

Close Calls

Autobiography of an Outlier

Curt Wittig

Dedication

Many fine individuals of earlier generations than mine, themselves stuck in dead-end jobs and tragic lives, offered friendship, support, and advice as I stumbled toward adulthood. They warned of desperation, inevitability, and indecision. They argued that education was the only viable means of escape from the dire fates afforded the underclass. Having paid the price, they knew. My callous disregard disappointed them at the time and me later. Only after I reached adulthood was their counsel duly appreciated. I wish to register my deepest gratitude, belated but not attenuated by time's passage.

Happiness throughout my adult life has been due to the love and companionship of Michele Andrisin Wittig, who is the real deal and the original "super." We accept one another for who we are, no strings attached.

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Cover Art

Front

Birds by Robert Wittig

email: wittig.robert@sbcglobal.net

See page 265 for information about Robert Wittig

Rear

A Disappearing People by Meirav Gebler

URL: www.meiravgebler.com

email: meiravi.g@gmail.com

See page 265 for information about Meirav Gebler

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"If I lose my demons, I will lose my angels as well."

Rainer Maria Rilke

Preface

One year ago, writing a substantial autobiography could not have been further from my mind. If someone had told me then that it would not only happen, but it would be launched quickly and finished within a year, I would have assumed he or she was either pulling my leg or nuts. Yet, this is what came to pass.

Here in the preface, you will learn what motivated me to put down in print the events of my life, how the project began, and how it evolved. There will be insights into my character, along with hints and previews of what is to come. Indeed, thinking about these things led me to further reckoning and introspection that found its way onto the printed page. My hope is that you will not be disappointed.

In looking back, this book turned out to be a great adventure. Challenges were encountered on fronts as disparate as ancestry and writing. The former involved extensive digging into the past, which required help from relatives and professional genealogists. The latter called for a departure from the scientific style that has been my staple for almost half a century. In other words, this style was ill suited to the task at hand. After all, the tables had been turned. The subject under the microscope was no longer an experiment or theory, but me.

It is said that an old dog cannot be taught to do new tricks. To be sure, I realized at the outset that it would not be easy to free myself from the shackles of a prose whose acme is precise expression, a lexicon whose succinctness and crystalline exactness desiccate language, rendering it devoid of vitality, unable to express angst and merriment. Nonetheless, I decided to give it a try. And why not! The worst that could happen is a document that goes largely unread.

Writing something of this nature is facilitated by the kind of discipline that enables one to apportion and use time in prescribed aliquots. This is not me – never has been, never will be. My nervous system simply does not submit to such self-control. I have an obsessive side, however, that saved the day. It enabled long, uninterrupted stretches of time to be spent in ferocious pursuit of the goal.



The author in Greenwich Village (2010)

Preface

Getting started was altogether another matter. Imagine if you will, a predator capturing prey. In the case of a book, the writer is the prey, while the predator is that intoxicating potion: motivation, which comes in many proofs and flavors. In my case, money was not a motivating factor, nor was any desire to tell the world about myself, nor was some traumatic experience. What motivated me was not any of those things. I had agreed to write an autobiographical piece for a scientific journal. It was to be pithy, limited in scope, and short.

This changed. Revisiting my past and unearthing facts about my ancestors begat an ardent fascination. The plan to write just an article was scrapped, replaced with something more ambitious. And so the odyssey began. The world from which I had sprung closed about me like a vise. It would not let go until many skeletons had been exhumed. The predator had stalked me, waiting for the right moment to pounce. And pounce it did. I found myself in the belly of the beast.

I shall say nothing more about my motivation, but let the pages speak for themselves. The book's genesis, however, is another matter. It warrants an explanation.

I have groped and stumbled my way through life's mazes, surviving time and again through sheer luck. You will come to appreciate this in due course. My adult life has been spent in academia, which by all accounts suits my temperament and personality. The combination of teaching and research in a job such as mine is a truly rewarding way to make a living. I cannot help it if I am lucky.

My research has crossed several disciplinary boundaries. Were one to assign it to a single area, though, it would be chemical physics, with the understanding that research scrapes and erodes traditional boundaries, almost by definition.

My good friends and scientific colleagues Hanna Reisler, Stephen Bradforth, and Jingsong Zhang went out of their way to do something nice for me in 2013. They organized a Festschrift, which turned out to be quite substantial, comprising sixty-one articles. A scientific Festschrift is



Passages
Robert Wittig

Preface

a special issue of a prominent journal – in my case *The Journal of Physical Chemistry* – that is dedicated to, and centered on, a person's career. An autobiographical sketch precedes the scientific articles. It was that autobiographical sketch that got me started. I estimated the task would take a couple of days. That turned out to be a world-class miscalculation.

Putting together an autobiographical sketch for the Festschrift was my first attempt at anything of this nature. The style I chose was unorthodox for autobiographies that appear in scientific journals, and the article that emerged was undoubtedly on the long side. It also was loaded with photos and pictures, which complicated matters due to copyright issues. The chief editor, George Schatz, is an eminent scientist and an eminently reasonable person. In speaking with him, the decision was made to post the article on my website. Festschrift readers would be directed there and encouraged to download and read it.

At that point, it was still not my intention to write a book. The idea was to write an article of about thirty pages. One thing led to another, however, and before long the writing had undergone a profound transformation: from chore to addiction. Once the article was on my website, there were no longer any limits to size, style, formatting, and so on. And of course there was always something new to be added. The project entered a new realm, and I began to work feverishly on an expanded version. As the manuscript grew in size and scope, it seemed just a matter of time before a book would emerge. And here we are a year later.

A challenging aspect turned out to be obtaining accurate information about my ancestors. Census, birth, death, marriage, divorce, and immigration records were helpful, though not always consistent, or even available. The only way to deal with the inconsistencies was to gather data from multiple sources. Photos were invaluable, particularly those that survived transit from the German-Polish border region of Upper Silesia to Chicago. Information that passed from generation to generation via word of mouth helped, though determining its accuracy ranged from difficult to impossible. Family lore was often rife with contradic-



Far Away
Robert Wittig

Preface

tion and inaccuracy, and embellished with fantasies. Genealogists provided reliable information through their impressive ability to unearth records.

The information obtained through family records and photos was combined with the results of the genealogical research. This enabled me to piece together a reasonably coherent picture of the moves undertaken by my paternal grandmother to rescue her son (my father) from the clutches of the Nazis. She traveled to Chicago, met friends who had emigrated earlier from Upper Silesia to Chicago, made new friends, established a base camp, entered into a most interesting marriage, and engineered a plan. She then returned to Germany and carried out the last stage of the move. That operation took place in 1935. It was quite something, and not a minute too soon. Eight years later my father fought the Nazis as a crewmember and "voice interceptor" (a.k.a. interpreter) on a B-17 bomber (the so-called Flying Fortress) that flew out of Kent County, England.

On my mother's side, her father was a nutcase and a real character. He assumed five names that we know of, and who knows how many more are out there. He was arrested forty-plus times, ran charity-based religion scams that got him pitched out of cities between New Jersey and Iowa, and had such a mysterious past as to place him in a league of his own. There is no shortage of amazing people and fabulously interesting events in my family history, and it all begs to be told.

Regarding my own life, being aware that many of my peers would be reading this, at first I considered focusing on scientific things of interest to physical chemists. This would have conveniently left out my teenage years, which reads like a documentary of personal failings and steps along paths to nowhere. As soon as the writing took off, though, the scientifically focused version was scrapped in favor of a more complete picture of my life. The

early period, say before the age of twenty, could easily take hundreds of pages. The version before you provides a glimpse: a collage of snapshots captioned in hindsight, a pointillist image created using a minimal basis of points.



Other Side of the Tracks
Robert Wittig

Preface

My early social and educational paths were non-traditional in the extreme. Hence, they shall occupy at least as many pages as are allotted my professional life. Not everyone is blasé about dredging up embarrassing and unflattering episodes from their past and putting them on display, and I am no exception. It took courage, and no small amount of it, for me to commit some of the personal stuff to paper. This material exposes the mistakes, human frailties, and near-disasters that characterized my adolescence: fights, running afoul of the law, family issues, miserable performance in school, violence, drinking and gambling, loneliness, mayhem, and more. A miraculous twist of fate saved my ass, and led me to an intellectual awakening and a self-imposed life sentence of scholarly pursuit.



Left Behind
Robert Wittig

My life prior to the age of twenty now merely conjures up memories and begets fantasy. I have never returned to the places and ways of those formative years, except through the retrospective maneuvers of a psyche that seeks answers. The cohort of young cannibals to which I belonged most likely has dispersed, been absorbed by their environments, or succumbed to their demons. I have tracked down a few of those people, sometimes yielding sad closure, other times pleasant surprise, but always underscoring how

divergent our paths have been. That period is a capsule of time in my memory that remains fixed at the point of separation.

My colleagues know better than to anticipate a Reader's Digest version from me, and they will not be disappointed. Even those who think they know me well will be treated to revelations and one hell of a story. Some of it will be dark, and take the unsuspecting reader by surprise. Nonetheless, I feel it must be told, lest the reader fail to gain a sense of who I am, and with it any appreciation of what sometimes underlies and motivates my behavior.

Preface

Part 1 of this book begins with my ancestors and ends with my appointment in 1973 as Assistant Professor of Electrical Engineering (EE) at the University of Southern California (USC), while Part 2 covers from then until now. Part 1 is non-scientific, except near the end, where graduate school and postdoctoral stints are discussed. Even there, the scientific material is given short shrift. The non-scientific material respects the adage: What is said must be true, but not everything that is true must be said. My guess is that even scientists who read this autobiography will judge the non-scientific stuff to be the more interesting.

My forty-one years as a USC faculty member is covered in Part 2. It is focused on my scientific work. Hopefully it deals with the science in a user-friendly way. I was a graduate student in the EE Department at the University of Illinois in the mid-sixties. The PhD requirements included fourteen graduate courses, an MS thesis, and two languages, in my case German and French. The majority of the courses I took were from the Physics Department, even though my major was EE. In light of this, my promotion to Associate Professor of EE and Physics made sense. Then came my promotion to Professor of EE, Physics, and Chemistry. Later, EE was dropped, then Physics, leaving just Chemistry. This is interesting, as my formal training in the field of chemistry is limited to the freshman year. To this day, I draw a blank when the conversation turns to mainstream chemistry.

Classroom teaching was given low priority during my years as an assistant professor. This would not be considered appropriate nowadays, nor was it back then. My enthusiasm was nil for a class on electromagnetic theory that met once a week from 7:00 until 9:30 p.m. (not my choice). A seriously mathematical subject such as this deserves better than two-and-a-half hours at the end of a hard day. Likewise, lectures that were broadcast in real time from the School of Engineering to local aerospace industries (also not my choice) held no appeal to me. On the other hand, I enjoyed carrying out research with graduate students and postdocs, and the occasional special topics courses I taught were stimulating and great learning experiences for both me and the students.



Einstein Lurking
Robert Wittig

Overall, I was popular and delivered okay lectures, but my teaching could have been better. This changed in the mid-eighties, and my teaching is now considered quite good. Much of the credit for this transformation is due to my obsessive side, which pushes me toward perfectionism on whichever topic is under consideration.

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Beginning in the mid-eighties there were periods of intense service: landing and running a research center before it was the vogue (Center for the Study of Fast Transient Processes, 1986-1997), heading graduate student recruitment, serving as Chair of the Department of Chemistry, Section Head of Physical and Theoretical Chemistry, recruiting faculty members, and more.

It would be unwise for me to detail the research that has gone on in my group over the past four decades, research that involved literally hundreds of coworkers. A recital of achievements has no place in the context of a broader audience. Instead, I shall focus on the human element through photos and anecdotes. I hope that the work itself is presented in a way that can be appreciated by technically literate non-specialists.

Acknowledgements

My sister, Jennifer Seat, played a significant role in the preparation of this book. Her recollections complement mine, as she is sixteen years younger than I. She also maintains good family records. A long-lost cousin, Kristen Quirk, had done a great deal of genealogical research. The information and tips she passed on to me were highly appreciated and helpful, notably, important family photos. Wayne Gavinski and I grew up together on Saint Georges Court. He provided information regarding things that transpired after my departure. Sometimes my memory had played tricks, while at other times the details were never before known to me. Michael Ray Brown helped greatly by steering me toward proper usage of the English language.



Lemon Mouse
Robert Wittig

Comparing notes with Bob Harris from the UC Berkeley Chemistry Department was interesting. His ancestors had lived on Milwaukee Avenue, just two blocks from where I grew up on Saint Georges Court. Lee-Ann Smith-Freeman received her Ph.D. in Chemical Physics under my supervision in 2009. She then attended Santa Clara Law School in the general area of intellectual property, specializing in patent law. Lee-Ann has helped keep this document legal.

Preface

On the science side, this autobiography falls far short of doing justice to the many people who participated in my group's efforts and shared in its successes. The students, postdoctoral researchers, visitors, and collaborators were absolutely wonderful, and many others helped me in ways too varied to list. I owe an enormous debt to those whose dedication and selfless efforts made the research happen and the experience fun. This debt cannot be repaid in kind. Rather, it is a seed of lifelong bonds. Special thanks go to Michele Dea, the administrative wizard of the Department of Chemistry, a person who has helped me for forty years.

Again, a detailed chronology of projects, dates, and participants would result in a significantly longer document, as there have been hundreds of coworkers. Most of the specific projects have been omitted for the sake of brevity. This at first bothered me, as they are deserving of recognition. Part 2 would have quadrupled in size, however, had they been included. Experts on such matters assure me that brevity is the lesser of the two evils. Indeed, it is the soul of wit. My guess is that the many photos in Part 2 will evoke interest and memory more effectively than would a recitation of technical achievements.

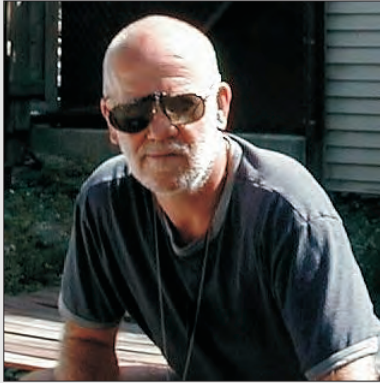
The University of Southern California has been my professional headquarters for more than four decades: the first eight years in Electrical Engineering, followed by thirty-three years in Chemistry, including several years in Physics during the transition. The departments have been wonderful. It is unfortunate that they are embedded in an administration wedded to one-size-fits-all micro-management.

My wife Michele is responsible for virtually all the non-scientific good stuff that has transpired throughout my adult life. This will become obvious as you read along. My belief is that without the non-scientific good stuff, there would not have been a scientific career. At least I know myself that well.



Aix-en-Provence, 2013

Preface



Robert Wittig
His house is the one on the left
in the painting.



Painter's Den
Robert Wittig

My brother Robert is an artist, though he refers to himself as a painter. Many of his paintings can be seen in this book, for example, the ones sprinkled throughout this Preface. Bob lives and works in the Chicago neighborhood where we grew up. His house is, in fact, next door to the house in which our family lived from 1952 onward. It is not shown in the above painting, but would be to the left of my brother's house. Hence, it comes as no surprise that his work reflects and captures the spirit presented by this part of the city years ago. His art fits well this autobiography. In addition, the information and insight he passed to me through kinship's prism helped greatly and required no interpretation.

The terms autobiography and memoir are frequently used interchangeably. There is, however, a subtle but important distinction. As noted by Gore Vidal: "A memoir is how one remembers one's own life, while an autobiography is history, requiring research, dates, facts double-checked." According to this, my memoir plays a secondary yet essential role in my autobiography. Anyway, here goes, starting with my parents.



Reflecting
Robert Wittig

Curt Wittig
Los Angeles and Santa Monica
July 2014

Preface

Part 1.

Before the Age of Thirty

Beginnings

My father was born Kurt Wittig on August 15, 1921, in Beuthen, Germany. His given name was changed to Curt fourteen years later after he came to the United States. At the time, Beuthen was a city of roughly 70,000 situated at the eastern edge of the ostensibly German part of Upper Silesia. The word ostensibly is used because ethnic Germans and Poles each laid claim to the area, regardless of any borders that might have been drawn. Each group was of resolute determination, ready and willing to fight, in fact, to the death if need be. Of course my newborn father enjoyed the comfortable station afforded an infant: oblivion regarding all but life itself.

The social situation into which my father was born was depressing, frustrating, unstable, dangerous, and likely to go downhill from there. Years of social and economic chaos, fighting in the streets, and an impotent political system had exacted their toll. Upper Silesia was in the process of being partitioned into German and Polish sections. The fighting that raged in the streets of Beuthen that summer reflected the fact that opposing forces had reached a stalemate there. Beuthen would soon be a border town.

Upper Silesia had a sordid history of ethnic strife that dated back centuries. It had been hotly contested after the First World War because of its coal and mineral deposits, its large and well-organized industrial base, and the ethnic hatreds that permeated the region's every nook and cranny. Years of fighting between ethnic Poles and Germans, as well as numerous diplomatic initiatives, had resolved nothing. Many had died as a



House of Tall
Robert Wittig

consequence of the hostilities, and the outlook appeared bleak. It had been hoped that the March 1921 Upper Silesia plebiscite (ballot measure) would resolve the issue of where to place the border. The plebiscite was carried out without disrupt-

Part 1. Before the Age of Thirty

tion, but it did not settle the dispute. The entrenchment, hatreds, and anxieties that preceded it continued, for the most part unabated. When armed conflict followed in the plebiscite's wake, a decision on the matter was brought before the League of Nations. That resulted in the partition of Upper Silesia into Polish and German sections, which took effect in October of 1921.

Because of how the border was configured, the German city of Beuthen was referred to as the Beuthen Wedge. Poland lay to its north, east, and south, and the Polish city of Katowice was only twelve kilometers away. Beuthen's inhabitants were of German, Polish, and mixed German-Polish ancestry. It is not surprising that my father grew up speaking German and Polish. He told me that a border crossing involved nothing more complicated than a short walk. His birthplace is now Bytom, Poland, and all of Silesia is Polish except for a small part in the Czech Republic.



The 1921 Upper Silesia plebiscite vote (Google Images)

Throughout my father's time in Germany, the country was in the throes of deep economic and moral depression. He was a couple of years old when his father, Karl Wittig, died from tuberculosis that had been contracted years earlier and exacerbated by the ingestion of poison gas in the First World War. Kurt was an only child, and his mother had to struggle to eke out a rudimentary existence. Theirs was a nomadic life: frequent moves, him changing schools and staying with friends and relatives while his mother went off to seek a better life for the two of them, a short time in an orphanage, and a bout with diphtheria, which had a 10% mortality rate at the time. On top of all that, they endured the frustrations and insults that accompany such existence.

My father and his mother left Germany in 1935. They went directly to Chicago, where they established roots that would turn out to be permanent. Indeed, they lived out their lives in Chicago, except for my father's military service and a few vacations. Neither of them ever again set foot on German or Polish soil. They learned English; my father began high school; and his mother worked, stitching expensive fur coats made of mink, sable, or chinchilla by hand. Not once was my father known to have uttered a good word about Beuthen or its environs.

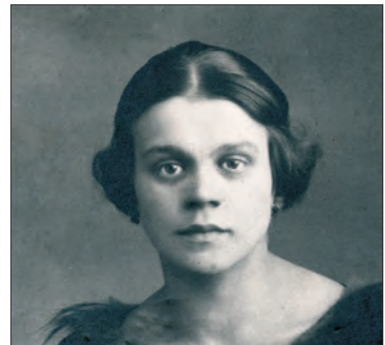
Part 1. Before the Age of Thirty

This cursory overview provides context. It does not, however, tell the story that needs to be told. While I was growing up, it was, roughly speaking, the extent of my knowledge regarding my father's European origin. Later, between my siblings and me, we slowly but surely extracted a tidbit here and a tidbit there, keeping a mental log and storing old photos and miscellanea. Eventually a coherent story began to take form. Skeletons from the past were imbued with life and vitality. Later yet, we dug much deeper, and an epic tale jumped at us from out of the past. Let me begin this tale by looking into the strategies and activities that enabled my father and his mother to get out of Nazi Germany.

Dad's Mother

The picture presented by my paternal grandmother was that of a person who kept pretty much to herself. At the same time, she distrusted politicians and organized religions with a passion, and when these topics came up in conversation she would let fly with strong opinions. An intensely private person, she took a lot of information with her to the grave. To the best of my knowledge, she never discussed her life in the border region of Upper Silesia with any of her grandchildren. Likewise, she was determined that they would know virtually nothing about her family background and ancestry. You could not extract such information from her for love or money, and God knows we tried. She protected her past with the determination of one who had endured a great deal and had learned, perhaps the hard way, to afford privacy its due respect.

She had been born Klara Wynczek on May 19, 1893, in the small town of Ruda, which was only five kilometers from Beuthen. Her parents were Philipp Wynczek and Frances Wycisk (maiden name). Her birthplace is now a northern section of the city of Ruda Slaska, Poland. She married a person named Karl Wittig, and they lived in Beuthen following the First World War. There is no document of any kind in the family trove concerning Karl: birth, marriage, divorce, military, death, photograph, ancestry, writing, and so on – absolutely nothing. Klara would sidestep the issue whenever she was asked about him. He remains a mystery. All information about him has been passed down by word of mouth. Were I to someday find out that Karl never existed it would surprise me, but not shock me.



Klara Wynczek

Karl is said to have died in 1923 or 1924, depending on the source of information. Klara gave birth to my father on August 15, 1921, and returned home three

Part 1. Before the Age of Thirty

days later to Hohenzollernstrasse 10, near the center of Beuthen. Whether she was living with Karl at the time is not known. From official records, it appears that her parental family lived at that address, and she remained at Hohenzollernstrasse 10 until 1935, albeit intermittently after 1928. She had a half-brother, Karl Czajerek, and he also lived at that address.



The thick black line indicates the 1921 border. Beuthen, Gleiwitz, and Kattowitz (Bytom, Gliwice, and Katowice in Polish) constituted the Industrial Triangle (blue). What is now a northern section of the Polish city Ruda Śląska was Ruda, Poland after 1921. Klara was born in Ruda, my father in Beuthen. (David Rumsey Map Collection)

When the border was drawn in October of 1921, Ruda and Beuthen became cities in Poland and Germany, respectively. It is interesting that a couple of kilometers one way or the other dictated whether my father would be raised in Germany or Poland.

