with a crew like this that my Uncle Sam expanded his business, starting Rosenblatt's Friendly Mountain Line. "Call Skidmore 4-1596 if you want to get a comfortable ride to The Mountains."[8] To start his business, he purchased a seven-passenger luxury limousine. Later, with me in tow, he added to the collection. I remember accompanying him to an estate in Syosset, Long Island, a large, horsey estate, with a mansion, open fields, and a long, white-fenced driveway terminating at a seven-car garage. When the chauffeur opened the immense garage doors electronically, you were greeted with a lined-up parade of luxurious, sparkling, black limousines, all jacked up on cinderblocks to keep their tires from cracking. There were Cadillacs, Pierce-Arrows, Lincolns, Bentleys, and Mercedes, the best at the time, all with soft leather and velour interiors, champagne ice-holders, telephone hookups, and interior windows separating the driver from the passengers. The interiors were like little palaces and still retained that new car smell. Because of the war, there was no gas allotment for luxury limousines, and so these beautiful specimens had been sitting deteriorating. It seemed such a waste.

My uncle bought the lot for a pittance. Once at the shop, he punched holes into the rear of these scrupulously hand-enameled limousines, installed nuts and bolts, and attached thick black luggage rack platforms to hold future luggage. After servicing the engines, these luxury cars purred and were ready to go. He would pick up passengers at their homes all over Brooklyn. The fare was seven dollars one way, and they were seated in a millionaire's seat for the 120-mile trip up to the Catskills, getting dropped off at boarding

[8] Federal Register 25, no. 108 (June 3, 1960): 4941.

houses, bungalow colonies, and resorts. As an immigrant, Uncle Sam ended up financially secure, with a fleet of cars, luxury and taxi alike.

His success didn't just serve as an inspiration as it also had direct, practical benefits for our family. Since Uncle Sam maintained a thriving taxi service, largely with a fleet of DeSotos, he had access to a wealth of salvaged parts. If someone in the family needed a car, he'd invite them to his salvage yard, where you could pick and choose from the available DeSoto parts and have your custom vehicle assembled. Taxi models changed only slightly from year to year, so you could mix parts to create a truly unique vehicle. I still remember my own. Uncle Sam cut off the roof, posts, and windows from one DeSoto and welded them onto another less damaged model, repainting the result. The final product was a one-of-a-kind car: dark blue on the top from a 1952 model and light blue on the bottom from a slightly older year. I called it my "combo" DeSoto.

Uncle Sam, while not as artistic or creative, possessed an entrepreneurial spirit that was unmatched. He worked hard, kept his eye open for problems to solve, and was relentless in his pursuit to better himself. I absorbed this, and with my father's creativity, the combination has served me well. The two Rosenblatt brothers, instilling observation, creativity, tenacity, and the desire to improve upon existing systems. I think this must be where it started. While my formal education took place in classrooms, my true education unfolded in my uncle's garage, my bedroom-turned-laboratory, and the aisles of amateur chemical supply shops in Manhattan. Still, I do remember high school having its moments.

I remember a visit by Mrs. Delano Roosevelt, who gave a supporting speech to us about our bright American future. This was hard to imagine. Our chorus reciprocated her message with a rousing performance of songs from the musical *Oklahoma*, which had just premiered on Broadway one borough over.[9] She seemed pleased. At the time, imagining a bright American future felt distant to me. I was more focused on the experiments waiting for me at home, but it did plant a seed. For that, I was grateful.

I remember Mrs. Griffiths, a Modern History teacher from England, who had a reputation as one of the strictest teachers. She was merciless in assigning homework, giving us jaw-dropping amounts regardless of weekends or holidays, and never considered that we had assignments, tests,

[9] "Oklahoma! premieres on Broadway," History.com, March 31, 1943, https://www.history.com/this-day-in-history/oklahoma-premieres-on-broadway.

and projects from other classes. I do recall one exception to her homework insanity. It was a Friday and the left-hand side of the blackboard, which always displayed our daunting homework assignments, was completely blank. Speechless at this radical departure from routine, we questioned Mrs. Griffiths, who soon revealed her reason: in honor of the Queen of England's birthday, she was giving us a break. I had never loved the Queen more. From Mrs. Griffiths, I learned discipline and perseverance, qualities crucial to invention and entrepreneurship. She may have been mostly merciless in assigning homework, but that prepared me for the long hours and meticulous nature of patent work.