The internecine conflict that engulfed the area at the time of the plebiscite was devastating for Klara, who had strong ties to each side. She gave birth to my father in the midst of armed conflict in

Beuthen. Shortly thereafter she found herself separated from relatives in Ruda by a border that was serious, and would become considerably more serious later. It was one thing for my father to walk nonchalantly across the border as a youngster, but there were strong feelings throughout the region, and adults were well advised to think twice before taking such a stroll, notably from the early 1930's onward.

It is hard to imagine that Klara's marriage did not incur problems. She was an ethnic Pole living in Germany, and her husband was a German who had fought against ethnic Poles during the First World War. (Poland did not regain its status as a sovereign nation until after the First World War.) In addition, immediately following the plebiscite, Polish insurgents had attacked Upper Silesia from the east in an attempt to gain territory and thereby improve their bargaining position. German forces of course had counter-attacked from the west. The border re-



Border crossing in Upper Silesia (1930-1932)

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flected where the fighting had been the fiercest. Such a situation does not make for easy relationships between neighbors, which is one hell of an understatement.

My siblings and I have been unsuccessful at tracing important parts of Klara's ancestry, and not for lack of trying. Polish is clearly implicated, and presumably dominant, on the basis of her maiden name (Wynczek) her mother's maiden name (Wycisk), her birthplace, and an older half-brother with the surname Czajerek. However, there is likely a German component, as well. Old photos and scribbling on the backs of the photos support this premise.

Following Klara's marriage to Karl, she morphed the spelling of her maiden name from Wynczek into a variety of German forms, preserving the pronunciation as much as possible. Winschzyk is one example, and the others were similar. Such subterfuge is consistent with the complicated situation Klara found herself in.

It was undoubtedly a delicate time for a person with both German and Polish ties to be living in the Upper Silesia border region. Strife was everywhere. In addition to the timeless and ubiquitous German-Polish antagonism, from late 1918 through 1920 Poland was engaged in a short war with Czechoslovakia (lasting a couple of weeks), and in three other wars with its eastern neighbors: Ukraine, Lithuania, and, of greatest significance, the Soviet Union. And to think, Nazi Germany was yet to come.

Poland's border disputes calmed down in 1923, and there followed a period of relative peace with her neighbors, with emphasis on the word relative. Internally, a chaotic, ill-fated attempt at democracy that began in 1919 continued until 1926. The many factious political parties that vied for power could agree on virtually nothing, and in 1926 Józef Piłsudski engineered a successful military coup. He took control of the government and ran Poland as a strongman until his death in 1935. He advocated a multiethnic state, which was in line with the fact that one third of the population consisted of ethnic minorities: Ukrainians, Jews, Belarusians, and Germans.

Roman Dmowski was the archrival of Piłsudski throughout this period. He was a vicious, outspoken anti-Semite who advocated an ethnically pure Poland. Among other things, he argued that to be a Pole one had to be Roman Catholic. No exceptions would be permitted. Dmowski had a significant following despite his radical positions, and this portended danger. The bottom line is that the situation



Photo taken at a gathering of Klara's family: Note the Polish newspaper.

Part 1. Before the Age of Thirty

in Poland appeared hopeless. Nothing resembling democracy was on the horizon; political chaos and strife would continue indefinitely; the economy would remain in tatters; and hostile neighbors surrounded her.

The mid- and late 1920's witnessed the Nazis gathering momentum in Germany, which put her neighbors on edge to say the least. The Nazis were a distinct minority at the time, but what they lacked in numbers was compensated by organization and a fanaticism that knew no bounds. An opportunistic demagogue, Adolph Hitler, headed the Party. He was regarded widely as a failed local politician who lied through his teeth but could be an effective orator in front of the right audience.

The depression that beset the industrialized world in 1930 exacerbated regional political problems. It brought to the forefront the smörgåsbord of racial, ethnic, and cultural hatreds that had lain dormant for many years, waiting for an opportunity to emerge. This menacing stuff fueled the Nazi propaganda machine.



Bleak
Robert Wittig

Hitler had laid out his Lebensraum policy in *Mein Kampf*, so his intentions in relation to Poland were no secret. It is unfortunate that few people read *Mein Kampf* when it came out.[‡] Things might have been different, as in it he reveals himself to be a narcissistic psychopath. He had even explained to his inner circle early on, and to his generals after he took power in 1933, that the Polish people would be subjugated and to a large degree eradicated, enabling Germany to take over the area and use it for agriculture and raw materials.

The looming Nazi threat from Germany was not Poland's only major problem, as the country was in a mess politically, economically, and militarily. In addition to the dangers on its eastern fronts, it had to deal with a large, hostile German mi-

[‡] Volumes I and II of *Mein Kampf* (*My Struggle*) were dictated to Rudolf Hess in 1924, while Hitler was in jail for the Beer Hall Putsch. They were published in 1925 and 1926. The original title was *Four and a Half Years of Struggle against Lies, Stupidity, and Cowardice*. It was the publisher who suggested the shorter title *Mein Kampf*.

Part 1. Before the Age of Thirty

nority, for example, in Poland's allotted portion of Upper Silesia. This entrenched and powerful fifth column was trouble waiting to happen. You can see why putting distance between one's family and such a scene was a good idea. It was hard to imagine Upper Silesia emerging from this mess without serious bloodshed.

Elections were held in Poland in 1928. Thirty-four parties took part and, as expected, there was a great deal of treachery and chaos. The party that supported Piłsudski, the Nonpartisan Bloc for Cooperation with the Government (BBWR), prevailed, if you call getting 29% of the popular vote prevailing. The Piłsudski supporters used every devious and/or heavy-handed tactic they could get away with to sway and coerce voters. When the smoke cleared, BBWR had garnered more votes than any other party, so it was declared the winner. Historians consider this election – as fraught with problems as it was – the last free election in Poland until 1989. No wonder Eastern Europeans are so cynical.

From Beuthen to Chicago

Pessimism hung heavy in the air, its anthem a banshee's wail of forlorn by day and terror by night. Its decree was everywhere: in the streets, bars and cafes, back rooms and back alleys, on every pair of lips. A toxic ether that permeated, poisoned, and gave no quarter had been let out of the bottle.

Klara abandoned any hope of a stable life for her and her son in Upper Silesia. Her vision of what the future held in the part of the world where she had been born and raised was as dismal as could be imagined. Sadly, her apocalyptic expectations proved to be prescient. Hitler was not about to go away of his own accord, and history spoke clearly on the matter. Such despots eventually maneuver and bully their way into the driver's seat.



Firestorm
Robert Wittig

Part 1. Before the Age of Thirty



On the Move
Robert Wittig

Poland would be no match against a Germany headed by Hitler. Besides, the Poles would squabble among themselves until it was too late. The rest of Europe was another matter, to say nothing of the United States. They would weigh in together against the Nazis. The Soviet Union was less predictable. In general, they were not to be trusted, but in light of Hitler's Lebensraum policy and his hatred of Marxism, the Soviets would surely take up arms against Germany.

In short, another major conflagration was on the way, and it would likely be as bad or worse than the previous one. Klara perceived several options, one of which stood out as most attractive. She and her son would abandon Upper Silesia. They would emigrate to the United States, specifically Chicago, where she had friends and contacts. To be safe,

though, she would first visit Chicago for a long enough period to test the waters.

Klara's plan began to take form in 1928 with her first trip to Chicago. She left her home in Beuthen at Hohenzollernstrasse 10 on July 28, 1928, and arrived in New York a week or so later. From there she went straight to Chicago. No one can convince me that the transition from Beuthen to Chicago would have been achieved without the help of friends who had already emigrated from Beuthen and its environs. It is hard to construct a rational scenario in which



This is roughly 200 meters from the apartment of Klara's family at Hohenzollernstrasse 10. (Google Images)

Klara, who had scarcely traveled outside Upper Silesia, left school after the sixth grade, and spoke no English upon her arrival in Chicago, achieved what she did on her own. More power to her if she did, though that is highly unlikely.

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Pulling into the City
Robert Wittig

Klara's immediate goal was to size up the employment situation and what life was like. She had no difficulty finding work in the apparel industry with help from her friends. The intoxication of the 1920's had not yet been stopped dead by the stock market crash of October 1929 that came to be known as Black Tuesday. Klara became a furrier: a person who turned animal pelts into high-end fur-coats through arduous hand stitching. This introduction to the Chicago

labor force stuck. She became proficient at, and accepting of, this kind of work. She stuck with it for the rest of her life. There were other jobs from time to time, such as department store clerk, but working with furs was her mainstay.

Klara's older brother, Karl Czajerek: The black mark on his shoulder is ink on the original photo.

Right: his daughter and my father



Klara's detailed movements between 1929 and 1934 have been difficult to trace. She traveled between Beuthen and Chicago several times, whereas my father stayed in Germany. He was ferried from one location to another in and around Beuthen, staying with different families, going to different schools, noting that his mother would come and go in a seemingly random manner, dashing about hurriedly whenever she made an appearance. He did not know, and no one was about to tell him, what she was doing or why she was doing it. My father was a confused and lonely child.

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The maneuvers that transpired during Klara's periods in Beuthen were rationalized to anyone who asked as due to economics. Relentless depression had racked the area throughout most of the 1920's. It abated as the end of the decade drew near, but started up again, and with increased fury, when worldwide depression struck in 1930. Of course, my father's frequent moves were for reasons other than economics, especially after 1932.

The worldwide depression indeed had stopped German economic recovery in its tracks. Worse yet, it was a godsend for the Nazi Party's propaganda machine, which required scapegoats to fuel their engine. The Nazis achieved large gains between 1930 and 1932.

The Great Depression took hold in the United States like a plague. The bottom fell out of the economy, which would soon be placed on life support and remain there for a decade. Klara would be lucky to maintain her job. Her pay would be reduced, and it would be difficult to save. Central and Eastern Europe would be hit hard, and not just economically. She could see from her vantage point in Chicago that the worldwide depression would accelerate the deterioration of the fragile political situation in Europe.

Klara had spent enough time in America by 1930 to convince her – not that she needed much convincing – that the United States was preferred hands down over Germany, despite the Depression and all that went with it. To pull off the move from Beuthen to Chicago in the social and economic climate of the time would require strategy, planning,

and courage, but there was never any question about the goal. Germany would fail in ways it had never known with the vicious Nazi bastards at the helm. In her view it was never a question of whether they would take the helm, only when, as well as whom they would drag down with them, and how much damage they would inflict before they were beaten. Upper Silesia did not have a prayer, and being in the line of fire it would suffer more than most.

The period 1930-1932 was one of survival: trips between Chicago and Beuthen; arranging places for my father to stay; holding onto a job in Chicago; trying to save money; networking; attempting to master the impossible language called English; and above all staying sane. Life in Chicago's bowels was hard. Yet, im-



Living Modestly
Robert Wittig

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migrants arriving from Europe brought tales of terror, gloom, and mayhem that strengthened her resolve. It took a small miracle, but she managed to save a reasonable amount of money. She would save a bit more, return to Germany, collect her son, and bring him to Chicago.

Germany in 1933

Klara's plan shifted into high gear in 1933. Urgency became paramount when President Paul von Hindenburg appointed Hitler as Chancellor of Germany on January 30 of that year. Germany could forget right then and there about its history of nurturing and promoting the arts, sciences, medicine, literature, music, and all things culture. At that point it had been taken over by monsters. Hordes of execrable scum bowed and scraped to one seriously sick son of a bitch, ready and eager to carry out his butchery without so much as a second thought. Germany entered a new realm of evil and depravity.



Shipwreck
Robert Wittig

All hell broke loose. Hitler made his Proclamation to the German People on February 1, the day after being named Chancellor. Nazi storm troopers immediately began to violently attack trade unions and the Communist Party: disrupting their political meetings, beating speakers and audiences, banning newspapers, beating people who were perceived as leaning to the left politically in their homes and places of work, and firing anyone in government service who was not a Nazi supporter. They arranged the Reichstag fire on February 27 to provide them with an excuse for implementing their agenda, hanging the blame on the Dutch Communist, Marinus van der Lubbe. The Reichstag Fire Decree was passed the next day, sweeping aside civil liberties.

The situation immediately descended into a barbaric rampage. The Nazis began rounding up and jailing their political opponents on March 1. The election held on

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March 5 was a Nazi display of violence and bullying, with brownshirts and storm troopers marching through the streets fully armed and with attack dogs, intimidating and beating voters. Despite all that, the Nazi's still were unable to achieve a majority, and consequently they were forced into a short-lived coalition with the German National People's Party. The Communist Party was outlawed and its deputies were jailed and driven underground. The Social Democrats fared only slightly better, and deputies from the Bavarian State Parliament were ousted on March 8. The newspapers of the Center Party (mainly German Catholics) were banned, and Center Party members holding government positions were all fired.

Hitler proclaimed the Third Reich on March 15; the Dachau concentration camp opened for business on March 22; the Reichstag passed the Enabling Act that made Hitler dictator of Germany on March 23; the Gestapo was established on April 26; the Nazis staged massive book burnings on May 10;[†] eugenic sterilization was legalized on May 26; all non-Nazi parties were outlawed on June 21; and the Law for the Prevention of Hereditary Diseased Offspring was implemented on July 14.



Books
Robert Wittig

[†] The German Student Union began burning books already in April, books that did not embrace Nazi ideology, books by Jews, socialists, intellectuals, and others. This "action against the un-German spirit" took place in thirty-four university towns throughout Germany. It received considerable support from the populace. Nazi leadership championed it as a rousing success. Joseph Goebbels delivered a speech to students in Berlin: "The era of extreme Jewish intellectualism is now at an end. The breakthrough of the German revolution has again cleared the way on the German path....The future German man will not just be a man of books, but a man of character. It is to this end that we want to educate you. As a young person, to already have the courage to face the pitiless glare, to overcome the fear of death, and to regain respect for death – this is the task of this young generation. And thus you do well in this midnight hour to commit to the flames the evil spirit of the past. This is a strong, great and symbolic deed – a deed which should document the following for the world to know. Here the intellectual foundation of the November Republic is sinking to the ground, but from this wreckage the phoenix of a new spirit will triumphantly rise."

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The Nazi salute, accompanied by the greeting "Sieg Heil" or "Heil Hitler," was made mandatory for all civilians on July 13.[‡] Anyone who refused to go along with it, including foreign visitors, was subject to arrest and incarceration. Jews, however, were forbidden to give the Nazi salute. By mid-July, less than six months after Hitler was named Chancellor of Germany, the Nazi political apparatus, with the support of its thugs and goon squads, had taken over virtually everything, and their agenda was being carried out with ruthlessness and impunity.

Klara had figured out much of the Nazi agenda and where it would lead already by 1928. She had, however, underestimated its intensity and the speed with which it would be implemented.

President Hindenburg died on August 2, 1934, at the age of eighty-six. He had been in failing health (lung cancer and senility), and it was known that his death was imminent. Hitler moved in and assumed control of the government on the day before Hindenburg died. He combined the positions of president and chancellor, and he appointed himself Führer, the supreme leader of Germany. He assigned to himself extraordinary powers.

It is sometimes stated that Hitler became President in 1934, and it was then that the Nazis took complete control of the government. This is misleading. The takeover was complete *de facto* by mid-summer 1933, if not sooner. By then the Nazis had taken control of the country and wiped out virtually all opposition. There was no stopping Hitler. The moves that followed were inevitable, mere formalities.

Germany was preparing for war. In a few years the Nazis would have the largest and most effective military force in Europe, if not the world. It was inconceivable that they would not attack their neighbors, as well as do terrible things to many of their own citizens starting with the Jews. For the most part, the rest of the world watched. They may have been horrified, but they stood by and watched.



Nazi rally in Nuremberg in 1934 – one of many held there

[‡] Arthur Moeller van den Bruck introduced the term Third Reich in a book by this title in 1923. The Italian fascist Benito Mussolini introduced the straight-arm salute in 1922. Hitler already held a title of Führer in the embryonic Nazi Party in 1921.

1934 in Chicago

Klara spent 1934 in Chicago. She was not a person given to optimism, even in trace amounts, in fact quite the opposite. The things that were happening in Europe, with Germany the focal point, and the speed with which they were happening, nonetheless shocked her. Many immigrants, including friends from Upper Silesia, were arriving with chilling firsthand accounts of the Nazis. There was no time to lose. She would retrieve her son, and do it quickly.

Preparations had to be made carefully, as they would have only one chance. She would return to Beuthen, sell everything she owned, pay whatever bribes were required to get departure papers, and board a ship to America. A lot of people had similar ideas, so they would need a watertight excuse for entering the United States when the ship pulled into New York Harbor.

Marriage to an American citizen would be the most surefire path to citizenship for Klara and her son. She had met an Italian guy named Joe Veronico a few years earlier. He was a naturalized United States citizen who had been born in Bari, Italy on March 20, 1884, left school at the eighth grade, and emigrated from Italy to the United States, arriving in New York on February 20, 1911. He became a United States citizen on September 2, 1919, after serving in the Army from August 24, 1917, until May 10, 1919. He was an eligible bachelor and Klara married him. She apparently had no problem marrying a man who had fought against Germany during the First World War.

Was it love, money under the table, to help a friend obtain citizenship, some shady reason, or a combination of these? Beats me. The important thing from our perspective is that it happened.



Heading Out
Robert Wittig

Part 1. Before the Age of Thirty

Klara's marriage to Giuseppe "Joe" Veronico presented many intriguing aspects that probably made sense in the context of the times and their respective goals. Joe and Klara had an official address in Chicago at 3358 North Central Park Avenue. The person who owned this property was Vincenzo Veronico, who lived there with his wife Carrie, who was also an Italian immigrant, and a nephew. Presumably Joe and Vincenzo were related.



Heavy Seas
Robert Wittig

Having an address in the United States would prove useful when Klara returned with her son. However, the really big deal – the ticket to citizenship – was the marriage. I do not know whether Joe and Klara actually lived at 3358 North Central Park Avenue, or what kind of marriage they had, as the arrangement seemed to drift in and out of the shadows. For example, Joe resided in Hillsborough, Florida in 1935, and he remained there until his death in 1944. Klara never lived in Florida.

We do not know the date of the marriage between Joe and Klara. We know it took place in Chicago, and we have tried to unearth the date by digging through Cook County marriage records, but without success. It might have been as early as 1929. This would explain how Klara went back and forth between Chicago and Beuthen without drawing attention. She traveled as Veronico on a United States passport, enabling her to bypass immigration each time she entered the United States.

We visited grandma Clara one afternoon when I was about ten, and I asked why the name on the mailbox was Veronico rather than Wittig. My parents muttered, shuffled, and launched into the damndest verbal dance you could imagine. A nerve had been touched. There was a story that was to remain under wraps, certainly to a ten-year-old. Indeed, the nature of her marriage and relationship with Joe remains a mystery to this day.

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There would be no problem with employment when Klara returned to Chicago with her son. She had, in just a few years, become indispensable through virtue of being skilled and hard working. She had been assured that she would have a job upon her return. The nature of the work, which was hard but not a nine-to-five job, was compatible with her trips to Germany. Her son would need to enroll in a top-notch high school, and it would be best if it were not too far from her job. She approached this task with a level of determination that is rare in contemporary society.

Klara's friends knew the Chicago public school system like the backs of their hands, as their own children were either in it or had been through it recently. Having one's son and/or daughter graduate from high school was a big deal in the 1930's. High school enrollment and graduation had increased steadily throughout the early part of the twentieth century, and education resonated strongly with certain immigrant



Chicago Twilight
Robert Wittig

groups. John Marshall High School was located at the corner of Kedzie and Van Buren, in the heart of Chicago's diverse, vibrant West Side. Klara's friends assured her it was the best public high school in the city, and they would not err on something so important. They of course exaggerated, but there was no doubt that Marshall High School was a first-rate operation.

Klara's task was clear. She would make sure her son got into Marshall. She went there repeatedly and made pitches in her best broken-English. It paid off. Kurt was accepted on the condition he learns English, and the school provided a tutor for that. It would be necessary to live within walking distance of the school, so Klara searched the area for reasonable living quarters. They were reasonable, all right, but not cheap. Actually, they were not all that pricey, but this was the Depression, and she was not making much money. It boiled down to simply showing up with enough cash to survive the transition, and it helped greatly that employment was lined up. Klara now had many friends in Chicago from Central

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and Eastern Europe. They were surviving through work in the apparel industry. If they could pull it off, so could she.

Back in Germany, my father was now thirteen. He still did not understand the reasons behind the machinations that had him moving from place to place, often in the countryside, to say nothing of his mother's long absences and seemingly random appearances. In short, he felt abandoned, as would most kids his age under the circumstances. Unfortunately, there was no way Klara could have confided in him about the one-way trip to the United States she was engineering. She knew her son. He would have opened his big mouth, and the whole thing would have gone up in flames. Knowing my father, I am likewise sure he would have blown their cover, most likely trying to impress his friends.

Imagine what would have happened if the Gestapo had learned of her scheme to deprive them of a soldier in the Wehrmacht. My father would have been conscripted via the Hitler Youth Program,[‡] and Klara would have faced a charge of treason. Her goose would have been cooked, so to speak. The Nazis had little use for her, whereas her son was exactly the kind of young guy they were looking for: no siblings, dead father, itinerant mother, and the right age. He was intelligent, but could be indoctrinated. In other words, he was perfect as far as the Nazis were concerned. He would make a fine addition to the Wehrmacht.



Last Look
Robert Wittig

As it turned out, Klara would not confide in her son until the end of their time in Germany drew near. It was then, and only then, that he would be apprised of the details of the exit plan. He would be instructed – and done so in no uncertain terms – about how to behave and, most importantly, what *not* to say.

[‡] Military conscription in Germany had been eliminated following the First World War. Hitler reintroduced it on March 16, 1935.

Transition

Klara departed from New York Harbor on February 15, 1935, and arrived in Hamburg a week later. Once back in Beuthen, she wasted no time setting in motion the final stage of the escape plan. There would be no turning back. She and her son would get out of Germany permanently and as quickly as possible, or at least go down fighting.

Klara's single-minded commitment conveyed an air of panic. She sold everything she owned, plus everything she could lay her hands on, accepting however much money people were able or willing to pay. By the fall, all her worldly possessions had been sold, and ties to her former life for the most part had been severed. She bribed authorities to facilitate getting out, which was a widespread and accepted practice at the time. Her son's identification (departure) papers were approved, valid for one year beginning July 5, 1935. Klara's papers were issued in Berlin without complication. The two of them were ostensibly going on vacation. So flimsy an excuse could not have gotten past the authorities without greasing a few palms along the way.



Sunset
Robert Wittig

A precipice had been reached. The trip they were about to undertake would be tricky and irreversible. There would be no flinching or turning back. It would be heart wrenching despite the ironclad logic, compelling circumstances, and personal factors. At least a place awaited them, where the seeds of a new life had been sown and were beginning to sprout.

My father was given the usual assurances that everything would be all right. Still, it must have been a hell of a thing to be uprooted more or less overnight and spirited off to a large metropolis halfway across the planet, where he knew not a living soul and could neither speak nor read the language. Kurt and his mother said goodbye to their friends and relatives in the area.

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The *SS Deutschland* departed from Hamburg on October 10, 1935, and it pulled into New York Harbor eight days later. I have gone over the passenger list with care. There were unmistakable attempts on Klara's part to game the system. Given that she was traveling with her son, she needed to use the name Wittig when leaving Germany. Upon entering the United States, however, she listed Joe Veronico as her husband and her son's father, and stated in one place that she held citizenship in no country, whereas in another place she stated that she was a citizen of America-Germany, whatever that means. Her entries on the ship's forms stood out as inconsistent and questionable. She must have been nervous as hell.

When the smoke cleared, Klara was victorious in that she had bypassed the more conventional immigration route by marrying Joe Veronico. Without this move, entry to the United States would not have presented an appealing transmission coefficient, as during the Depression there were severe restrictions on immigration for anyone who would likely seek employment. Unemployment in the United States peaked at 25% in 1933, and it was still 20% in 1935.

The Immigration Restriction Act of 1921 limited the number of immigrants from a given country to 3% per year of the number of people from that country who appeared in the 1910 census. The Restriction Act had been introduced as a temporary measure, but during the Depression it was being applied in the face of a veritable flood of humanity trying to get out of Central and Eastern Europe. It was even used to prevent Jews from entering the United States as the Nazi scourge descended on them, as hard as that is to believe.

In any event, Klara pulled it off, spiriting her son out of harm's way for the time being. The eponymous Švejk would have been proud of her.*

Klara's fears about life in the German-Polish border region were confirmed and then some. The German Anschluss into Austria on March 12, 1938, precipitated, in rapid succession, the disgraceful Munich Agreement signed (by Germany, Italy, France, and the United Kingdom) on September 30 that gave Germany free rein in the region, Germany's invasion and annexation of the Sudetenland regions

* The Czech author Jaroslav Hašek wrote three novels about *The Good Soldier Švejk*. The work has become a classic. The central figure is an amusing character named Švejk. The theme is the absurdity of the First World War and Švejk's attempts to avoid military service. The consummate articulation of plebian sensibility, Švejk interacts with bureaucracy as an imbecile. It is left to the reader's discretion, however, to decide whether he is truly an imbecile or simply playing such to achieve his goal.

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of Czechoslovakia in October, Kristallnacht on November 9 and 10, which sent 30,000 Jews to concentration camps and marked the beginning of the Holocaust, and the German takeover of the remainder of Czechoslovakia, which had been weakened considerably by the loss of the Sudetenland. German troops entered and controlled all of Czechoslovakia on March 16, 1939. Formal capitulation of the government in Prague took place on that day.

The German invasion of Poland took place on September 1, 1939, marking the official beginning of the Second World War. When the onslaught began, the Wehrmacht rolled through the streets of Gleiwitz (now Gliwice in Poland) and Beuthen. It was a terrible region in a terrible time. Hitler's polemic against the Jews had begun decades earlier. However, it now shifted into its most sinister form, with the Nazis formulating and beginning to implement their plan for the total genocide of European Jewry, their *Final Solution*.

Approximately 80% of Beuthen's 5000 Jews fled the country between 1933 and 1939. Those who remained were rounded up by the Nazis and put on the first transport of Jews to arrive at Auschwitz-Birkenau, forty kilometers southeast of Beuthen. Every man, woman, and child in this group was murdered on February 15, 1942.



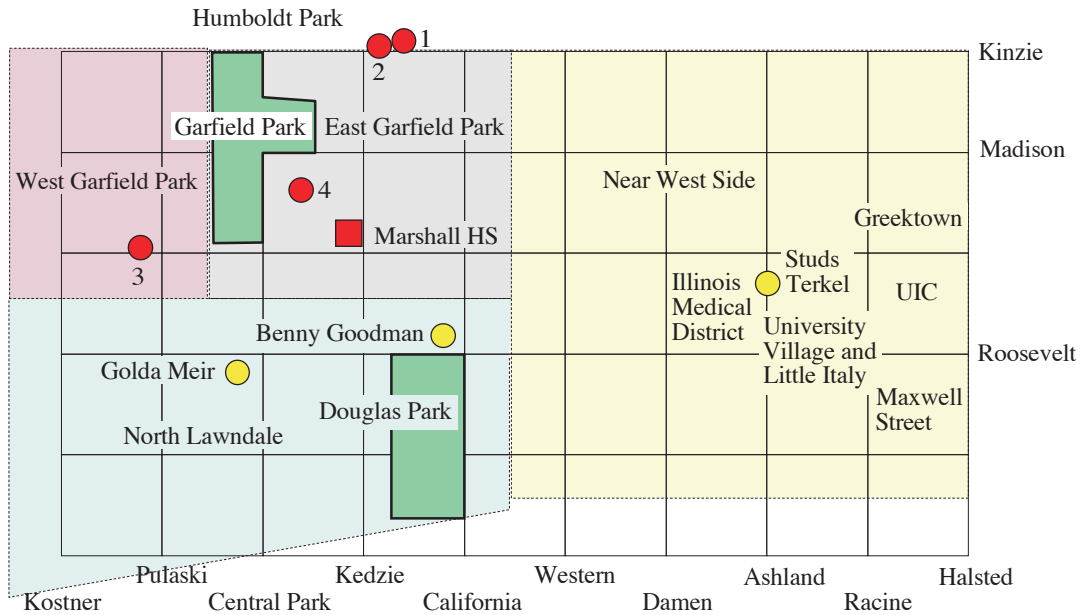
No Comment
Robert Wittig



A Disappearing People
Meirav Gebler

Chicago in 1935: An Auspicious Start

It was official. The Klara Wittig who departed from Hamburg on October 10, 1935, was now, and would remain for the rest of her life, Clara Veronico. The apartment where she and my father lived was in East Garfield Park at 3443 West Adams Street (number 4 on the map below). It was only three blocks from John Marshall High School. Clara and Joe Veronico interacted briefly at the time, perhaps to sort out financial matters, but not thereafter. Again, the dynamics of how that transpired are unclear, as Joe lived in Hillsborough, Florida, where he worked on and off as a night watchman. Clara somehow managed to change her son's name from Kurt to Curt. She probably pulled this off with some deft maneuver shortly after they arrived.



Chicago street grid: Squares are a half-mile on a side; streets are labeled at the bottom and right. Red circles: (1) our flat on Albany Ave; (2) mom's childhood flat on Troy St; (3) our flat on Congress St; (4) the apartment where Clara and my father lived. Yellow circles: notable individuals. Districts (East Garfield Park, West Garfield Park, Near West Side, North Lawndale) are shaded; boundaries are approximate.

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Joe maintained the marriage pretext in the 1940 census by continuing to list Clara and her son as living with him in Hillsborough. However, he no longer spelled their names correctly (Kurt Wicking) and he had forgotten their birthdays. Joe passed away in 1944 at the age of sixty.

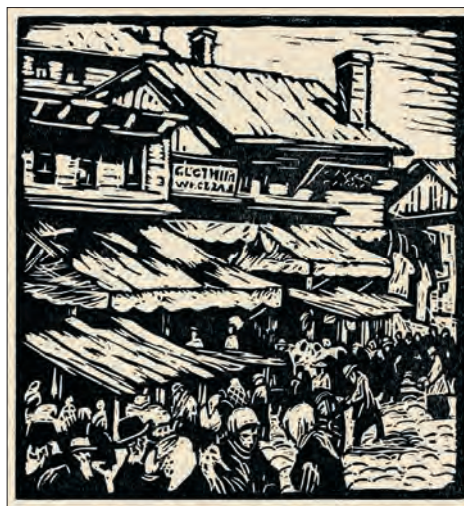
An open question is whether Clara had any roots and/or history, Jewish or not, that would have placed her on the Nazi hit list. To the best of our knowledge, she subscribed to no religious affiliation or deep beliefs. Yet, she made some interesting moves.

In 1930, North Lawndale was home to a teeming Jewish community, predominantly of Eastern European extraction, that accounted for 45% of its population. This percentage grew steadily to 64% in 1946 before declining. The adjacent sections of East Garfield Park, West Garfield Park, and the Near West Side also had parts that were heavily Jewish, including ones that leaned more toward Central Europe than Eastern Europe. The part of the city that was referred to as Greater North Lawndale contained the largest Jewish community in the history of Chicago, by a large margin, and that record still stands. It was the third largest Jewish community in the world, surpassed only by those of Warsaw and New York.

Maxwell Street: An Interesting Aside

The Near West Side also contained significant Greek and Italian enclaves. These continue to be present though reduced greatly in size relative to their heyday counterparts. One of the biggest attractions was the Maxwell Street Market. It was the largest open-air market in the country. My parents took me there several times in the early and mid-1950's. Buying something was of secondary concern. It was great fun to walk around and see the sights, and this was well after its prime. Nonetheless, you still had to see it to believe it: an Eastern European shtetl atmosphere embedded in a multicultural Bohemian milieu.

The Maxwell Street era and phenomenon has been portrayed with accuracy and attention to detail in the 2007 documentary film *Cheat You Fair: The Story of Maxwell Street*. I hear it is worth seeing.



Woodblock by Todros Geller (1928) titled *Maxwell Street*, depicting the street's shtetl atmosphere in caricature (Google Images)

Part 1. Before the Age of Thirty

Maxwell Street was known as the Ellis Island of the Midwest at the beginning of the twentieth century. By 1910, roughly 50,000 Russian Jews had disembarked trains arriving in Chicago from the East Coast. They settled, almost to a person, in the Maxwell Street area. They had been preceded by waves of Irish and Italian immigrants. Starting around 1910, the Russian Jewish community that dominated the Maxwell Street area's crowded tenements commenced their migration westward,



Typical Maxwell Street stall (Google Images)

populating mainly North Lawndale, but also adjoining sections. This exodus accounted for the explosive growth of the Jewish community in Greater North Lawndale.



Blue Jazz
Meirav Gebler

The Great Depression was in full force by the early 1930's, and by then the Maxwell Street area had become the birthplace of the Chicago Blues. From the 1930's through the 1950's, performers like Howlin' Wolf, Muddy Waters, Little Walter, Bo Diddley, Junior Wells, Daddy Stovepipe, Jimmie Lee Robinson, and Robert Night-hawk played on street corners for nickels and dimes. Benny Goodman, arguably one of the most influential musicians of the twentieth century, spent his early years playing on and around Maxwell Street.

The area gave way in the early 1960's to the construction of the Chicago Circle campus of the University of Illinois. This was contentious as hell. True, the area had gone steadily downhill: crime, infrastructure, and poverty – the usual stuff. Yet, it had preserved as best it could an important heritage and a

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unique lifestyle. The construction project nonetheless persevered and was victorious. The Chicago Circle campus of the University of Illinois opened in 1964. I missed going there by one year.



900 West Maxwell Street in 1949: This is now a sports field of the University of Illinois at Chicago (Google Images).

ved until a University work crew moved in and cordoned it off, effectively ending the performances.

Maxwell Street exists today as history in the form of books, photography collections, memoirs, and occasional television shows and films such as *Saturday Night Live* and *The Blues Brothers*. The last Chicago Blues performances on Maxwell Street took place during 1999-2000. Frank (Little Sonny) Scott, Jr., set up a makeshift stage near the corner of Maxwell and Halsted Streets. It survived

Clara Veronica

Clara commenced working as a furrier, and she continued living, working, and socializing in this community for the rest of her life, despite attractive employment opportunities elsewhere and my parents' harping that she should move to a nicer part of the city. She also worked in a department store during the late 1930's. The Fair Store[‡] was located in downtown Chicago at the corner of State and Adams, due east of where Klara and my father lived at 3443 West Adams Street. It was convenient to have two sources of income during the Depression, as one could never be sure how long a given job would last. Moreover, much of the furrier work could be done at home, making it very convenient indeed.

My guess is that Clara's social network was centered about the neighborhood where she resided, and she felt both camaraderie and a debt of gratitude toward those who had facilitated her immigration to the United States. She also may have wished to maintain a low profile in light of her creative route to citizenship.

[‡] Ernst Lehmann started The Fair Store in 1874 in Chicago. It acquired its name because Lehmann saw it as akin to a fair, a place for thrifty shoppers. A broad range of merchandise was for sale at low prices.

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My father attended nearby John Marshall High School, which was excellent, and, for what it's worth, had the largest Jewish enrollment of any high school in the country, except a few in New York City.

Whatever the reasons, Clara's interactions with her son's family were kept separate from those with her personal friends. There was no shortage of speculation on our part regarding her reasons. I have no recollection of these two groups ever making contact with one another. Clara also kept secret to an extraordinary degree anything about her life in Upper Silesia. It is intriguing that she would remain so tight-lipped about her background, not just in the beginning, but also throughout her life. My guess is that she had been through a lot and was loath to resurrect buried memories.

When Clara entered the United States on October 18, 1935, she listed her closest relative in Germany as her brother Karl Czajerek. From perusing old photographs it appears that he was at least ten years older than her. She stated that he lived in Beuthen at Hohenzollernstrasse 10 and worked as a bank official. He opted to stick out the war, whose inevitability by then was a foregone conclusion. I recently found records that place him at Hohenzollernstrasse 19 in 1937. The building whose address was Hohenzollernstrasse 10 no longer existed in 1937.* I guess he just moved down the street. Many years ago someone in our family mentioned that Clara's older brother had died during, or slightly after, the War. Clara never mentioned her brother in any discussion to which I was privy, though it was known that they had been close. This might explain, at least in part, why she was reticent about her life in Upper Silesia.

As amazing as it may seem, my father was uncertain about the given names of his grandparents. Maybe there had been a rift of some sort because Clara married a German and was living in Germany, one of the enemies of a rekindled Poland. Maybe my father had a bad memory. There is no shortage of maybes.

My conclusion is that Clara did not have Jewish roots, at least to any significant degree. She did, though, have a large number of Jewish friends in Chicago: Jews who had emigrated from Central and Eastern Europe to escape the Nazis, who worked in the apparel industry and lived near her, people she trusted implicitly. These friendships were deep and lifelong.

* Such buildings contained large numbers of apartments. For example, Hohenzollernstrasse 19 was home to thirty-four families.

Part 1. Before the Age of Thirty

The paternal grandmother of my youth was a dignified person who held her head high, listened to classical music on a vintage radio, and displayed distinctly European taste in things ranging from food to fashion to etiquette to furniture. She was proud but in no way haughty. She lived in a modest apartment in a substantial building on a tree-lined street. The area had seen better days, and she had to survive on a tight budget, but such things did not get her down.



Klara traveling on the *SS Deutschland* from Hamburg to New York (October 1935)

Clara and my mother did not see eye to eye on a great many matters, and they let their views be known, albeit in ways that differed qualitatively. My guess is that deep down she thought my father could have done better. She was keen on education, despite having left school herself after the sixth grade, and she showed interest in the welfare and futures of her grandchildren. She once took me aside and advised me to get rid of my girlfriend because she was sickly, and therefore would be a burden throughout my life. She had a point, though it fell on deaf ears. It is a shame that she became, to a large degree, isolated from the rest of the family. She had a great deal to offer, from perspective to values, not at all a person to be shut out.

The pangs of her sadness would burst through from time to time, but in general Clara preserved her stately image and reserved demeanor. Only in rare instances was the façade lowered. When this happened her eyes did the talking. They spoke an inward soliloquy of sorrow and resignation that we attributed to the distance that had developed between her and her son.

She never had confided in him the unabridged version of his rescue. Some things are better left unsaid. Besides, he would not have understood, even in hindsight, for he was a kid when it took place. The Nazis had begun to implement their horrific agenda, and her son was too young – twelve years old in 1933 – and too sheltered to grasp the depth of what was going on, not that the adults were much better. Regardless, he was in many ways now lost to her, and assigning blame offered no respite.

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Neither Clara nor her son ever returned to Europe to reconnect with friends and relatives, or find out what had become of them. They undoubtedly learned things through letters and messages passed by word of mouth. Such information, however, was never passed down to their descendents. Theirs was, in effect, total separation. My father had bombed the living bejesus out of Germany, and they were proud of what he had done. Had some of her friends and relatives become Nazi sympathizers, or been sent to concentration camps, or just pissed in their pants while millions were shipped off to the gas chambers? Their apprehension about reconnecting is understandable.



Snow
Robert Wittig

With the passage of time, Clara grew closer yet to the community of friends she had made in Chicago: from when she first arrived, though the Great Depression, the Second World War, and later. Like her, many had fled Europe to escape the Nazis. They had bonded.

Clara passed away on February 12, 1968, at the age of seventy-four. Odds are that not much more will be learned about her parents, childhood, and life in Upper Silesia. Some facts have been unearthed through our digging, but the human element remains elusive. Likewise, many crucial aspects of her transition from Beuthen to Chicago are unlikely to surface. She remained an enigma to the end, indeed, to this day. It was her wish.

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Mom's Family

My maternal grandmother was born in Chicago on July 8, 1903. Marion Elizabeth Ackerley was the fourth of the family's six children,¹ and the first to be born in the United States. She was of mainly English ancestry, with small percentages of Scottish and Irish thrown in for good measure. Marion's parents, Yates Shaw Ackerley and Edith Marie Reid Giles, married on June 15, 1896, in Everton, Lancashire County, England, at the ages thirty-three and twenty-four, respectively. Today, Everton is a district in Liverpool. Yates had been born in West Derby,² which is now a suburb of Liverpool. Edith had been born in Newark,³ Nottinghamshire County. Her family had moved to Lancashire when she was young.



Marion Ackerley when she was about ten years old

Yates and Edith Ackerley packed up their belongings and children (three at the time) and



(above) Yates; (right) from left to right, Louise Edith, their mother Edith, and Marion



¹ Children of Yates and Edith Ackerley, in order of birth: William, Eric, Louise Edith, Marion, Henry, and Harry.

² The parents of Yates Shaw Ackerley were Richard and Louisa. Their children were, in order of birth: Richard, William, Louisa, Elizabeth, and Yates.

³ The parents of Edith Marie Reid Giles were John and Eliza. Their children were, in order of birth: Eliza, Louisa, Annie, John, William, and Edith.

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emigrated from England to the United States in 1901. They sought, among other things, a more prosperous life. For many years severe unemployment and poverty had plagued the part of Lancashire County near Liverpool, and for that matter all of England. The Chicago and Lancashire branches of the family in due course lost touch with one another, never to be reconnected.

Marion grew up dirt-poor in and around the areas west of downtown Chicago referred to as Near West Side and East Garfield Park. These are indicated on the street grid given a half dozen pages earlier. While in elementary school, she informed her father that she was unhappy and wished to forgo further education. Apparently the kids picked on her because she was not a clever student and her breasts had developed earlier than with other girls her age. I cannot imagine a girl of thirteen being "picked on" for the latter, but that is what we were told. In any event, her father acceded to her request. Marion left school after the seventh grade to enter the workforce.

Her plan was to work for a while, and then marry and start a family. Marion married on December 25, 1921, a singularly unconventional day for a marriage. She gave birth to my mother, Edith Rebecca, on October 28, 1922. This was followed by the births of my mother's two younger brothers: Franklin Henry on March 12, 1924, and Robert Edward on July 13, 1925. None of this, except the date of the marriage, was considered out of the ordinary for working class people living in large cities at that time. Such a life does not summon an image of prosperity, but it is said that hope springs eternal.



Marion's children: Edith, Franklin, and Robert (1925)

My maternal grandmother's marriage was to a person who, at the time, was going by the interesting name Zeal Hayes. More unusual than the date of their marriage was that he was fifty-five years old (only three years younger than her father)[†] and held the rank of General in some renegade fringe-religion outfit called the Christian Army. Marion was eighteen, unsophisticated to a fault, and knew precious little about him. Such an age difference was highly unusual, and she was not even pregnant when they married. Their union was looked upon askance by everyone around them except the soldiers in the Christian Army.

[†] Zeal Hayes was born on July 7, 1866. Yates Ackerley was born on March 20, 1863.

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Zeal told my grandmother that he had been born into a Jewish family in Ohio, but had cut ties with them early in life and ventured out to make his way in the world. The extent to which he kept her in the dark about his early years was incredible. For example, she did not know the given names of his parents, and there was uncertainty about their surname. She told us it was Fetz or a name that sounded like Fetz. It turned out he confided in other people, but not Marion. My guess is he did not want her snooping around his past, and for good reason.

The marriage was so bizarre as to demand some explanation. For openers, what ever possessed Marion to agree to such a thing? It turns out that her genius of a father had come out as an Episcopal minister a few years earlier. Family lore has it that he was the one who made the introduction, and that he approved of the marriage. Whether he believed it was truly a good idea is not known, but he had done poorly on the financial front, and at least it was one less mouth to feed. Besides, Zeal also was a man of the cloth. Yates might have assumed on the basis of this ethereal connection that the marriage would turn out all right.



Men of Cloth
Robert Wittig

Zeal explored various approaches to making money, most of marginal at best legality. None panned out. Supporting a family through a charity-based storefront religion was simply not in the cards. Given that Yates had introduced his daughter to such a crazy guy, it is safe to say that Yates' deficiencies in the clear thinking department were not limited to financial matters.

The story of the man who called himself Zeal Hayes shall now be told. It is a mosaic created from bits and pieces, a pointillist portrait with a lot of points missing. Were the full truth to come out, from the family's perspective it might prove to be a piece of history better left untold. You will soon see what is meant by this oblique remark. Unearthing the story required a year of hard digging, including the efforts of professional genealogists. The Zeal Hayes story that emerged is an odyssey of intrigue, cunning, daring, and boldness played out on a platform of lifelong and obdurate subterfuge.