Finally, I remember my health teacher, Morty Rodgers, brother to Richard Rodgers of Rodgers and Hammerstein fame, who later, I believe, went on to become OB-GYN at University and Bellevue Medical College.[10] How incredible to imagine the contrast between Morty and Richard at a Thanksgiving dinner—a great composer and writer, producing both plays and adulation across the river, and Morty, whose days were filled not with applause, but with the cacophony of basketball sneakers squeaking on a gymnasium floor. This is not meant to be a slight to Morty, who I admired greatly. Unlike some of my other teachers, Morty wasn't there to push, he was there to nurture. He taught me that leadership comes in different forms, and not all guidance has to be relentless to be meaningful. Whether inside the classroom or out, my most valuable lessons came from observation, experimentation, and the unorthodox learning environments my family (and a few special teachers) cultivated for me; the very foundations of invention itself.

[10] "Mortimer Rodgers, Gynecology Head, 71 [Brother of Richard Rodgers]." *New York Times,* January 9, 1970. https://www.nytimes.com/1970/01/09/archives/mortimer-rodgers-gynecology-head-71.html.

CHAPTER FOUR

MY FATHER'S NATURE

I really did admire my dad. From a very young age, I saw in him a man who soaked up whatever life made available. Through his art, his work, and his hobbies, he fervently created the world he wanted to live in. Part of this meant finding a way to surround himself in nature. The best example of this was the creative transformation of our home and small yard. Modest by nearly every standard (especially given its less-than-ideal lot size) he viewed every inch of undeveloped soil as a chance to bring something to life.

This was no easy feat, considering our six-family home at 415 Montauk Avenue occupied nearly the entire lot where it was situated and the small square footage that remained was a former dump site. Still, despite working full-time to support our family, he seemed to have energy left over to cultivate this environment that reflected his values; one he wanted his family to share in.

Over time, the ten-foot by twenty-five-foot backyard became his own little Shangri-La, an imagined tropical paradise brought to life through sheer ingenuity. First, he designed a new topography. In what felt like just a few days, I watched from the back window as he dug two holes, piling the soil at one end. It was his mountain, springing up over lunch. He lined the excavations with waterproof cement, prepping them for their final transformation into pools. The first pool fed, over rocks, into a second, larger one, which had two different depths. The raised end was topped with two large, imported flat rocks, and between them, he tucked the spout of a water line. Soon, the whole setup came to life with a steady trickle of gurgling water—over the rocks, down a small waterfall, from one pool to the next. Once it was all working, he built planting troughs around it, filling them with irises and multicolored flowers that somehow thrived in their lush little corner of East New York.

But the pools were hardly the only highlight of the backyard transformation. They took up only about half the lot. The rest was our own little slice of

Napa. My dad's craftsmanship, which was something I admired and tried to emulate, was on full display as he built an arbor for the vines he planned to grow. Red Concord grapes, popular at the time, were too ordinary for Abraham Rosenblatt. He stepped up with white Concords—a higher vintage, at least in spirit. Below and adjacent to the arbor he planted radishes, but soon the vines overshadowed the farm, and the crops became meager. However, the grapevines spread and flourished. In almost no time, the pools were stocked with a variety of tropical fish, guppies, zebras, platies, and even Siamese fighting fish. To my delight, the fish prospered with practically no maintenance, the pond itself attracting and propagating mosquitoes and their larvae, perfect gourmet food for tropical fish. While the fish munched on the diminishing mosquito population of late fall, we snacked on the white Concords, straight off the vine (or "Rinse first!" when my mom insisted); their trademark pop and sweetness were like candy.

But it was the warm summer evenings that I liked best, when work wound down, and the family would locate our folding chairs under the arbor. We'd snack on grapes and radishes, treats of after-dinner snacks that took no additional effort to prepare. Often, neighbors would drop by, which my parents enjoyed. I imagine they felt like, despite our modest home, we had something special to offer. Abraham's garden was a gathering place, a welcoming environment, and my parents often sent guests away with a handful of radishes or a bunch of grapes, or plastic bags floating with some of our tropical fish offspring, proud that they had seemingly endless parting gifts to offer.

Abraham's garden oasis was a real gift to my mother, who became amenable to expanding his nature-inspired projects indoors. Before long, we had a large indoor aquarium to complement the outside one, and to function as a winter vacation home for the tropical fish. He custom-built it, of course, a sizable tank in our den that, much to my mother's annoyance, leaked constantly. Sealing adhesives back then weren't what they are today. The aquarium was mounted on top of our radio-console record player, and because of the persistent leaks, we always kept a tray underneath. My mother made sure Dad was diligent about emptying it; he knew what would happen if he didn't. But the fish didn't seem to mind either way. They swam through their lush, little green underwater garden, lit from above by a fluorescent light, the tank complete with an ornate, copper, Japanese Pagoda-style top, every last inch handmade.

Many nights I found myself in still solitude, enjoying the ambience and the company of the fish in the glowing aquarium. There was something serene,