In Search of the Real Zeal

Mark Twain pointed out that truth is stranger than fiction because fiction is obliged to stick to possibilities whereas truth is not. That applies here in spades. The Zeal Hayes story commands the rapt attention associated with gripping fiction, but at the same time it is over the top: so preposterous a tale that it could not possibly be a fabrication. A great deal of research yielded what we now know about Zeal. As mentioned earlier, gaping holes nonetheless remain.

Let us start with the marriage. The article below was published in the *Chicago Tribune* – at the time one of the country's most reputable newspapers – on December 26, 1921. It is reproduced verbatim. The reporter referred to himself as a war correspondent with the Christian Army. He was most likely off his rocker. The article nonetheless contains facts that resonate with Twain's pithy adage that truth is stranger than fiction.

Samaritan Day Nursery Seized by Christians

Gen. Collins Replaced by Gen. Z. Hayes

The Samaritan army, led by Gen. Edward Collins, is in full flight along the Walnut street sector tonight and the Christian Army, under the command of Gen. Zeal Hayes, has full possession of the day nursery at No. 2243. The army of occupation counts among its spoils of war the lives and welfare of sixteen babies and children, ranging from 1 to 6 years of age. The rout of the Samaritan Army was accomplished through the desertion of Maj. May Lulu Breen formerly in command of the nursery to the Hayes forces. This she accomplished by becoming the bride of Col. "Happy" P. J. Meikel of the Christian Army, thereby rising, without the formality of a commission, to equal rank with him.

Col. Meikel plays the tambourine with either hand. Gen. Collins conducts a soup kitchen for down and outers at 1140 West Madison Street. He is said to have about 35 solicitors, who seek monetary contributions and gifts of old clothing both for the unemployed and the nursery.

Reports on Nursery.

The nursery is located among that group of old, sooty frame buildings that line the west side between Lake Street and the Northwestern tracks. THE TRIBUNE'S attention was attracted to it by reports that babies were being kept there in insanitary surroundings, that men and women of all types visited the place, that on one occasion a woman under the influence of liquor had been ejected from the premises.

Part 1. Before the Age of Thirty

The nursery itself is a rickety frame structure with a sagging front porch. On it is a sign: "Samaritan Army Day Nursery," and across the snow covered yard stretches another sign that is to replace it: "The Christian Army." There is no bell and the reporter obtained no response to his knocks. The reporter passed into an uncarpeted room, unfurnished save for a few chairs and a table and a picture or two. The chairs were occupied by several boys, ranging from about 15 to 18 and the man with the glasses, who, silently and suspiciously, eyed the visitor. The odor of tobacco smoke pervaded the room.

Call for "Mother."

The boys disappeared into the back room calling for "Mother." Mrs. Meikel, wearing a uniform somewhat patterned after that of the Salvation Army and an apron, ushered the visitor into a cubby hole of an office, where sat Col. Meikel, a little man; Capt. Jacob F. Gates, who says he donates his time as secretary, and a boy about 16 whom Col. Meikel introduced as his son. Tambourines and a base drum reposed on a cot and desk.

"Something should be done to that fellow Collins," said Col. Meikel. "He has thirty-five men collecting money and clothes on the pretext that they are to go to the nursery. He has never given us a penny of it and he's storing all those clothes above his place on Madison Street. He's waiting for spring to come when he expects to have enough to open a store and sell them. I've taken Mrs. Breen under my protection by marrying her and I've applied for a state charter for the Life Line Nursery."

Mrs. Meikel is speaking: "Yes, and that fellow Collins hasn't got a state license to conduct a nursery like this in the first place.... We have twenty-five children here and sixteen of them stay here all the time, night and day. (A license of a day nursery forbids the keeping of children in a day nursery overnight.) We've fed them and clothed them. We buy \$79 worth of milk a month.... None of these children have any homes. They have been sent here from all parts of the city, even South Chicago."

At the health department it was said a license for a day nursery had been granted to Collins but an investigation of the sanitary conditions at the place was immediately started by Dr. Lee Stone at the direction of Dr. John Dill Robertson, with the result that the license will probably be revoked unless Gen. Hayes removes the nursery to more sanitary quarters. A respite was granted until after Christmas so that the holiday might not be spoiled for the children – even such a holiday as they probably will have.

Gen. Collins' mission on Madison Street was found closed, but in an upper room at 1134 West Madison Street the reporter found several men and an old woman. "Whaddya want him for?" asked the woman suspiciously. "He's out in his automobile." Collins was reached later by phone. "Certainly we ain' givin' th' nursery any money now" he said. "We got to spend it all on Christmas dinners."

Part 1. Before the Age of Thirty

This bizarre event played out near Chicago's skid row, which was replete with crazies and every brand of social misfit that one could imagine, even back in 1921. My guess is that it was no coincidence the marriage between Zeal and Marion took place on the same day as the nursery takeover. Carrying out the raid on Christmas Day provided an element of surprise, while being married would be advantageous when it came to explaining to the authorities that proper care would be forthcoming to the children.



Christmas Eve
Robert Wittig

Getting married on Christmas Day was presumably a last-minute decision dictated by the day of the raid. Probably the marriage ceremony involved spending a few minutes with a Christian Army person to take care of paperwork.



General Zeal Hayes applied for, and was granted, a patent for the Christian Army insignia on the front of his hat.

Try to picture the scene that was unfolding on the day of the nursery takeover. The first thing that strikes you is that the Christian Army is a ragtag troop from the word go: a herd of sorry nutcases that brings to mind the outcome of someone opening cages at the zoo and then going to lunch. This mongrel horde of screwballs is marching down a part of Walnut Street that has seen better days, and is now a hop, skip, and a jump from the city's notorious skid row. These warriors are garbed in full Christian Army attire, and the operation is being carried out under the command of none other than General Zeal Hayes. They are intent on taking over a children's nursery run by an adversary group: the equally nutty Samaritan Army. When they get to the nursery they march inside and take it over, whatever that means.

Part 1. Before the Age of Thirty

The affair must have been a sight to behold. This glimpse of the 1921 version of the ursine character who called himself General Zeal Hayes would be terrific grist for late-night comedy. But what about earlier versions of the man?

Let us now back up to 1907 and Des Moines, Iowa. Zeal made his debut to the street-religion scene there as a Captain in the American Salvation Army. The addition of the word American to the traditional Salvation Army was his attempt to establish a degree of separate identity. Indeed, Zeal distinguished himself and then some. In the span of two years he was charged with embezzlement, fraud, subornation of perjury, witness tampering, assault on a member of his troop, disturbing the peace, and other offenses.

On one occasion Zeal became enraged because he believed another officer in their group had been paying too much attention to his wife, Adeline May Hayes. So what did Zeal do? He beat up Adeline, rather than the guy he suspected of paying too much attention to her. Apparently beating up Adeline was easier. She left him over this, and a few years later they divorced. Another time, Zeal's amorous advances toward the wife of a member of their group were spurned, so he beat her up, as described in the snippet below. Zeal was a real a piece of work.

On other occasions, Zeal was dragged into court over his persistent confrontations with another fringe-religion group: The Volunteers of America. He was finally told by the Des Moines police chief to get his crooked ass out of town and keep it out of town for good. Petitions signed by the local citizenry demanded his permanent ouster. It was pointed out that he had used the name Frank Betz in Columbus, so what in fact was his real name? He achieved widespread notoriety as the subject of front-page newspaper articles, none of which were complimentary. Many examples were found online, some of which are listed below.



Preacher Man
Robert Wittig

- "ARMIES GET IN COURT AGAIN: HAYES WORKERS OCCUPY VOLUNTEERS' STATION AND CAPTAIN IS ARRESTED – For the second time in two days, Captain Zeal Hayes of the American Salvation Army pleaded not guilty." (*Des Moines Capital*, November 12, 1908)
- "IN JAIL OVER LOVE TROUBLE, HAYES ARRESTED, CHARGED WITH BEATING WIFE OF FELLOW WORKER – Captain Hayes came to her home during

Part 1. Before the Age of Thirty

the absence of her husband and attempted to make love to her...McCauley went to the headquarters...and handed in her resignation. Captain Hayes...feared that she would tell of the incident to his wife and began an argument which ended with Captain Hayes beating and bruising her." (*Des Moines News*, January 10, 1909)

- "SAYS CAPTAIN EMBEZZLED HIS DEPOSIT OF \$9, FORMER LIEUTENANT JOINS SALVATION WAR STARTED BY A CHARGE OF ASSAULT BY HAYES – Following the charges of assault and battery preferred against Captain Hayes...members of his organization have come forward and volunteered to give testimony....Several members of the organization told Judge Stewart stories of abuse and fraud that they say the staff captain has perpetrated..." (*Des Moines News*, January 11, 1909)
- "CAPTAIN HAYES HAS MANY NAMES – Having obtained a web of evidence against Captain Zeal Hayes...several of the charitable organizations will appeal to the police to have him sent from town if he attempts to do business again in Des Moines....Captain Hayes went under the name Frank Betz in Columbus. A number of other damaging statements are made in the letter. The Associated Charities also has been collecting strong evidence against Captain Hayes." (*Des Moines Daily News*, January 21, 1909)
- "HELD FOR EMBEZZLEMENT – Staff Captain Zeal Hayes, of the American Salvation Army, was arrested at Des Moines, charged with larceny by embezzlement..." (*Sioux County Herald*, February 10, 1909)
- "NAB AMERICAN SALVATION ARMY HEAD, CAPTAIN ZEAL HAYES ARRESTED FOR SUBORNATION OF PERJURY – Mrs. Sellick...commissioned by Captain Hayes to collect money and later ordered to swear that she had not secured money under false pretenses....Alleging that it was for the benefit of city flood sufferers...no flood sufferers existed." (*Cedar Rapids Evening Gazette*, August 11, 1909)
- "DECORAH JOURNAL – the 'American Salvation Army' recently in Decorah were fakers. Their 'preaching' on the streets was nonsensical and consisted mainly in hallelujahs that became louder as money fell at their feet. They denounced General Booth, the head of the Salvation Army, as a man who made \$80,000,000 out of connection with the army." (*Postville Review*, October 22, 1909)
- "SALVATION ARMY MAN IS ACCUSED – was commissioned by Captain Hayes to collect money and later ordered to swear she had not secured the money under false



Salvation Army
Robert Wittig

Part 1. Before the Age of Thirty

- pretense. ... The money was wanted for Des Moines flood sufferers....there had been no flood." (*Des Moines Daily News*, August 11, 1909)
- "WAVERLEY – Captain Zeal Hayes of the American Salvation Army, who worked in Des Moines until requested to leave by Chief of Police Miller some months ago, is in trouble here....The story goes that Hayes became jealous of Major Ballengee's attention to Mrs. Hayes and proceeded to beat up his wife to such an extent that she left him" (*Perry Weekly Chief*, January 12, 1910)
 - "BARE SWINDLE UNDER CLOAK OF RELIGION – Bloomington, Illinois – That a thoroughly organized and extensive system of swindling under the guise of religion has been unearthed was the assertion of the police today following the arrest of General Grant Zeal Hayes." (*San Francisco Call*, September 8, 1913)
 - "TAMPERS WITH WITNESSES Mrs. John McCauley who filed charges of assault and battery against Staff Captain Zeal Hayes of the American Salvation Army now charges that Hayes has been tampering with her most important witnesses. Yesterday she came before Judge Stewart with two little girls whose testimony Hayes has made an effort to change." (*Des Moines News*, January 14, 1909)
 - "OHIO BULLETIN OF CHARITIES AND CORRECTION – a man like Zeal Hayes, who has been arrested forty times, and who, with his so-called Christian Army, is known to authorities in dozens of cities, to tell the Columbus Chamber of Commerce, as he did a few days ago, that they could not stop his getting money." (*Ohio Board of State Charities*, 1920, vol. 26, p. 40)
 - "CHARITIES UNITE AGAINST HAYES – Salvation Army and Miss Youngquist Try to Shut American Salvationists Out....Hayes has been sent out of several cities in the east....Hayes' story that he was with Roosevelt's Rough Riders was investigated and proven a falsehood...the American Salvation Army has been a thorn in the side of charitable organizations." (*Des Moines News*, January 11, 1909)

The main character in these snippets (a sampling from his forty-plus arrests) is my maternal grandfather. His favorite scam was a time-honored ruse: Send your soldiers out on the streets to solicit donations under the pretense of helping the needy, and then keep most of the money yourself. He would even instruct members of his group on the delicate art of lying to the police. He would get nailed with some regularity, but most of the time it was his followers who were apprehended by the strong arm of the law and paid the price. They served as conduits that took in money on the street and passed it to Zeal. He apparently was not just any old



Alms for the Poor
Robert Wittig

Part 1. Before the Age of Thirty

con man, but a skilled one. He was arrested and tossed in the clink many times, whereas his fines and serious jail time remained modest.

The relationship between Zeal and the Salvation Army Headquarters soured following his many run-ins with the law. It seemed as if he went out of his way to rankle the Salvation Army's top brass. Everyone knows that the Salvation Army in general attracts and tolerates a strange breed. Even an outfit like this, however, which preaches understanding and forgiveness, could not continually turn a blind eye toward the outrageous shenanigans of a snake oil salesman like Zeal.

Here was this crooked firebrand interloper making the rounds under the protective umbrella of charity-based religion. He would go from town to town, at each stop denigrating the founder of the Salvation Army, William Booth, and his wife Catherine, with preposterous, libelous accusations. His misdeeds reflected badly on the Salvation Army, and they needed this like a hole in the head. For example, the notoriety stirred up by Zeal lessened their ability to garner donations for years. Being *persona non grata*, Zeal made tracks in search of more fertile ground. In other words, he was run out of town in Des Moines and the surrounding communities.

Zeal decided to ply his wares in the small towns of central Illinois, where he adopted the name Grant Zeal Hayes. He repeated more or less the same scam that got him thrown out of Iowa, which does not strike me as particularly intelligent. He again ran afoul of the law, for example, getting arrested in Bloomington, Illinois in 1913 for swindling under the guise of religion. Zeal was arrested more than forty times



Retreat
Robert Wittig

that we know of, and this leaves out everything prior to 1903. There is also a gap from 1914 until 1920 in which we have been unsuccessful at tracking him.

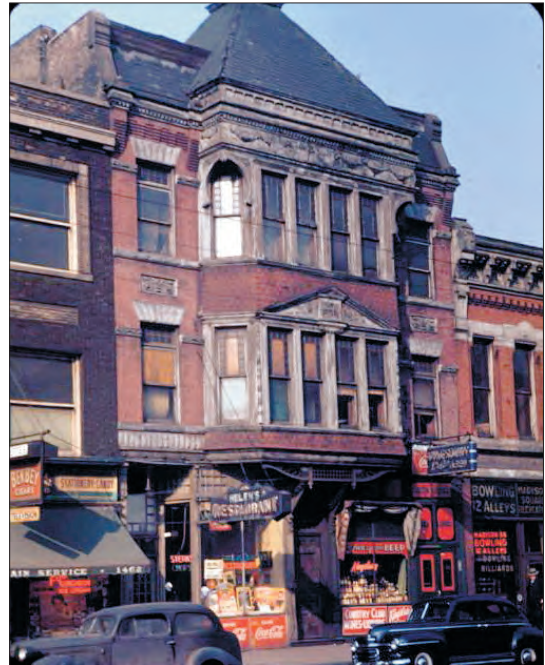
Zeal resurfaced at the end of the decade in Chicago. There he set up a scam operation, not unlike the ones in Iowa and central Illinois, under the aegis of a fledgling group of renegades called the Christian Army. To the best of my knowledge Zeal was the founder of this group. In 1920 he applied for and was granted a pa-

Part 1. Before the Age of Thirty

tent for a Christian Army insignia, the one shown on his hat about four pages back. In the 1920 census he listed himself as divorced and having been born in Ohio, though the space allotted for the name of the city in Ohio was left blank.

At the time, Zeal was living at 17 Loomis Street, on the edge of skid row. He listed his occupation as Officer in the Christian Army, and he lived with a companion, Alfred Rayms, also a Christian Army Officer. Their "army" was composed of nineteen followers from quite a range of places: Ireland (3), Norway (1), Poland (1), Greece (1), Lithuania (1), Germany (2), British West Indies (1), Massachusetts (2), Indiana (1), Ohio (1), Iowa (1), and Illinois (4). Try to picture this group taking over a children's nursery.

We have at this point uncovered a good part of Zeal's trail: from the American Salvation Army in Iowa, to a combination of the American Salvation Army and the Christian Army in central Illinois, to the Christian Army in Chicago. But how did Zeal become installed in the Salvation Army in the first place, and what about his marriage to Adeline? He was forty-one years old in 1907, so he carried a lot of history to Iowa. Let us now turn to his earlier life.



1460 West Madison Street is one block from 17 Loomis Street where Zeal lived in 1920. The photo is from a slightly later time, though nothing much had changed. (Google Images)

Part 1. Before the Age of Thirty

Zeal showed up in Trenton, New Jersey in 1903, having insinuated himself into the Salvation Army at the rank of Lieutenant. Being the new guy on the block, he was interviewed. The citizens of Trenton surely would be interested in learning about this character with the interesting name and completely unknown background. Zeal proceeded to spin a truly preposterous tale. The following piece was published in the Trenton, New Jersey Times on January 22, 1904. It is reproduced verbatim, except for a few small missing pieces in the beginning indicated with ellipses, where the archived records were unreadable.

DROPS LARIAT FOR SALVATION BANJO

Lieutenant Zeal Hayes, who was recently assigned to the Trenton branch of the Salvation Army, was not always engaged in the kind of work to which he has of late invested himself. To the casual observer there is not much about Hayes to suggest the frontiersman. But a look into his eyes shows unmistakable determination and there is firmness around his mouth not characteristic of a weakling. In conversation with him [Hayes]...gave some interesting facts...[about] his past life.

BORN IN LONDON

He was born in London and came with his parents to this country when he was two years old. His father, who was a Dunkard minister,[‡] settled at Kalida, Ohio. When ten years old, Hayes ran away from home and began life as a cowpuncher. He went to work for a ranchman at Houston Texas and for four years was a member of a wild rollicking band of men who composed the outfit there. Then he drifted into Mexico and Montana.

Tiring of the daredevil life and sports of cowboys Hayes presented himself to the commandant of Fort Riley Kansas one morning and became a trooper in the Seventh Cavalry. Three years of army discipline was about all he cared for at one time and a longing for the unfettered life of the cowpuncher impelled him to seek a bunk and a saddle at a Nevada ranch. For four years more he followed the trail of the herds and then re-entered the army. He participated in the three days fight against the Wounded Knee in the badlands of Arizona.

WITH ROOSEVELT

In 1898 he was transferred from troop K of the Seventh Cavalry to become a member of Roosevelt's rough riders and with the hearty lads of that command took part in the battle of San Juan Hill. Following the war he served out his enlistment, which ended in 1900. He then went back to Montana and associated himself with a band of cowboys in a wilderness of that place. Hayes's sister Anna, an adjutant in

[‡] The Dunkards are a religious sect that practices trine immersion. Believers are immersed three times: once each, in the name of the father, the son, and the Holy Spirit. They refuse to take oaths and participate in military service. They revere nonconformity. Their dress and practices are similar to those of the Mennonites.

Part 1. Before the Age of Thirty

the Salvation Army learned of his whereabouts and one day rode horseback ninety miles through a snowstorm seeking his conversion. How successful her mission was Hayes's life since then has shown. Hayes was shot seven times in different brawls in Mexico. Some of the bullets found vital parts but he recovered fully from the effects of them. He has also been in many knife fights and there are scars on his person showing where the steel ploughed furrows in his flesh.

The Zeal Hayes interviewed in Trenton was a con man – and was he ever. Never mind that the massacre at Wounded Knee happened in 1890 in South Dakota, not in Arizona, or that Wounded Knee is a place (a creek), not a tribe (the tribe was Lakota, part of the Sioux Nation), or that Zeal had never been a member of Teddy Roosevelt's Rough Riders, or that he had been born in Ohio, not London, or that there never has been a Dunkard church in Kalida, Ohio (current population 1500), or other nutty things, such as getting shot in bar brawls on seven occasions including vital parts, but in each case recovering fully, plus knife fights, which at close range are as deadly as a bullet.

How could anyone listen to this maniac spouting such ludicrous crap and report it as fact? The answer is that Zeal apparently had a certain charisma. He was a fruitcake, to be sure, but with an uncanny ability to seduce a listener.

Taking people in with slick talk is one thing. Keeping them on the hook indefinitely is altogether another matter. It was not long before the authorities in Trenton figured out Zeal was a fraud and a crook and threw him out of town. From there he went west, showing up in Springfield, Ohio later in 1904, in Des Moines in 1907, and in Steubenville, Ohio in 1908.[†]

Zeal was thirty-seven years old in 1903. Whatever the reasons, he did not want to reveal his past or even drop hints, lest people get nosy and start digging around. Apparently some things had taken place in his earlier life that he wanted to hide. Thus, when he gave the interview, he enlisted his most convincing demeanor, turned on his charm for all it was worth, and spewed the greatest bullshit story of his generation. Mark Twain might have argued that the story Zeal gave in Trenton was so preposterous that it must be true. Not so: There are limits.



Native-American Woman
Robert Wittig

[†] City directories indicate that Zeal lived in Springfield, Ohio in 1904 at 25 W. Columbia. He was a Lieutenant in the Salvation Army in charge of its Industrial Department at 151 E. Main St. He lived in Steubenville, Ohio in 1908 with his wife Adeline at 208 Market St. There he was an officer in the American Salvation Army.

Finally we come back to Zeal's Jewish roots. My grandmother was steadfast in her adamancy – stood her ground until the day she died – that Zeal was a Jew by birth. She also was pretty sure that his original surname was Fetz or something that sounded a lot like Fetz.[‡] She was less certain about his given name, but thought maybe it was Ezekiel, or Zeke for short, as that morphs to Zeal. For many years it was accepted that Zeal Hayes started out as Zeke Fetz.

The religious identity of Zeal's parents can be surmised on the basis of data concerning male circumcision. In 1860 the number of non-Jewish males who underwent circumcision was one in 10^5 for large eastern cities, while in rural areas it was essentially nonexistent.* It rose precipitously starting in 1870, reaching 1% in 1871. The reason for its jump in popularity is amusing. The suggestion was put forward – and believe it or not got traction – that circumcision would inhibit a boy's tendency to masturbate upon reaching adolescence.

Back to the point, in 1866, the year of Zeal's birth, unless a male child was Jewish, the probability that he would undergo circumcision was minuscule. Alternatively, virtually all male children underwent circumcision in Jewish families. An estimate using elementary statistics indicates that a randomly chosen male child, if found to be circumcised, was of order a thousand times more likely to be Jewish than not.

Using rough numbers for the year 1860, the United States male population was 16-million, while the number of male Jews was 100,000. Assume that birth rate is proportional to population, with the same proportionality constant for each group. The numbers 16-million and 100,000 can be used as long as we take their ratio. A circumcision probability of 10^{-5} for non-Jews yields 160, whereas, all male Jews underwent circumcision. Thus, a randomly chosen child, if circumcised, was of order a thousand times more likely to be a Jew than not.

[‡] When my grandmother was in her seventies, we asked her to tell us everything she knew about Zeal's origin. She knew that Zeal Hayes was not his original name. She knew next to nothing about his family in Ohio, other than they were Jewish and Zeal had been estranged from them for many years. She did not know if he had children from his earlier marriage, or if there had been only one earlier marriage.

* A. A. W. Johnson, *Lancet* 1860; 1: 344-345.

Part 1. Before the Age of Thirty

Given that my grandmother was adamant throughout her life that Zeal came from a Jewish family, it is inconceivable that he had not been circumcised. Zeal had to tell her the truth about his Jewish origin, not because he decided to be honest for a change, but because it would have been impossible to conceal it. Marion would not in a million years have believed he had been born a Jew had he not been circumcised. Still, it is too bad we did not put the question to her.

It was common practice at the time to name children after their ancestors. For example, my mother was named after her grandmother Edith. In the case of the older of her two younger brothers, none of us figured out where the name Franklin came from. His middle name Henry is the same as the given name of one of Marion's brothers, but Franklin seemed mysterious. However, if Zeal's original name was Franklin, this would fit. My mother's middle name is Rebecca, and it would not be surprising if she had an ancestor on Zeal's side named Rebecca.

I recently obtained several family birth certificates via online archival services. Taking Gore Vidal's advice, I was just being thorough. There was no reason to expect anything unusual. Imagine my surprise when my mother's birth certificate listed her father as Franklin Zeal Hayes. My mother was born sixteen months earlier than her brother Franklin. This connection could not be dismissed.



Fog Lifting
Robert Wittig

Then, just a few months ago, we obtained copies of the court records of the 1912 divorce of Zeal and Adeline. There he lists his name as Franklin H. Betz, and the name Zeal Hayes is listed right up front (and throughout the court records) as an *alias*. He was living at 1715 Madison Street at the time, a short walk from skid row. In all the years that Zeal lived in Chicago, he and his family and soldiers resided exclusively in the Near West Side, often in and near skid row.

According to the divorce documents, Zeal and Adeline were married in New York City in August of 1904. Adeline filed the divorce papers on July 9, 1912, in Chicago. In them, she claimed he had beaten her many times: punching, kicking, choking, and knocking her to the floor. In addition, he had racked up a large number of adulterous affairs. According to newspaper articles, Adeline was no prize

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herself. However, apparently she was an angel compared to Zeal. She obtained custody of their adopted daughter, Katherine Minnie Hayes, who was six years old at the time. Following the divorce, she went back to her maiden name, Adeline May Dennis.

Many pieces of the puzzle now fit. My grandmother's recollection of a name that sounded a lot like Fetz was on the mark. It turned out to be Betz. The name Franklin appears on my mother's birth certificate and in the 1912 divorce papers, and my uncle Franklin was named after his father. My conclusion is that my maternal grandfather's real name was Franklin H. Betz.

Samuel and Martha Betz of Springfield, Ohio had a son Franklin in 1866. He took a job as a traveling salesman with the Cincinnati Coffin Company using the name Frank H. Betts. Later he started a family in Utica, New York while continuing to work out of Cincinnati as a traveling salesman. His presence in Utica was questionable during the times when Zeal was in Iowa and getting started in Chicago. On the other hand, his presence in Utica was confirmed during the periods when he was nowhere to be found in the Midwest. He eventually went off the grid in Utica. His family there listed him as dead in the 1930 census, though no death record exists. There are a number other possibilities regarding Zeal's life before 1903. They are amusing and to varying degrees plausible. My conclusion is that we have nothing other than idle speculation. His parents have not been identified.

Marion Moves On

Marion and Zeal parted company after about five years of marriage. In plain terms he was given the boot. Grandma told us that he had worn her to a frazzle. Here was this young woman: early twenties, raising three kids, constantly broke, and never more than a step from the poorhouse. She had grown more than a little weary of his infinite supply of crackpot schemes. Most were of questionable legality, and some were clearly on the wrong side of the law. They consumed the family's meager resources and amounted to nothing.

Zeal had proven to be an imperious wheeler-dealer whose venue was the street and whose targets were downtrodden, desperate, lonely souls who had the misfortune to place their trust in him. Sure, the Christian Army got people to drop mo-



Tough Life
Robert Wittig

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ney in their baskets as they worked the tambourines and chanted on the streets, but that was not serious exploitation. No one ever went to the poorhouse because they dropped too much money in a charity basket. Zeal's real victims were his followers, his soldiers.

The disparity between what Zeal preached and how he lived reminds me of the main character in Sinclair Lewis' 1927 satirical novel *Elmer Gantry*. It centers on an unscrupulous con man who takes up with a small-town evangelist preacher modeled after Aimee Semple McPherson. Zeal and Elmer had a lot in common.

Zeal had serious problems, not the least of which was his inability and/or unwillingness to support his family. And to think, his failure to raise a buck took place during the 1920's, prior to the dearth of opportunity that befell the country when the Great Depression cast its pall. His manifest improvidence was an embarrassment and augured poorly for the family's future. They lived hand-to-mouth, adrift in a bizarre netherworld, one step ahead of the law. Marion, rather than becoming inured to his brand of madness, developed an allergy to it.

The dissolution of the marriage was inevitable, though not derivative of personal animosity. Simply put, Marion was the family's linchpin. She dumped her jerk of a husband because of the kids. All of that transpired with Marion more or less ignorant of Zeal's past. She would not have married him in the first place, had she even a cursory knowledge of what had transpired in his past marriage(s), and even a fraction of his previous antics vis-à-vis the American Salvation Army.

Marion and Zeal separated in 1927 but did not divorce. She and the kids remained at 2426 West Polk Street, and he moved to Christian Army Headquarters, two blocks away at 804 South Western Avenue. Marion and the kids then moved to her parents' place at 1262 South Fairfield Avenue, again not far. It is amazing how many times the family changed flats without ever leaving the West Side.



Formations
Meirav Gebler

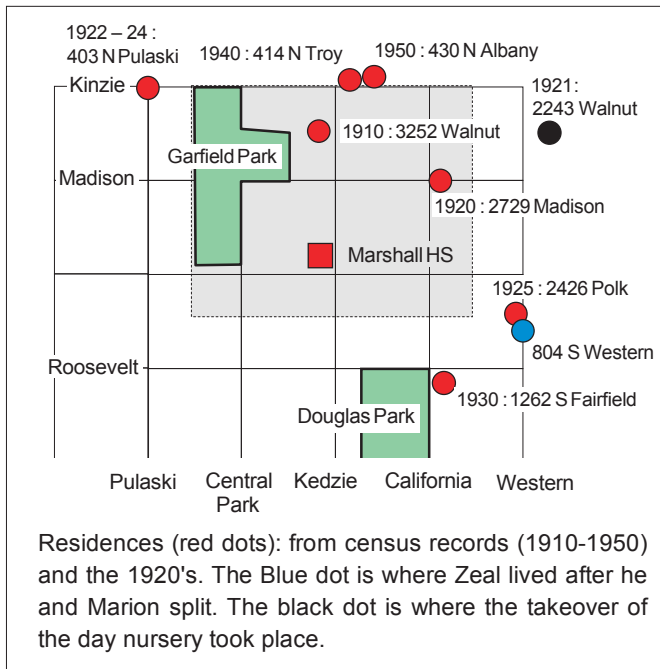
Part 1. Before the Age of Thirty

The man known to many as Zeal Hayes succumbed to heart failure on February 9, 1929, at the age of sixty-two.[†] His original family in Ohio was located by one of his associates with whom he had confided. When informed of Zeal's demise their response was that in fact he had been dead for quite some time. Being religious Jews, they had sat Shiva for him years earlier and were not about to do it again.

This was a tough period for Marion. She and the children had been living with her parents for a few

years when her father took ill. He died of heart failure on November 19, 1930, at the age of sixty-seven. He had functioned as an Episcopal minister for the previous decade. Throughout this period, his family remained fans of smoking, drinking (despite Prohibition, which ran from 1920 until 1933), and having a good time in general. In other words, Yates' minister gig had not altered their lifestyles.

Yates had this much in common with Zeal: When all else fails, become a man of the cloth. His family, however, had not shared his fervor. The maternal grandmother that exists in my memories had no interest in religion. It had been thrust upon her when she was young, but it had not stuck. I have no recollection of her entering a church except for weddings and funerals.



[†] The death certificate states that the cause of death was mitral regurgitation with cardiac decompensation. My maternal grandmother said he also had developed a staph infection, and this contributed to his demise.

Zeal, Zeke, Franklin, Grant, Hayes, Betz, Fetz, and so on

There were many things wrong with my maternal grandfather, and there is no escaping the fact that he was a certified nutcase. The man was without peer. He used at least five names, amassed an impressive forty-plus arrests, concocted wild stories about a Dunkard family, bar brawls from Mexico to Montana, and being in Teddy Roosevelt's Rough Riders. He lived in and passed through a huge number of cities and towns where he perpetrated fraudulent operations under the guise of the Salvation Army, was run out of town on several occasions, and got married on Christmas Day, the same day he led a ragtag troop in a takeover of a children's nursery. He was a habitual criminal and scam artist until the end, and who knows what else. What a guy.

It required great effort, but finally it was possible to connect many points. However, this applies only to the period beginning in 1903, at which time the man was thirty-seven years old. In this later period of his life he was indeed a nutcase, habitual criminal, con man, and many other things. His association with street religion was a scam, and this was uncovered time and again. He had the cunning to revive it in a new place, but he was an oaf when it came to keeping his illicit activities hidden. All this is a matter of record, but what about the thirty-seven years prior to 1903?

We may conclude that the mystery of Zeal's early years was the result of a dedicated effort on his part to keep this information under wraps. Even the interview in Trenton served this purpose. Zeal invented a past that was convenient, could not be checked, and was published in a respectable newspaper, the Trenton, New Jersey Times.



This 1925 photo presents Zeal as a respectable guy. How could one not trust such a family man! Looks can be deceiving.

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Sculpture: Crumble Man
Robert Wittig

My guess is that Zeal set up the reporter in Trenton. The interview was his way of giving the screwball story that he wanted to spread some degree of credibility. Much of it was accepted, and what would found later to be incorrect would be blamed on the reporter's ineptness.

Signing up with the Salvation Army ensured that Zeal would constantly be on the move, never staying long enough in one place for people to start snooping. Moreover, he could remain aloof from the community while at the same time picking their pockets. And what does it mean when a man of the cloth gets caught in some nefarious activity? His punishment is nothing more than a slap on the wrist and a ride out of town.

In the final analysis we are left to speculate. Perhaps he walked out on a wife and kids and had to change his identity as much as possible to evade the authorities, or was involved in a serious crime and became a fugitive or escapee, or was nuts and did not want to be institutionalized. For sure, my maternal grandfather was one hell of a specimen.

Keep Trying

Marion had three subsequent marriages. She met Frank Ware while he was a roomer in her family's flat. They married on August 26, 1933. His parents had emigrated from England and Canada. He grew up in the Near West Side and left school after the eighth grade. Frank was fourteen years older than Marion.

That marriage ended in 1945. Frank professed to be a blacksmith and boilerma-



My uncle Franklin Hayes, maternal grandmother Marion, and her husband Frank Ware (1945)

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ker, though he never managed to be employed as such. Maybe he could be forgiven for not finding work during the depths of the Depression. However, to go several years with no job whatsoever was extreme, even during those hard times. Rumor had it that he did not go out of his way trying, and being constantly plastered did not help.

His unblemished record of zero employment continued after the United States entered the Second World War. This reflected badly on him. The rapid growth of the defense industry boosted employment dramatically and ended the Depression. It was no longer difficult to find work. Marion's factory job supported the family.

Unemployment was not Frank's only problem, or even his major problem. His drinking worsened to the point of full-blown alcoholism. He would steal the rent money Marion brought home from the factory and get thoroughly soused for days on end. Bathtub gin was common during Prohibition, and it could be purchased throughout the neighborhood. It contained a lot of toxic stuff, but it was cheap. Frank was a regular customer. He had a gambling problem, as well, and being a drunk meant he always lost. And on top of all those wonderful attributes came his abusive behavior.

Marion finally had enough and threw him out. She held up the divorce decree as a trophy. It occupied a prominent place on her fireplace mantle for decades. Then there was a quite short-lived marriage (or relationship) that she preferred to not talk about. This guy turned out to be another nutcase, and he also drank too much. Marion got rid of him in short order. Apparently her judgment when it came to choosing a husband was nothing to write home about.

I recall the evening when grandma treated us all to a blow-by-blow description of her earlier marriages. She did not talk much about Zeal, except dismissively. The focus was on Frank Ware, whom she lambasted roundly. The guy who came after Frank was like a bad dream: pretty awful, but over quickly, and having little effect on her life. Frank died of cirrhosis a few years after they parted company.

My grandmother was handed a bad deal in her first two marriages. She was not the cleverest lass, but there was no excuse for her father's demented participation in her marriage to Zeal. At the very least he should have stepped in after it became obvious that a colossal mistake had been made. Marion married Frank Ware probably out of



Time Will Tell
Cover of *Mensa Bulletin*, January 2002
Robert Wittig

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desperation. Her father had recently died, the Depression had descended, she had three children, and she was unlikely to earn enough money to support the family. Their marriage progressed from barely tolerable to impossible.

At age forty-four, and with time and the supply of eligible bachelors running out, she married a one-of-a-kind character named Martin Rolnick. He was nine years her senior, and he had an unconventional and absolutely fascinating background. This marriage worked rather well for both of them.

Martin Rolnick

Martin August Rolnick was born on November 9, 1894, to Polish immigrant parents. His father, Marian Rolnick, was an ethnic Pole who had emigrated to the United States in 1885 at the age of twenty from a region in Eastern Europe that was part of the Russian Empire. His mother, Agnes Liesnieski, was an ethnic Pole who had emigrated to the United States in 1872 at the age of four from a region that was part of the German Empire.** Martin's father worked as a presser in a tailor shop, and he held this job until his retirement. His parents eventually spoke English, but they never mastered reading or writing English.

The Rolnick family hopped from flat to flat in and around Chicago's Near North Side and Lincoln Park areas, with a couple of excursions to the Near West Side and North Lawndale. Martin was the second of six children.† He left school before the eighth grade. The eighth grade seems to have been the cutoff for my grandparents, step or otherwise. None of them started the ninth grade.

Upon leaving school, Martin entered the workforce as an errand boy in a drugstore, and from there he advanced to low-level jobs in factories and garages. For example, he spent a few years as a mechanic's helper in some makeshift garage operation on Southport Avenue. The Selective Service Act, which introduced the draft, was passed on May 18, 1917, just six weeks after the United States entered the First World War on April 6, 1917. Martin registered for the draft on June 5, 1917. He was called for active duty on May 19, 1918.

The involvement of the United States in the First World War ended with cessation of hostilities on the Western Front. An armistice between the Allies and Germany was signed on November 11, 1918, in Compiègne, France. The Treaty of Versailles was signed on June 28, 1919, five years to the day after the assassin-

** Recall that the sovereign nation of Poland emerged only after the First World War.

† The Rolnick children, in order of birth, were John, Martin, Lena, Thomas, Bernese, and Felix.

Part 1. Before the Age of Thirty

ation of Archduke Franz Ferdinand, which had triggered the war. The Versailles Treaty formally ended the state of war between Germany and the Allied Powers. Martin was discharged on February 22, 1919, a few months after the Armistice. He returned to Chicago and picked up more or less where he had left off.

Martin's reentry into civilian life fell short of the glorious return of a regaled victor. He continued to work in factories, garages, and at odd jobs. Between his mid-twenties and mid-thirties he did little more than survive one ill-fated marriage, drink, hang out, drink, gamble, drink, and get into trouble here and there. In other words, he did precious little of anything useful, certainly nothing significant.

He maintained this precarious existence until the Great Depression took hold, at which time he found himself without work. He considered himself a flexible and imaginative guy, but had he relied on his contacts to help him find work, he would have been lucky to not starve. It was time to attempt something new. And his next occupation would be new indeed. His salvation would be the junk business.

Martin was a junkman throughout the Depression. He would make the rounds using a horse-drawn cart replete with all the bells and whistles appropriate for a junk cart. The horse-drawn cart was a good sign, for it indicated he was on his game. When he was down on his luck, which was often, he lugged a smaller cart around by hand. He worked mainly the Near North Side and the Near West Side: as far north as Fullerton Avenue and as far south as the Maxwell Street area and the eastern part of North Lawndale, where his family had lived for a while.

Martin spent a lot of time in the Maxwell Street area, which was pretty wide open at the time. Some of the most interesting people on the planet lived in this part of Chicago. One he remembered pretty well was Jack Ruby, formerly Jacob Leon Rubenstein. This is the guy who shot and killed Lee Harvey Oswald, the man who assassinated President John Kennedy two days after Oswald had been taken into custody. Jack Ruby died of lung cancer a few years later while in jail. Martin remembered him as an odd character: part crook and part patriot. Hart, Schaffner, and Marx originated on Maxwell Street. Some of Al Capone's guys were from Maxwell Street. The author Theodore Dreiser was from Maxwell Street. The list goes on and on.



Hard Times
Robert Wittig

Part 1. Before the Age of Thirty

Martin loved the life of a junkman. That sounds crazy, but it is true. He found it exciting, which perhaps comes as no surprise, considering his previous jobs. Large amounts of money were made and lost. Martin would have a windfall when he uncovered large caches of expensive metals such as tin, but then he would lose everything with the help of drink. Much of his early life, particularly this part, was spent in an alcoholic fog. He would wake up, often in a jail cell, not knowing what had happened the night before. The judges knew him well. Had they not deemed him harmless – would not hurt a flea, as the saying goes – they might well have locked him up and thrown away the key. In short, he was a nice man, but a hopeless drunk.

In 1940 Martin was married to a person named Nellie, who was twelve years his senior. They lived just outside Chicago in Bensenville, and he was still a junkman. This would soon change to factory work. Something happened, perhaps death or divorce, but in any event Nellie disappeared from the scene by the mid-1940's. It was during this period that Martin sobered up for good, never to touch alcohol again. He landed a different factory job, married my grandmother in 1947, and they lived happily ever after. One can never be entirely sure about the "lived happily ever after" part, but that is how they appeared to me and everyone else in our family. Besides, such things are relative.

Martin and Marion held jobs in factories that were near one another, and by the mid-1950's they had saved a small amount of money. With it they bought a house at 2324 North Greenview Avenue. They were proud of their purchase, and rightly so. Neither of them, nor their parents, had ever owned property.

The place was within walking distance of their jobs, which added to its attractiveness. It was a shambles, but they could not afford better. In any event, they would fix it up. In fact, the whole area was run-down in the mid-1950's, so their place did not stand out. You might find these disparaging comments curious if you saw their neighborhood now: condos, yuppies, gyms, yoga, pilates, organic everything, High End Coffee, shrinks, the works. It was not like that in the mid-1950's.



My maternal grandmother and Martin Rolnick (1946)

Part 1. Before the Age of Thirty

Life had knocked Martin down more times than he could remember, but he had always managed to get up and right himself. The man did not have the word quit in his vocabulary. He was determined to turn their modest purchase into something nice. He worked ferociously for a couple of years: evenings, weekends, vacations, holidays, and every other moment he could squeeze in. He gutted the entire structure, starting with the basement. He installed a thick, concrete floor that served as a foundation, and eventually fixed up, and rather nicely, all the rooms on the main floor, in the basement, and in the attic. I remember helping with the concrete.

We mixed the concrete with gravel and sand in the backyard, and transported it in an ancient wheelbarrow down narrow steps to the basement. Maneuvering this wobbly beast, loaded to the brim with wet concrete, without tipping it over was a challenge. I was fourteen, young and strong and capable of great physical feats, or so I thought. Martin was an ancient sixty-two.

Those wheelbarrows of cement taught me that I was, in fact, an ungainly weakling. Were there any doubt, it vanished the day I lost control of the wheelbarrow on the way down the stairs and everything, myself included, went crashing to the bottom. The concrete made one hell of a mess. Martin, compared to me, turned out to be a spry, wiry athlete. He also had the stamina of a marathon runner. The man outworked me without any question.

Had you met Martin once you would have never forgotten him. A born storyteller, he could amuse kids or adults for hours on end. The stories about his junkman days were spellbinding. He could transport you through space and time to the alleys, characters, crooks, food, smells, negotiations, arguments, deals, swindles, and all that interesting stuff. Listening to his scintillating descriptions while watching his wildly animated gesticulations was better than going to the movies. We would sit for hours, enraptured by his tales. Mom and Dad would play three-cent-limit poker at their place on Saturday evening every so often, with me watching from the sidelines. The poker was boring, but Martin more than compensated with his stories.

I have never, throughout my entire life, encountered another person like Martin. Imagine if you will, a fusion of Groucho Marx and Jimmy Durante, and turn up the energy level.

My step-grandfather Martin Rolnick was a great man – without doubt a unique character, but a great man. He was the son of Polish immigrants who had lived under Russian and German rule before coming to the United States. Martin had been born into serious poverty, and as a young man with no formal education he worked his ass off to eke out a primitive living as a junkman. And he made more than his share of mistakes along the way.

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After Martin married my grandmother he damned near killed himself to provide her with a nice place of her own. Sure, he had messed up his early years, but he made amends and then some.

Martin was proud of me for my pursuit of education. He did not know much about what transpired in schools, but he was one of the strongest proponents of education I have known. He had a profound knowledge of, and interest in, the legal system. His firsthand experiences had whetted his appetite for learning rather than sending him underground. He may well have become a lawyer had he been educated.

My maternal step-grandfather Martin Rolnick passed away on February 27, 1976, at the age of eighty-one. My maternal grandmother Marion passed away in 1983 on her eightieth birthday. She and Martin were one hell of a pair.



Higher Education
Robert Wittig

Grandma

My maternal grandmother was considered by most to be a simple, uncomplicated person. Nonetheless, she had dealt with more than her share of adversity, and this had hardened her. Her winsome smile was not to be mistaken for complacency. She harbored strong opinions and, despite a generally reserved demeanor, was not someone to be trifled with. Get her riled up and she could turn into a holy terror on short notice.

On the other hand, she lavished nothing but love and warmth on her grandchildren. As a child there was no greater treat than going to grandma's house and spending time with her and Martin. We even got to visit them for several days at a time when we were lucky.

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Years later my grandmother took me aside at a family gathering after hearing of my intention to remain in Urbana-Champaign for graduate school. She told me in a hushed voice to not be ashamed. A lot of people need extra time to complete their education. She counseled me to stick with it because a college degree is worth any additional time that might be required. She had no understanding of graduate school, as she had completed only the seventh grade. Nonetheless she was spot-on with the basic idea, and she made no bones about its importance. My grandmother was a complex individual but, to borrow the signature phrase from Poe's *The Purloined Letter*, her complexity was "hidden in plain sight."

Grandma and Martin are examples of the many people in my life who had little formal education themselves, but were inspirational insofar as identifying education as the only viable means of avoiding the kind of life they knew. I did not realize at the time just how inspirational they would prove to be. It is not to my credit that their messages took so long to sink in.



Ivory Tower
Robert Wittig

Mom's Youth

My mother and her two younger brothers grew up on Chicago's West Side. The family rented a modest flat at 414 North Troy Street, starting shortly after Yates' death in 1930 and continuing until the mid-1940's. The term modest flat is generous to a flaw. The building was a Dickensian monstrosity – a woebegone, rickety, wood-frame structure on the verge of collapse. It was located at the boundary between Humboldt Park and East Garfield Park. Their place was literally a stone's throw from Kinzie Street, which was the border. The map a half dozen pages back indicates East Garfield Park using gray shading.



Home Sweet Home
Robert Wittig

Nearly all the family's friends, the kids' elementary school, the most desirable high school (John Marshall), the stores where they shopped, and virtually all their social activities were located in East Garfield Park. The family had resided for many years at different places in and near East Garfield Park. There were excursions to North Lawndale, the Near West Side, and West Garfield Park, but never farther. The map a half dozen pages back indicates the locations of their residences at ten-year intervals starting in 1910 (taken from census data), plus places where Marion and Zeal had lived. There were a few other family residences, also located more or less within the gray rectangle. Mom and her family considered themselves denizens of East Garfield Park. This is where they felt at home.

Mom's early life played out for the most part within an east-west corridor that extended from downtown to Garfield Park and beyond. Her family was not given to long trips, such as to the north and south sides of the city or, heaven forbid, beyond the city limits. They preferred the innermost part with its mishmash of good, bad, and ugly. They considered themselves city people and were proud of it. It gave them satisfaction, a measure of sophistication that was available to the city's underclass.

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They could meander down State Street with the best of them, and bask in the luxuries of Michigan Avenue and the Gold Coast without spending so much as a nickel. And it was fortunate that they did not have to spend so much as a nickel, as they did not have the nickel.

This picture seems incongruous given that the Depression was in full force. The family existed one day to the next on a far less garish stage than Michigan Avenue. Quite



Michigan Avenue
Robert Wittig

the opposite – flat broke was their way of life. Were a feudal code in place, they would have been serfs. Nonetheless, Mom described the situation to us in fairly upbeat terms. I suppose her point had been to instill in us that not everything good in life requires money, which is an important thing to keep in mind.

The Depression brought excruciatingly hard times to the poorest parts of Chicago, such as the section where Mom's family lived. Finding steady work of any kind was next to impossible. They endured severe poverty.

During the cold months, Mom and her brothers would scour the streets, alleys, and parks for anything that could be burned, as this would enable the family to stay warm. Scraps of wood and paper were big catches. Once the kids picked up a large cardboard-covered battery and inadvertently mixed it in with the stuff to be burned. Everyone in the flat could have died from the fumes. Grandma sensed something was very wrong and called for immediate evacuation. It was lucky she was at home.

The family would solicit the local butcher shop for bones and scraps of meat supposedly to feed the dog. The guy behind the counter would cast a knowing wink their way and help out whenever possible. My mother and her siblings walked long distances, even in the dead of winter, for lack of bus fare. Badly torn clothing was always repaired, never tossed, often yielding items with interesting

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patches. Toilet paper was lifted from public restrooms or improvised from crumpled newspaper. Hot water was a luxury. What passed for a bath was carried out with a bucket of hot water, a small towel, and a bar of soap. Growing vegetables in the back yard and vacant lots was serious business, not a middle-class amusement. Chickens were kept in back yards, and not as pets. Sometimes the kids would be upset by their sudden disappearances. When the soles of shoes wore through, cardboard inserts were fashioned to keep them useable. This practice was alive and well throughout my childhood.

At the same time, on the basis of everything we were able to surmise from the stories Mom told us, her family was happy during this period, despite the economic hardship. At least this was how she saw it, or chose to see it. The relationship between happiness and money is a curious one. Money means different things to different people, and it is often not a civilizing influence. This was true back then, and it is just as true today, if not more so.



Hung Out to Dry
Robert Wittig

Our Family

My father arrived in Chicago in 1935 – straight off the boat, so to speak – unable to utter a word of English. This had to be remedied before he would be permitted to enroll in school. The staff at John Marshall High School was sympathetic and helpful. A tutor was provided to help him learn English, and a very good one. Of course Dad's mother had arranged it all the year before. Dad fulfilled his end of the bargain by mastering



My parents in 1945: Edith Rebecca and Curt

English quickly and with stunning proficiency. In less than six months he spoke fluently, with no trace of an accent whatsoever.

When my father died, the person who had taught him English showed up at his funeral. This took us by surprise. Dad and his former tutor had not kept in touch, but somehow the tutor got word of Dad's death. He told us that Dad had a prodigious capacity for learning English and languages in general, the most impressive he had come across. Perhaps this was helped by speaking both German and Polish as a child.

Dad's aptitude for languages came up again following his enlistment in the Army. After basic training he was sent to the University of Minnesota to learn Swedish, as it was feared Germany would invade Sweden. This does not strike me as an efficient use of human resources. The Army soon came to its senses and sent him to England as a member of its Air Corps, where his fluency in German was badly needed.

Mom and Dad met at John Marshall High School. It was excellent in all things academic, and it was pretty good at basketball, as well. Among its graduates is Jerome Friedman, who won the 1990 Nobel Prize in Physics for his role in the discovery of quarks, Julius Richmond, the Twelfth Surgeon General of the United States and the founder of the Head Start Program, and Peter Lisagor, the bureau chief of the *Chicago Daily News*. Golda Meir lived and worked at the Douglas Park Library a few blocks from Marshall, and Benny Goodman, one of my parents' favorite musicians, was also raised just a few blocks from Marshall. Louis

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Price, a lead singer for *The Temptations*, went to Marshall. I encountered him recently at a fund-raising event for the Boys and Girls Club of Santa Monica.

Many notable people had their start in this part of Chicago. Saul Bellow, an awardee of the Pulitzer Prize and the National Medal of Arts, and the 1976 Nobel Laureate in Literature, was raised in the Humboldt Park section about a mile from Mom's home. Likewise for Studs Terkel, Shelley Berman, who is an emeritus faculty member at USC, Irv Kupcinet, who was a world-famous columnist for the *Chicago Sun-Times* and a well-known television personality, author Nelson Algren, and many other notable personages. Not one of them was born to a life of comfort, yet each made a mark.

My parents married several months after Pearl Harbor and a year-and-a-half after graduating from high school. Obtaining a high school diploma was a major achievement in the family, as no one in its history had ever pulled it off. The previous record for formal education had been completion of the eighth grade. Mom told me that Dad had even been so unusual as to be a good student. Mom was nineteen and Dad was twenty when they married. It was understood that he would enlist in the Army, and they decided to marry prior to his enlistment. It was almost certain he would be dispatched to the European Theater posthaste. My father reported for active duty on September 18, 1942.

My Uncles

My mother's brother Franklin acquired the moniker Buddy when he was young, and it stuck. He was uncle Buddy to my siblings and me, and Buddy or Bud to the grownups. I have no recollection of his real name ever having been used. Even now I cannot bring myself to refer to him as Franklin. My parents gave me the middle name Franklin after my uncle. I consider it my good fortune that they did not use Buddy.

Buddy enlisted in the Navy on February 27, 1943, shortly before his nineteenth birthday. He underwent basic training, and was then shipped out to sea on a battleship. The ship was bombed shortly after it arrived in the South Pacific. I do not remember being told



My uncles: (left) Franklin and (right) Robert Hayes

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the details of the attack, whether it was by airplanes, submarines, ships, or a combination of these. In any event, an explosion took out the radio room, where Buddy had been on duty. He survived, though barely.



Ghost Ship
Robert Wittig

Buddy was discharged from the Navy on October 5, 1945. He underwent a painful and lengthy recovery in a string of Navy hospitals, and it was years before he was able to walk about with relative ease. Throughout his life the huge amount of shrapnel that had remained in his body after his recovery compromised his health. Every so often a piece would work its way to the surface, enabling it to be removed, but most of it stayed put.

It was not just the shrapnel that would work its way to the surface. There were other reminders as well of his ordeal.

My nightmares often involve flying under my own power to higher and higher heights, running away from something or someone, being lost and trying to catch a train, being chased through dark places, and walking on narrow steel beams at dizzying (skyscraper) heights. You undoubtedly have nightmares of your own. Maybe some of yours are like mine.

Buddy's nightmares were different. His friends were writhing, screaming, thrashing uncontrollably, incinerated in a fiery inferno of burning fuel atop the water. His nightmares were not products of his imagination, but recollections returning to haunt him. They were frequent and really bad. He had stared death in the eye that fateful day, the sole survivor of the guys in the radio room, and death would not let him forget that he had been spared.



Tropics
Robert Wittig

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Uncle Buddy had character. He was a kind and fair person who assisted those in need. He faced the future bravely and resolutely, overcoming obstacles, rolling with the punches, never throwing in the towel. He had boxed in the Chicago Golden Gloves competition prior to enlisting in the Navy. He might have become a contender, but his war injuries took such strenuous physical activity off the table. He nonetheless remained a fighter throughout life – without gloves and punches, instead focusing his efforts on actions that benefited others.

Following Buddy's return to Chicago after the War, he took a job in a factory, and he continued with factory work throughout his life. He became involved in union organization with the United Steelworkers of America, and he eventually served as union steward at the company where he had started work as a young guy, and had remained until the end of his working years: The Sloan Valve Company. This is the company that pioneered fixed-volume flushing in 1906 and introduced motion activated flushing (at Chicago O'Hare Airport) in 1991. Their units are found on virtually all toilets and urinals in commercial and public places in this country. He was very proud of his role in, and contributions to, the United Steelworkers of America.

I remember uncle Buddy – even way back when many of us were crammed together in a flat on Albany Avenue – as warm and generous. He would play with us kids for hours on end. He married a few years after the war: a practice that was all the rage among returning servicemen. His wife Ruth was quiet, which stood her apart from our rowdy family in a big way. Kids can spot things in people, and we sensed that something was not right in the relationship. Buddy's wife was older than he, and she had a daughter from a previous marriage. Buddy wanted to have other children, but she did not. Their marriage went south after a few years. Buddy raised his daughter in a loving, mixed-race household, as his subsequent marriage was to an African-American woman with children.

This was a man who, for roughly two decades, donned a Santa Claus outfit on Christmas Eve and made the rounds, handing out gifts to the small children who ran to him at each house he visited. He would let them sit on his lap, and he would indulge them in the usual Santa Claus fantasies. I do not remember how many



Uncle Buddy on leave in the summer of 1945

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households he visited. It is certain that the number was not small. A person does not do this sort of thing unless he or she is made of good stuff.

Uncle Buddy died on July 8, 1991, at the age of sixty-seven following a massive heart attack. He had been in failing health for some time: stroke, overweight, diabetes, and a heavy smoker. He enjoyed a bit of whisky from time to time, but was not one to drink in excess. His legs had been in bad shape for several years, and as a result he had become sedentary. Without a doubt Buddy's brush with death as a young man had shortened his life. Michele and I went to see him a couple of years before his demise. He had not migrated far from the old neighborhood. He was nice as ever.

We sat in his modest flat that afternoon, nursing cups of coffee and tea, nibbling cookies, listening to classical music and jazz. We talked about politics, Chicago, his life, the United Steelworkers of America, us, our lives, the future. His wife (or significant other) joined us, but most of the talking was among Buddy, Michele, and me. When you looked into his eyes, you could still see the young man: the boxer, the incurable romantic, the guy who sang tenor, the guy who hung out with his friends on stoops throughout the neighborhood, the guy who would stick up for the underdog. Uncle Buddy knew what was coming. It was the last time we saw him alive.

Mom's brother Robert, a.k.a. Chummy, was sixteen years old at the time of Pearl Harbor. He enlisted in the Navy in 1943 at the age of seventeen, and he was discharged in 1946. Robert served as a torpedo-man's mate, second-class petty officer. He was not injured seriously during the war. He married shortly after returning home, and he and his wife Eleanor took up residence in a Chicago suburb, Tinley Park, where they raised three children: Kristen, Scott, and Randy.

Robert went straight to work upon his reentry to civilian life. He studied art assiduously and landed a job as a commercial artist, which turned out to be his lifelong profession. When I was a kid, he would show us some of his work, even the nudes.

His drawings were really impressive. He and Eleanor spent their lives together in Tinley Park. He was not delighted with the nickname Chummy (no surprise), so for the most part it went by the wayside early on.



Robert Hayes in 1945.

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Robert's aptitude, capacity, and interest in art continued throughout his life. He was fortunate to earn a living doing this kind of work. He was an employee of Union Carbide for many years, and this was the family's main source of income. At the same time, he enjoyed working freelance, as this enabled him to take on a range of projects such as churches and large commercial buildings.

For reasons that to this day remain mysterious, Robert and my mother did not get along. She would complain: "He thinks he is too good for us," and utter more colorful epithets, as was her habit. I was a gullible youngster, but even to a kid like me it seemed that she carried matters too far. Mom probably had a few valid points, but Robert undoubtedly had a few equally valid



Wedding of Robert Hayes and Eleanor Gortz (1947)

points. Regardless, they should have cooled it on the rancor and split differences. Unfortunately, this was not in the cards. Mom was pugnacious, a take-no-prisoners combatant who could start a fight in an empty room, the last person on the face of the earth to compromise.

Mom was part of the problem, when she should have been part of the solution. Her brother Robert had worked hard and achieved something. She should have been appreciative, rather than reverting to trenchant sarcasm, the last defense of the weak. Dad was caught in the middle, so he went along for the ride, as that was the path of least resistance. This estrangement was less than useless. It gave me the creeps even as a youngster.

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Robert Hayes passed away from leukemia on June 28, 2000, at the age of seventy-five. Earlier this year I met Eleanor and two of her three children: Kristen and her husband James, and Scott and his wife Marge. Kristen and James hosted a Memorial Day gathering at their home in Crown Point, Indiana, in the far northwest corner of the state. It is close to the Illinois border, and less than an hour by car from Tinley Park.

Eleanor is eighty-nine, and still lives in Tinley Park. She is in excellent health and in equally excellent spirits. Scott and Marge also live in Tinley Park. I did not meet Randy, though I was informed that he and his wife Debbie live in Tinley Park, as well. I did, however, meet Kristen and James' daughter Lauren and her husband Nathan. It was a nice reunion. I had not seen any of them for several decades.



Above: Kristen Quirk, Scott Hayes, the author (Crown Point, Indiana, 2014)

Left: James Quirk (2013)



From the left:
Eleanor Hayes,
Colleen Petersen,
Lauren Long,
Randall Quirk
(Crown Point,
2013)

Kristen has worked as a nurse for many years. It has been a demanding yet emotionally satisfying career, in that it is vital work. She and James have three children: Lauren Long lives in Crown Point, Randy lives in Fort Wayne, and Colleen Petersen lives in San Diego. Kristen helped me greatly by providing information and advice about how to access genealogy archives. She is the person who provided the photos of Franklin H. Betz alias Zeal Hayes, as well as other photos on my maternal grandmother's side that found their way into this autobiography.

My Parents

Returning to my parents and the war years, it was quite a time. My mother gave birth to me, and my father was sent to a military air base in Kent County, England. There were many impromptu airfields in Kent County, as it faces the narrowest part of the English Channel. He served as a crew member on a B-17 bomber. This huge plane was referred to as The Flying Fortress. In addition he functioned as what was called a "voice interceptor," which means he picked up and translated the German military communication broadcasts that filled the air during combat. He also flew a few missions in a smaller plane, the de Havilland DH.98 Mosquito. This plane was referred to as the Wooden Wonder, as it was made almost entirely of wood.



My father before his departure for England



The Mosquito: My father is in the center. The handwriting is his.

A large number of military installations were bombed, many of them several times: Frankfurt, Berlin, Leipzig, München, Dresden, Hamburg, Köln, Münster, Osnabrück, Koblenz, Friedberg, and quite a few others. As the war in Europe drew to a close, they mopped up a few pockets of Nazi holdouts near Bordeaux, France, and they dropped food to starving Dutch civilians in Utrecht, the Netherlands.

Many of the English and American planes that took off from the Kent airfields never made it back to their bases. My father's plane frequently returned riddled with holes. It was downed a couple of times, but in each of these instances the pilot managed to maneuver the plane into Allied territory in Belgium before setting it down with what amounted to a crash landing. The pilots and crews always survived, and my father would then cross the English Channel on a military ship, reconnect with his unit,

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and resume his duties. He was discharged on September 20, 1945, at which time he returned to the States to get on with life, so to speak.

My father was often asked whether he had mixed feelings about bombing the country of his birth. His stock reply was "Not in the least." He had witnessed firsthand the wholehearted embracement of the Nazi regime and its sinister programs by an unfortunate percentage of the Germans in Upper Silesia, the book-burning campaign carried out by young Nazis that began already in the Spring of 1933, the vicious anti-Semitism that had been unleashed, and the attacks on everything considered insufficiently Nazi. He had grown up forty kilometers from Auschwitz. He had talked to guys who had liberated the death camps. They had retched their guts out, and these were really tough guys. My father knew what had been at stake.

I was born in Chicago on September 14, 1943. We lived on the top floor of what was (and still is) called a two-flat until I was five.[†] It was located at 430 North Albany Avenue, just a block from where Mom had grown up on Troy Street. Interesting characters were commonplace in the neighborhood.

The junkman would pass through the alley adjacent to our building, chanting his familiar refrain "Rags old iron!" He was such an icon of the era, especially his cry, that Nina Simone made him the centerpiece of a song that became popular later: *Rags and Old Iron*. As soon as we spotted the junkman, Mom would scurry down the stairs, dragging with her an eclectic collection of candidates for the world of renewable stuff. This meant we would receive a small amount of cash, were the junkman accommodating, for things that otherwise would be tossed. It should be said that these things otherwise *might* be tossed, for we were a family of insufferable packrats. My guess is that the family's packrat trait was, in large part, psychological baggage carried forward from the Depression. Regardless, were it not for the junkman, we would have accumulated even more useless stuff.

The iceman would come by with a pair of heavy-duty steel tongs and a thick, leather pad draped over one shoulder to protect him from both the cold and the



Author in late 1944 on Albany Ave

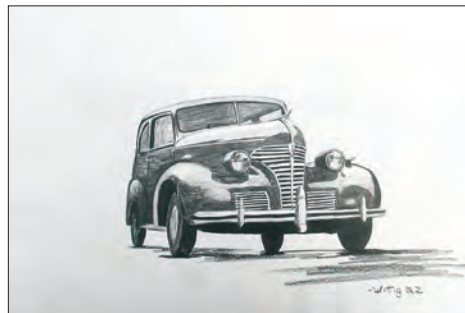
[†] The term two-flat is used mainly in Chicago and surrounding communities. In other parts of the country it is usually referred to as a duplex or two-unit apartment building.

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sharp edges of the ice. He would hoist a large block of ice to his shoulder, carry it up several flights of stairs, and place it in the icebox. Even in the heat of summer a block of ice would last a week, as long as the icebox door was not opened frivolously. Refrigerators came later. The milkman would leave one or two quart bottles of milk near our back door every few days. In cold weather we had to bring the bottles inside quickly, before the milk froze and cracked the bottles. In summer the milkman would place the bottles directly in the icebox, which was kept on the back porch to maximize open space in the kitchen, where all of our meals were eaten.

The junkman and iceman each made his circuit using a horse-drawn cart, whereas the knife sharpener got by with a pushcart. It was fitted with a homemade contraption that enabled him to spin the abrasive-coated wheels that were used for sharpening blades. He would sit in a seat and pedal, as one would do on a bike. In fact, this part of the contraption had been salvaged from an old bike. The knife sharpener and his equipment looked like something straight out of a Charles Dickens novel, when in fact he had simply emigrated from the Maxwell Street area to the greener pastures of East Garfield Park. He showed up every few months, except in the dead of winter, and he never lacked for business. Housewives would greet him with the damndest collection of things that needed sharpening: knives, scissors, cleavers, axes, and so on.

Most of the motor vehicles in our neighborhood dated from the 1920's. Hard times during the Depression and a moratorium on the production of non-military vehicles during the War ensured that the 1920's were well represented. People in our stratum rarely owned cars, and when they did, they were invariably clunkers that tested one's mettle just to keep them running. Try to imagine what it was like attempting to fix one of those beasts in the dark, using a flashlight or a light bulb at the end of a string of extension cords, with the temperature hovering around zero and the wind wailing like a banshee. Life back then was a lot different than it is now.



Built to Last
Robert Wittig

The girl who lived in the apartment building diagonally across from us never passed up an opportunity to pick on me. One day this earned her a punch in the nose, which resulted in a nosebleed. We were each five years old, so she was not really hurt. Nevertheless, you would think that she had been shot in the face at close range from all the commotion it created. It turned out that it was perfectly

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acceptable, and in some families even laudable, for boys to hit boys, but boys were not supposed to hit girls.

When it snowed I would take my sled for rides down the railroad embankment behind the factory across the street. This led to my first experience with being knocked unconscious. In warm weather I patrolled the sidewalks on my two-wheeled scooter, sustaining bruises and scrapes, but nothing serious – collateral damage in the search for great adventures.

Our flat on Albany Avenue was three blocks from Garfield Park, which is one of Chicago's three great West Side parks. The other two are Humboldt Park to the north and Douglas Park to the south. Garfield Park opened in 1874 as Central Park, but was renamed in 1881 in honor of President James Garfield following his assassination. It came into prominence in the early part of the twentieth century when it underwent extensive landscaping and acquired impressive recreational facilities. Garfield Park was at that time the centerpiece of the Chicago Park System. Much of our free time was spent there.



An outing in Garfield Park



Footbridge Over the Canal
Robert Wittig

Garfield Park was great. Its lagoon was decorated with common but picturesque aquatic plants such as reeds, cattails, and lily pads. There was a wooden footbridge to an island, and small rowboats could be rented for next to nothing. There were enough frogs to keep the mosquito population more or less in check, and painted turtles would forego the sanctuary of the water to bask in the sun. The Park was also home to splendid gardens and a con-

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servatory that housed strange-looking plants from all over the world. It had the Golden Dome Field House, a band shell, and many statues and sculptures. From a child's perspective, though, its most important attributes were its grassy areas and playgrounds.

By the time I was five, it was part of our routine to go to the Park on weekends, often for a picnic. We later moved to the top floor of a two-flat on Congress Street in West Garfield Park. This placed us on the other side of the Park, but still only three blocks from it. We remained there until I was eight, and we continued to make weekend visits to the Park.

The flat on Albany Avenue was not designed to accommodate the large number of persons who called it home: my maternal grandmother and



Reeds
Robert Wittig

her husband, our family of three, and my two uncles, who had returned from the Pacific Ocean Theater of the Second World War and were attempting to adjust to life in postwar America. In addition, a human medley of visitors would pass through, and typically they would stay for a couple of weeks. More often than not they were soldiers, sometimes with their girlfriends, whom Dad or my uncles had befriended during the War. They were usually on a journey from nowhere to nowhere, and we were conveniently positioned along their route.

The flat could get downright crowded with its two minuscule bedrooms, one bathroom, and the small front room that was converted into a bedroom for my uncles at night. The adults, to a person, were two-packs-a-day smokers. Some of them were so hooked, and loony on top of it, that they prided themselves on needing only one match a day. It was used to light their first cigarette in the morning. Each successive cigarette was lit from the previous one when it was about to expire.

Friends and friends-of-friends would come over on weekends, and the place would get noisy and crowded. The intimate proximity afforded by our cramped quarters, together with the impressive amount of booze that flowed, ensured lively arguments on virtually any topic that came up. Maintaining coherence proved im-

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possible, but that did not seem to bother the participants. In short, the entropy of inarticulateness ruled. No one topic, however contentious, survived for more than half an hour.

Throughout all this, the smoking did not let up, and after a few drinks it even accelerated. In the winter all the windows were shut so we may well have set a record for the concentration of second-hand smoke. No one paid attention to such things back then.

My maternal grandmother and her husband worked hard at their factory jobs, but their diligence and frugality were penalized rather than rewarded. There was no

escaping the fact that they were the official tenants, so they got stuck paying the entire rent for the flat. In other words, the rest of the occupants were getting a free ride, which is not a bad deal if you can pull it off. Of course, such a situation cannot continue indefinitely.



Back Yards
Robert Wittig



Grandma on Albany Avenue

Grandma loved her kids dearly, but it had never been her intention to run a free boarding house and indulge them in a suite of pastimes that read like Hemingway's *A Moveable Feast*. No fan of subtlety, she put her foot down and made it clear to Mom and Dad that they had worn the welcome mat down to its last few fibers. In effect, she tossed us out in the summer of 1948.

The move from Albany Avenue to a two-flat in West Garfield Park at 4114 West Congress Street took place without complication. We remained there until 1951, at which time the construction of the main stretch of the Congress Expressway (later renamed the Eisenhower Expressway, Interstate 290) was about to begin. In fact, the phrase "about to

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begin" does not come close to doing justice to the scene that was developing. Chicago's full armada of heavy demolition and construction machinery was lining up in anticipation of hitting the ground running on the appointed start date.

The prospect of enduring a project of this magnitude, which would continue for many years and take out all the houses across the street from us, to say nothing of the specter of having a behemoth like the Congress Expressway a few feet from our front door when the construction ended, was not appealing. The writing was on the wall. The flat on Congress Street would be abandoned in search of higher ground.

The move undertaken by our fledgling family in the summer of 1951 would estrange us from the West Side environment that we had come to know and love: where Mom and Dad had attended high school, where nearly all of their friends lived, where they knew what to do and where to go. There would be no more uncles with their girlfriends, no more raucous weekend gatherings of neighbors, friends, and relatives, no more maternal grandma with her new and interesting husband Martin close at hand, no more having Dad's mother just down the street. The junkman, knife sharpener, iceman, and milkman would disappear from our lives overnight. It is not as if the old neighborhood was not experiencing its share of problems, but it was familiar ground. Our comfort zone, fragile as it was, was on the chopping block.

As it happened, the bottom fell out of the old neighborhood shortly after we left. Its population had grown explosively following the Second World War, resulting in severe overcrowding. The area had nonetheless maintained a reasonably cool Bohemian atmosphere. However, the construction of the Congress Expressway, which created one hell of a mess for several years, as well as the crime wave that followed, eliminated any vestige of attractiveness in East and West Garfield Park and North Lawndale.



On the Move
Robert Wittig

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East Garfield Park had a teeming population of 70,000 in 1950. By the year 2000, however, its population had dwindled to 20,000, and the amount of violent crime in the neighborhood was horrendous. The sections referred to as East and West Garfield Park and North Lawndale would come to be known as Chicago's killing fields. When we moved in the summer of 1951, none of us was astute enough to have foreseen this, at least how bad it would get.

We would confront head-on the rawness of a new neighborhood, with its new people and social mores. Mom and Dad had been through a lot already. Their attitude was that this would simply be the latest chapter in a long string of life's tests and adventures, bravado that sounded better than it played. Little did they know that the new neighborhood would prove to be very raw indeed, and even hostile at times. It would arouse dormant demons and create new ones. It would ferret out and exploit their most guarded vulnerabilities and weaknesses. It would sap their strength without mercy or relent. Despite all they had been through, they were young and less ready than they thought.

Before I describe our family's move in the summer of 1951 and all that followed, let me give you a preview of what lay in store.

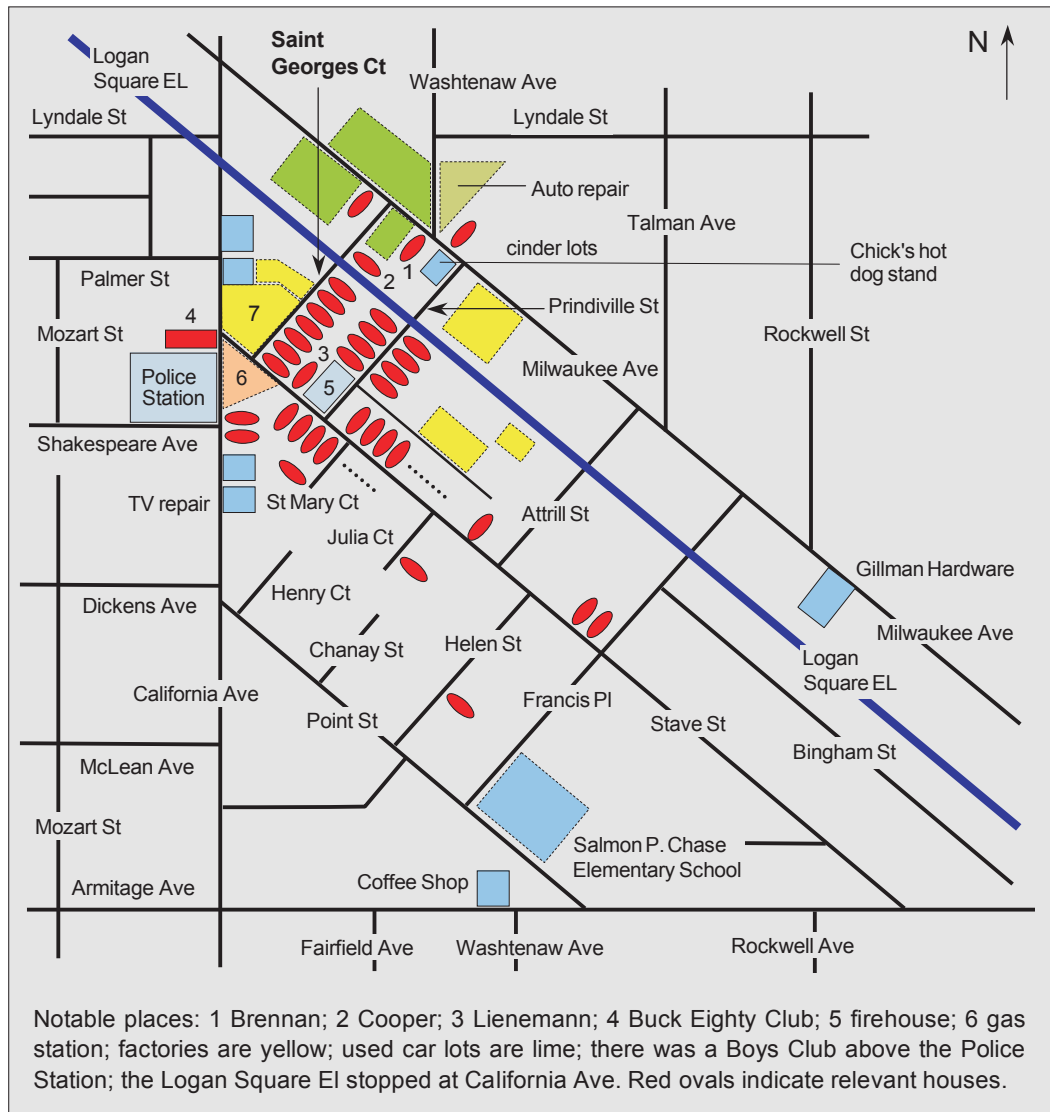


Terror
Robert Wittig

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Saint Georges Court

Each Chicago heat wave arrived with its own unique arsenal of irritations and challenges that were designed and coordinated by the Almighty to inflict maximum misery. That said, this one deserved first prize for severity. Gillman Hardware on Milwaukee Avenue had sold its entire inventory of house fans by mid-week, and since then the temperature had climbed even higher. Worse yet, the humidity was holding steady at 90%. Sleeping indoors was out of the question. At night we shared the back porch with mosquitoes and huge black beetles that did not seem to enjoy the heat any more than we did.



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A relentless sun invited the cliché that an egg could be fried on the roof of a car. One of the local firemen even went so far as to demonstrate this, should incredulity lurk. A kid from down the block stole a wrench from the firehouse and unleashed many of the neighborhood's hydrants. When the asphalt softened in mid-afternoon, parked cars began to sink into the street. Old people who were stuck indoors feared for their lives. The Windy City lay still – no relief in sight.

The local gin mill, the Buck Eighty Club, was packed with Cubs baseball fans. They had descended like locusts to watch the big game and get thoroughly sloshed on a Saturday afternoon. It was a ritual with them, especially getting sloshed. The excuse they offered on this day was that cold beer was therapeutic against the heat. Not to be outdone, Jerry was hosting his own big event a block away, and he would make damned sure it was worth the price of admission. People were known to behave strangely in such heat, and today would be no exception. Jerry would see to that all by himself.

This was not the first time Jerry and Phil mixed it up. They were, shall we say, not the best of friends. On this day, though, Jerry was unusually agitated. Maybe it was the heat wave. Maybe it was because his mother had been giving him a particularly difficult time lately. Dorothy (old lady) Cooper was a force of nature. She would berate Jerry from her second floor perch at a volume that challenged Kate Smith. It was the habit of neighborhood parents, particularly mothers, to collect their broods by standing on the porch and screeching their names at full volume. If they felt up to it, a short message or threat would be tossed in for good measure. Old lady Cooper outdid the rest. She could be heard a block away, if not farther.



Sun Red
Robert Wittig

Whatever the reason for Jerry's agitated state, the way things were shaping up on this sweltering Saturday afternoon, it was obvious that a fight was imminent, and that it was destined to be one hell of an event.

Jerry commanded center stage in the vacant lot next to Chick's hot dog stand, bare from the waist up, hurling vile taunts toward the open windows of the Brennan flat. He called Phil's mother, June, a slut and a drunk, and Phil's father a de-

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mented fool, and an even more ridiculous drunk than his wife. On top of that, Jerry was quick to point out that this trailer-trash pair was responsible for turning out the neighborhood lummoX. And just in case his message was still not getting across, he blasted out variations on these themes every couple of minutes to the fascination of the gathering crowd. Jerry was aching for a fight, and Phil was known territory and an easy mark. Indeed, Jerry had decided that Phil would be his whipping boy on this steamy afternoon.

There were four Cooper kids. Three were normal by local standards, whereas Jerry's noodle had a few loose screws. The normal ones had been fathered by Dorothy's husband, Claude Senior, whereas Jerry's father was some guy Dorothy had taken up with before Claude Senior came on the scene. Everyone knew Jerry had wiring issues upstairs, and therefore cut him some slack. Everyone, that is, except Phil Brennan. He was downstairs and face-to-face with Jerry in minutes.

The event drew a sizable crowd composed of kids, teenagers, and adults, including a few firemen from down the street. Phil was several inches shorter than Jerry, but he was muscular and built like a fire hydrant. Rumor had it that he was not much smarter than a fire hydrant, and it seemed he was always getting pissed on, also something he had in common with a fire hydrant. Jerry was not all there, to be sure. However, he was a strapping nineteen-year-old, lean, fast, and mean.

Phil did not have a prayer. He nonetheless persisted, with blood gushing from his nose or mouth every time Jerry landed a punch to his face, which was happening with increasing frequency. In the finest Irish tradition, Phil refused to surrender. The firemen finally broke it up. Though the police station was only a half-block away, cops were nowhere to be seen, unless of course you wandered into the gin mill, where they had successfully infiltrated the Cubs gang.

Jerry subsequently picked a fight with Rich Lienemann. Same drill as before: stand outside someone's place and hurl vicious insults and taunts until the desired effect is achieved. This time the event took place in front of the firehouse, and it



Fire
Robert Wittig

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was Jerry who did not have a prayer. The Lienemann family lived immediately adjacent to the firehouse, and Rich later became a fireman. At the time, he was without a doubt the toughest guy around, and he promptly beat Jerry to a pulp. In fact, if some guys had not stopped the slaughter, it might have gotten ugly. There was real antagonism between Rich and Jerry.

A recent tragedy had people on edge about these slugfests, so it was good that the fight was stopped before it got crazy and someone was hurt badly or worse. The TV repair guy whose shop was on California Avenue had accidentally killed the gas station owner just a few steps away, where Stave Street and Saint Georges Court meet. No one wanted another such disaster. The repair guy's wife had claimed that the gas station guy had been rude to her, so the repair guy walked around the corner from his shop and punched him. The gas station guy hit his head as he went down and died in a matter of minutes.

The neighborhood was treated to several more of Jerry's epic battles, interspersed with numerous other fiascos of his making. Then, with apparent spontaneity and uncharacteristic aplomb, he took everyone by surprise with a bold announcement. He would enlist in the Marines. It turned out his mother had convinced him to do it. She held sway over him, which was impressive given that Jerry was the poster child of an out-of-control wild man. Her theory was that the Marines would straighten him out. This made no sense. If a seasoned battle-ax like old lady Cooper could not straighten out her obstreperous lout of a son, it probably could not be done.



Iwo Jima
Robert Wittig

No one was saddened by Jerry's imminent departure, and certainly no one was keen on locking horns with old lady Cooper over her wacky notions concerning turning her son around. The last thing anyone wanted was for Jerry to change his mind. My guess is that deep down old lady Cooper simply wanted to endow her high hopes with some degree of credibility. In any event, she pushed the fantasy of Jerry undergoing a miraculous transformation via the Marines on anyone who would listen and not object too vigorously. Jerry signed on and departed in a few months.

The Marine Corps figured Jerry out in short order and gave him the heave-ho before he could inflict serious damage. In plain terms, they cut their losses. Upon

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landing back in the neighborhood he commenced wandering the streets in a daze, a sorrowful lost soul and now crazier than ever. He lived in and among life's shadows, seeking nothing more than survival. At least that is what it looked like to my friends and me.

Come rain or shine, Jerry could be seen trudging back and forth on Saint Georges Court, Prindiville Street, Stave Street, and nearby alleys, talking mostly to himself, but occasionally uttering unintelligible passages to someone sitting on a stoop or to a passer-by. Nothing he uttered made sense, and eyes rolled heavenward as he passed. The scene presented by Jerry the reject was a sad one.



Lonely Watch
Robert Wittig

At first we made sport of this new, transformed Jerry, who no longer had any appetite for fights or, for that matter, social engagement of any kind. With typical Chicago sensitivity, he was treated as a spectacle, something to be put on display, a one-man freak show. Eventually it dawned on us that Jerry really had come unglued during his time in the Marines. We then backed off, leaving him alone to endure as best he could his personal solitary confinement. We were a mischievous and abrasive lot, but not mean. You did not kick a guy when he was down.

The Jerry that sulked in the shadows and moved furtively about was certainly not what old lady Cooper had in mind when she talked him into enlisting. Before long he was hauled off to a mental institution, where he was diagnosed with severe schizophrenia. The mental institution could not house him indefinitely, so he was turned loose on the street again, this time armed with a large enough supply of prescription drugs to render him docile, plus free refills for as long as necessary. Unfortunately, the meds did not seem to do much good. Perhaps he was less than diligent about taking them.

Jerry was never able to get on top of his schizophrenia, either with or without the meds, and in the long run it took him down. He withered away in a mental institution to almost nothing. He lay comatose in the fetal position, weighing less than 100 pounds, fed intravenously, waiting for the end.

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Phil Brennan's parents were not the sort of alcoholics who kept their hobby under wraps. They put on fantastic shows: ear-piercing deliveries of memorable epithets, throwing things at each other, slugging it out, getting evicted time and again, you name it. All of this and more went on in front of the kids, Phil and his younger brother Larry. No wonder Phil enlisted in the Navy when he was a late teenager.

Phil remained in the Navy until his mid-forties, when he was tossed out for beating up one of his superiors. By then his father had died of cirrhosis.

Phil's mother June had stood by her husband throughout his endgame, which apparently was not an appetizing thing to watch. She quit the booze for good after that. Phil was an all right guy, but he was not cut out for the life of quiet desperation that greeted him upon his reentry into our little corner of the world.



Out of Darkness
Robert Wittig

Four years had passed since Jerry and Phil had had their big event, and Larry seemed to be following in his brother's footsteps. He was the instigator – a barrage of epithets – the day we squared off in front of the firehouse and drew a crowd. Larry was the better fighter, but he got careless, and a punch or two put



Broken Arrow
Robert Wittig

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him down. The fight was not a big deal. There had been no bad blood between us, so we remained friends. In fact we were better friends after the fight than before.

The depravity in Larry's home life worsened, so he abandoned his parents and moved in with his grandparents, who lived directly across the street from the firehouse. He enlisted in the Army after a few years. Following his Army stint, he got a job as a butcher in a nearby supermarket, married a nice young woman, and they had a couple of kids. They were insanely happy. He never touched alcohol, for obvious reasons.



Engine Company 43 on Stave Street between Prindiville and Saint Georges Court (photo by Robert Wittig)

Breast cancer took Larry's wife in her early thirties. Depressed beyond reach, Larry put a gun to his head and blew his brains out. Their tragic end, which left two young children behind, haunted the neighborhood for years. Larry had raised himself from the gutter: street urchin, mired in filth and squalor, no stranger to domestic violence and abuse, largely uneducated, and all the time enduring a loneliness that few could fathom.

There would be no Reader's Digest version of the Larry Brennan story. It involved a young man with determination, a young man who rose above his environment, whose decency was an outgrowth of having witnessed indecency. It involved an unpretentious couple that was deeply in love. It was a story of human tragedy, played out on life's stage near a nowhere place called Saint Georges Court.

Our Place

My parents bought their first and only house in 1951. Construction of the next phase of the Congress Expressway was drawing near. In just a couple of months, bulldozers would commence their onslaught. We left the flat at 4114 West Congress Street, and in just the nick of time.

The house cost \$12,000, with mortgage payments of \$90 per month for thirty years. It is on a tiny side street with a catchy name: Saint Georges Court.[‡] The street is close to the corner of California and Milwaukee Avenues. There is no apostrophe in Georges.

At the time, there were eight dilapidated houses, a large factory, a small factory, a used car lot, and a couple of empty lots on the street. Our house was a stone's throw from the tracks of an elevated train, the so-called El. Saint Georges Court, which was no longer than half of a city block, presented a visual cacophony.

This arm of the El connected downtown with Logan Square. It is the same El route that figures prominently in Nelson Algren's 1949 novel, *The Man with the Golden Arm*, which depicts drug addiction in postwar Chicago. The story takes place in the seamy Polish ghetto of Wicker Park. Milwaukee Avenue runs in a northwesterly direction starting from downtown. It passes right through the center of Wicker Park on the way to our neighborhood. In 1949, Wicker Park was ridden with violence, alcoholism, drug addiction, racial bigotry, anti-Semitism, cor-



Prindiville Snow
Robert Wittig

[‡] Saint George was born in Lydda, Palestine (currently Lod, Israel) in 303 AD. His ethnicity was Greek. The family's religion was Christian, and their social status was that of nobility. He is best known for having slain a dragon. This skill would have come in handy around Saint Georges Court.

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ruption, and so on. I stayed at a Bed and Breakfast in Wicker Park this past spring. The area is now upscale.

Algren led an interesting life. Born in Detroit to a German Jewish mother and a Swedish father who had converted to Judaism, he lived most of his life in Chicago, not far from our place. He had an affair with Simone de Beauvoir, the lifelong companion of Jean-Paul Sartre. They cavorted among the prostitutes and junkies of Chicago's skid row on West Madison Street. Their would-be trysts in Paris were thwarted by travel restrictions that the United States government placed on Algren because he was considered a suspicious, left-wing character during the McCarthy witch-hunt era. Nelson Algren spent five months in a Texas jail for the heinous crime of stealing a typewriter – clearly a person the government needed to watch!

An older woman occupied the attic flat when we moved into the house on Saint Georges Court. She had lived there many years, and it was agreed she would stay and do some babysitting in lieu of rent. There was a short period after she passed away when my parents had me sleep there. Heavy blankets were essential in the winter, as the flat was no longer heated. A glass of water would often be frozen in the morning, which was ample inducement to run downstairs and stand in front of the heater. The ceilings were so slanted it was hard to stand up, except for about a meter either side of the crest. This flat was less than useless insofar as generating rent income.



Attic
Robert Wittig

The lowest flat was below street level, and it flooded whenever there was a significant rainfall. My parents tried to rent it out, but this was hopeless. Anyone crazy and/or desperate enough to live in this dump was unlikely to pay the rent except on the day they moved in. Recently it was discovered that the drain leading to the main sewer had given up a long time ago. Virtually all the water that had entered this drain had been absorbed into the ground, which strikes me as a pretty unhealthy situation. The house was built in the 1860's. Trust me, it is not one of those cute old places that yuppies buy and fix up. It had this much in common with the Maxwell Street Market: You had to see it to believe it.

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The main flat was my home from age seven until my departure from Chicago at age twenty. My brother Robert was born on September 21, 1948, just after we moved from Albany Street to Congress Street. My sisters were born after the move to Saint Georges Court: Kathleen on February 5, 1954, and Jennifer on March 29, 1959. Another sister was born a couple of years before Kathleen, but she was either stillborn or died within days of her birth.

My father tried his luck at selling insurance after the War. Being a door-to-door insurance salesman is a truly rotten way to make a living, or in my father's case, attempt to make a living. Think of Willy Loman in Arthur Miller's 1949 *Death of a Salesman*. What a joke. You could not imagine a person less suited by personality to sell anything than my father. He abandoned the insurance business after about a year in favor of a factory job in a place that ground optical lenses. Some of my earliest memories are of the toys he brought home: lens rejects and sticks of pitch that gave off a curiously pleasant odor and were fun to chew on. This constitutes my earliest interest in optics. This job also was a disaster, though less so than the insurance experiment.

Dad then tried driving a truck, and this time a resonance was struck. He drove a truck until retiring on his sixtieth birthday in 1981. He was a member of Jimmy Hoffa's International Brotherhood of Teamsters union, which provided us with access, at no additional cost, to the worst medical care in the city. My brother Bob came close to dying from pneumonia because of some quack union doctor. When my parents realized that their son was on the way out, and the quack was less capable than a medicine man, they called in a real doctor. An ambulance got Bob to the hospital in time to save his life. He pulled through with one lung, and recovered half the function of the other lung over a period of several years.



On the Road
Robert Wittig

The Teamsters union's version of medical care for the families of its members was just plain awful. I can attest to that on the basis of my own medical experiences with their system. It was Chicago, however, and Jimmy Hoffa did not look all that bad compared to Boss Daley. Sadly, my father passed away several months after retiring in August of 1981. In October he complained of feeling

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strange. He entered a hospital to be examined, fell into a coma, and died on December 9, 1981, of lung cancer.

My mother worked the 4 p.m. to midnight shift at a nearby factory, the Mills Envelope Company. She held this job from right after we arrived in the neighborhood until after my departure from Chicago at the age of twenty. A teenage girl who lived next door looked after my younger brother and me in the afternoons during the early years. Mom eventually abandoned the envelope business in favor of an office job with Sears, Roebuck & Company. She even worked her way to the pinnacle, the Sears Tower.

Being the oldest sibling incurred a variety of duties. I would paint the inside and outside of the house during the warm months, in the cold months shovel snow, scrape ice, and transport fuel oil in 5-gallon cans from the shed to our flat and the flat upstairs, keep the water pipes from freezing in the winter, keep the house clean, and so on. It was good training. My mother left for work at 3:30 in the afternoon, so it was also my responsibility to cook dinner for my father and siblings. There were a few light-hearted adventures.

Once I cooked sardines. Turns out it is a good idea to open the can before heating it. The explosion resulted in vapor-deposition of pulverized sardine on the kitchen walls. On another occasion, oatmeal was cooked in a pan. Turns out it is best to have water in the pan, as well. When the oatmeal ignited, the fire was a sight to behold, and the smoke blackened everything in the kitchen. Such catastrophes notwithstanding, my stint as family cook was uneventful, and no one starved or got ill. It was a valuable experience that has served me well throughout life.

Mom and Dad did their best at raising a family under harsh circumstances. Changing times and the environment they found themselves in swept them along. They were hardly without human frailties, but sloth was not one of them. My father left the house by 6 a.m. and rarely returned before 7 p.m. He drove a truck in Chicago's legendary traffic and weather, and delivered heavy boxes to customers in out of the way places, often carrying them up several flights of stairs. This was no picnic.

My mother's job at the factory was physically demanding and mercilessly repetitive. Working on the shipping dock of the Mills Envelope Company enabled me to see what it was like to collect envelopes from a rapid conveyor and pack them into boxes for eight hours a day, all the time standing on a concrete floor. And she did this while earning substantially less than male counterparts doing essentially the same work.

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Mom and Dad would engage in lively discussions on topics such as the direction the country should take on social issues, whether we should launch a pre-emptive strike against the Martians, and politics in general, at a bar down the street called the Buck Eighty Club. To some of its regulars it offered their only hope of asylum, whereas others were probably capable of holding a steady job, though no one would ever know for sure.

Truth be told, the Buck Eighty Club was a joint, a low-end saloon, in no way to be mistaken for some cozy place where young people socialize. There was no dancing, no music, no nothing – just beer and whisky, and the cheaper the better. It was a place where the stereotypes of postwar America bar culture proved to be archetypes. Any young person who ventured in was most likely training for a life of hard drinking.



Business Sinister
Robert Wittig

To the best of my knowledge such places are no longer around, so to picture them requires a bit of imagination. Keep in mind that following on the heels of the Second World War came the Korean War, the Cold War, and the McCarthy era. In light of the crisis atmosphere these things created, it is not surprising that a lot of drinking was done to dull the mind, not stimulate clever conversation. A problem with such a hobby is that booze can be a wily creature, pouncing when one is most vulnerable, and often with a powerful grip. It took down a lot of otherwise strong people in the dives that peppered our neighborhood. Mom and Dad proved to be no exceptions.

Spawned in their respective glooms, Mom and Dad had survived the Great Depression with its abject poverty, and the Second World War with its annihilation of 28,000 lives per day. They scraped to make ends meet in the years following the War, enduring enormous economic hardship plus the emotional toll that goes with it. To make matters worse, the kids were uncontrollable during their teenage years, as teenagers are prone to be. Their ages were separated by roughly five-year intervals, which ensured decades of stress for my parents. At some point Mom and Dad simply gave up and surrendered to their demons. No strangers to

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the bottle, they each smoked two packs a day, abhorred exercise, had abysmal eating habits, and could justify it all. This does not augur well for longevity. Each was terminally ill before age sixty.

In the beginning, Mom and Dad were avid readers, and some of their habits rubbed off on me. Once into a story there was no stopping, which often meant not sleeping until the end was reached. As an early teenager, novels by Uris, Dostoevsky, Heller, Buck, Plath, Michener, Salinger, Steinbeck, Poe, and so on were attacked with passion. Periodic raids were made on my parent's stash of more adult content novels.

There were fishing trips to Lake Michigan and nearby small lakes, and vacations in Wisconsin and northern Minnesota. In Minnesota we rented a cabin on Lake Vermilion near the city of Tower. I went fishing at every opportunity, and got good enough to serve as a guide for guys who were having no luck. The area had once been home to a thriving iron-ore mining industry. Tower is a few miles from the small



Rowboat
Robert Wittig

town of Soudan, where particle physicists now use an abandoned underground iron-ore mine to carry out experiments on neutrinos and dark matter. Bob Dylan grew up as Robert Zimmerman in nearby Hibbing.

We listened to classical music on Sunday afternoons, and there were visits to the Field Museum, Art Institute, Lincoln Park Zoo, Brookfield Zoo, Adler Planetarium, and Shedd Aquarium. It was my father who was keen on culture. He was the avid reader, the classical music fan, the one who pushed museums and intellectual things. My guess is that this was acquired in Europe. In time it ebbed and finally came to a complete stop, but it served us well while it lasted.

The day-to-day recreational activities of the kids in the neighborhood were probably similar to those of kids in other large industrial cities at the time: playing baseball, football, and basketball in vacant lots and on side streets lined with parked cars; climbing onto the El tracks to retrieve softballs that had lodged there as a result of foul balls; collecting and trading bottle tops and baseball cards;

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weaving popsicle sticks into little rafts; bottle hunting in the alleys to recover their two- and five-cent deposits; pitching pennies and later nickels on the sidewalk; lagging spent shoe heels, obtained gratis from the shoe repair guy, also on the sidewalk; learning to roll dice (shoot craps) and play poker; fishing in the Humboldt Park lagoon and from piers that jutted into Lake Michigan; water balloon fights with the firemen and anyone else who could be enlisted; lifting manhole covers and rolling them down the street; opening fire hydrants in the summer; and many other amusements.

On Saturdays the kids in the neighborhood would be sent to the nearby Oak Theater to provide the parents with a respite and some much needed time alone. For twelve cents we got to see twenty-five color cartoons one after the other. You had to arrive early to get a place in line because these shows sold out. A few kids would lie low in their seats when the show ended, so they could see it a second time. This invariably resulted in parents showing up at the theater to retrieve them, relieved they had not gotten lost on the way home. When turned away, we would try the other neighborhood movie theaters, but they usually did not show the coveted twenty-five color cartoons. This led me to see Arthur Miller's *Death of a Salesman* at the age of nine. Mom thought it was a bit advanced for me, as it was winning awards for its adult content story of real life, and the film and Arthur Miller were targets of the McCarthy witch-hunt paranoia sweeping the country.

A series of dogs – Daisy, Buster, and Butch – kept us company. At home we played Scrabble, Monopoly, and card games. We spent entire afternoons with the Encyclopedia Britannica that my parents had purchased on installments. We were very poor, but we were very happy. Later our family situation became complicated and considerably less happy. But before we go there, let me tell about my education and all that went with it.



Humboldt Park Lagoon
Robert Wittig

Early Education

My kindergarten year was cut short by a streptococcus infection that lasted four months due to the unavailability of antibiotics in the late 1940's. Next came elementary school, grades one through eight. There was no such thing as middle school back then. We lived on Congress Street for grades one and two, and on Saint Georges Court for grades three through eight. Congress Street will be skipped, despite a few great adventures.

Saint Sylvester Elementary School was a few blocks from Saint Georges Court. The building was a grand old place that dated back to the late nineteenth century. It was a terrific source of antiques: inkwells, blotters, cloakrooms, window poles, and the like – everything you would expect from a place of that vintage.

Parents in the neighborhood often sent their kids to any school that was close and safe, regardless of its religious persuasion. That this one happened to be Catholic was not a big deal. Many kids who went there were not Catholic, and for those who were, it was likely their parents were religious in name only. Looking back, it was to the school's credit that they threw a wide net.

My parents knew the location of the church, but that was about it. Once a priest from Saint Sylvester showed up at our house to lobby against birth control. He must have been crazy to attempt such a mission. My mother, not a person shackled by the chains of civility, administered one of her legendary tongue-lashings. He was shown the door in no uncertain terms.

Pat Feeley had gone through Saint Sylvester two years ahead of me. She organized a fiftieth reunion of my eighth grade class. Clergy were welcome to attend but not allowed to address the group. It was to be strictly a secular affair, free



Sylvester
Robert Wittig

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from the vestiges of the ontological absurdity she had endured in her youth. She was not about to genuflect at this late date.

To call my performance in elementary school questionable would be one of the great understatements of modern times. My grades were mediocre – and were they ever, but that was only half the story. The right hand side of the report card was reserved for registering character flaws, misbehavior, obstinacy, and the like, and here is where my true temperament was documented. Not once was this side left empty. If the school had given an award for the largest number of entries, I would have won it hands down. My friends deemed such a record a badge of honor, which tells you something about my choice of friends.



The author in third grade

Behaving as an idiot throughout elementary school did me no favors. Sure, Saint Sylvester had its share of zany teachers, but most of their teachers were dedicated. I could have learned a great deal, and at an age when learned material settles in for the long haul.

The neighborhood Boys Club was an oasis. The Chicago Boys Clubs made every effort to provide attractive, and at the same time healthy, environments that would keep us from wandering the streets during the critical years before high school. The Clubs were only for boys back then, but this has been fixed, and now they are Boys and Girls Clubs. The adults who volunteered their time and energy deserve the highest praise. Only in hindsight was it clear just how strong and valuable their influences had been. Things I learned there stuck with tenacity. As an adult, it was possible to play chess, ping-pong, and pool instinctively. I still kick myself for not having studied a foreign language during this critical period.



Chess
Robert Wittig

Mrs. Meyer taught arts and crafts. She was enormously influential, and not just in how to construct things from papier machè. She undid much of the ethnic and racial bigotry that the kids were picking up at home, teaching them instead tolerance and respect. She even managed to bend the rules and have girls in her arts and crafts classes. The vast majority of the adults who ran the Boys Club were great role models, but Mrs. Meyer stands out. Our neighborhood club was a fifth-floor walkup above the

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police station. To this day, I can recall the minutest detail of the rooms, games, tables, coat racks, and so on. The property had not been touched since before the Depression. It was a snapshot of the past.

For some of the kids in our neighborhood, the Boys Club served as their real home. For the majority it was an essential complement to their home lives. The Club's worth had nothing to do with the games we played. These were but one component in a program that instilled in us lasting values.

The Boys Club was a haven: a place where kids could go, where they belonged, where they could be themselves, where they felt safe. Many of them would have faced a lonely existence otherwise. Had they been turned loose on the street, they inevitably would have fallen in with a bad crowd – or perhaps put together one of their own! In my opinion, the devastating effects brought about by loneliness suffered at a young age are often overlooked or underestimated.

The Boys Clubs throughout the city would combine forces and arrange two-week summer outings to a camp they owned in a wooded area near Winona, Indiana. Several such outings were offered each summer. They were godsend for parents. In addition to the respite, it cost less to send your kids to summer camp than keep them at home.

Summer camp was fun. We rowed boats and paddled canoes, told stories around campfires at night, and saw creatures that were not a part of city life, such as snakes, turtles, rabbits, and raccoons. We learned to swim, though a close call with drowning lessened my enthusiasm for swimming.

One of the camp counselors would round up a group of kids, and take them charging through the woods, fording streams, and leaping over downed trees. On one such occasion, my foot caught on the trunk of a fallen tree, sending me crashing. This was my second experience with being knocked unconscious. The third (and with any luck the last) occurred in my late teens in a boxing ring. Summer camp was a great melting pot, and the counselors did a superb job. Some of the luckier kids got to attend back-to-back two-week sessions. There is a Boys and Girls Club in Santa Monica, where we live. It gets our support.



Summer Camp
Robert Wittig

High School Years

It had taken what seemed like forever, but my incarceration in Saint Sylvester was finally at an end. I would now be permitted to explore the next level of education available to guys like me. Do not get me wrong. It was not that I had any interest in education, far from it. But the prospect of striking out into uncharted territory was exciting.

My transition from elementary school to high school took place in 1957. That summer turned out to be anything but dull. The most interesting stuff took place on the streets, as guys my age were too young to hold a real job and too old to stay at home. I spent a great deal of time participating in sports and engaging in the demented banter that is characteristic of this rite of passage. The sport of choice was softball. It was played each day, rain or shine, in a hybrid sports field composed of a couple of empty lots separated by a street, plus the alley that ran parallel to the El tracks. Reading and studying, in fact anything of an intellectual nature, were out of the question.

Local playing conditions dictated that the traditional rules of softball would be augmented. A fly ball that landed on the El tracks was an automatic out. Balls that landed there often became wedged, requiring one of us to scramble up an El post and onto the tracks in order to retrieve the ball. The automatic-out rule served as an incentive to avoid pulling one's swing to the left, which is a natural instinct for right-handed batters. Play would be stopped for passing vehicles, as Prindiville Street cut straight across what passed for an infield. This was done partly as a courtesy, and partly to avoid getting hit by a car.



Saint Georges Court
Robert Wittig

We were also supposed to pay attention to cars parked in the lot adjacent to Chick's hot dog stand, as not all of his customers had a sense of humor about fly

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balls landing on their vehicles. This was treated as a suggestion rather than a rule. On the other hand, one must, by all means, avoid breaking windows with fly balls, notably those of the nearby Gola house. Wally Gola was one of the players, and we did not wish to get him in hot water. In addition, old man Gola let us play penny-ante poker on their front stoop, and we did not want him to think twice about his benevolence. It took a long fly ball to reach the Brennan flat, which was on the second floor of a large brick building next to the hot dog stand. Consequently, this was an automatic home run, even if a window got broken. We aimed.

Team captains emerged and sides were chosen. The Italian game of morra (throwing of fingers) was used to determine who got first pick from the pool of players. Choices then went in sequence. Everyone got to play, even if it meant there would be more players on one side than the other. Most of the guys played bare-chested, hanging their T-shirts in a safe place, like on a fence. This was less to display their glistening upper bodies to the fawning teenage girls who watched the games, than to keep the shirt wearable. It was usually hot as hell, and a T-shirt would get drenched with sweat and stink if kept on during play. Player ages ran from thirteen to seventeen, and it was understood that the older guys would be split up to avoid a slaughter. Being the youngest, and lacking any identifiable aptitude for the sport, or even any interest in it, I was among the last chosen.



Bamboo
Robert Wittig
Featured in *Bohème Magazine* (2003)

We would have played until sundown had we been left to our own devices. Play was invariably interrupted, however, by the shrill calls of mothers, if they were home, announcing that dinner was ready. Old lady Cooper had the lungs, vocal chords, and demeanor to get the job done, and then some, and their flat was well positioned for the task. It fronted on Saint Georges Court with a back porch that overlooked the outfield. She would move to the edge of the porch, configure herself as the Pope might do in addressing an eager throng of the faithful, and call out to her three sons Bill, Claude Junior, and Jerry. The woman could have been heard in the next county.

This generally landed two out of three right away, with Jerry holding out, shouting back inane comments. Old lady Cooper would eventually tire of his obstinacy, and tell him to save it and get his lame ass home, or else. Jerry knew that the

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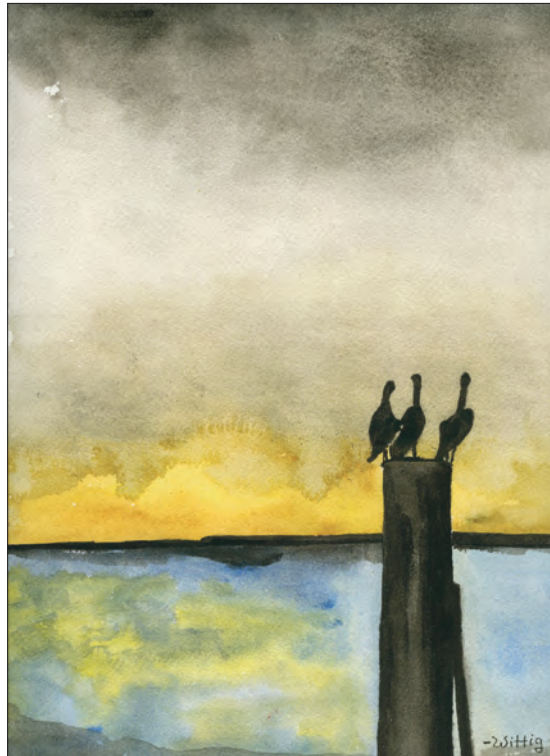
term "or else" translated into her siccing the old man on him, and Claude Senior was known to wield a mean belt.

Jerry would often spiral out of control during play, hollering all sorts of crazy things, in which case old lady Cooper would see fit to renormalize him. Some of their exchanges were classic: "Jerry." "Yeah, Mom." "Jerry." "Yeah, Mom." "Would you do me a favor?" "Sure, Mom." "Would you shut your big, goddamned mouth; would you do that for me, Jerry, honey?"

On weekends the softball orgy would begin in the early afternoon. We would descend on Chick's hot dog stand after a few games to gorge ourselves on overly salted fries and maybe a hot dog. The fries cost eight cents, and a hot dog cost eighteen cents, so the latter was a luxury reserved for special events.

Sometimes Phil Brennan and his younger brother Larry would play, which placed them in the awkward position of possibly breaking one of their own windows. Phil and Jerry Cooper would argue incessantly. No one ever figured out what they were arguing about, but Phil was the local barbarian, and Jerry was as nutty as a fruitcake, so there did not have to be a reason.

On occasion the parents of Phil and Larry (June and Phil Senior) would have one of their legendary drunken brawls. Their place was located center stage, so everyone in the vicinity was treated to the spectacle. They were a unique couple, even for the neighborhood, and the building in which they lived was also unusual. It was a substantial brick monolith wedged between a used car lot and the hot dog stand. The ground floor was always boarded up. We had the impression it had been configured for commercial use, but lacked a taker.



Birds of Lill
Robert Wittig

The couple who lived above the Brennans was also strange, each of them in his and her own way. No one knew much about this pair, as they kept to themselves. They were not known to have ever mingled with any of their neighbors. The man must have held a day job, because he got home at 5:30 every workday, and

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trudged up the stairs to their fourth-floor flat. There he would encounter the wife from hell. She outweighed him two to one, and the second he walked in the door she would start screaming her lungs out at him and sometimes give him a pounding. Every window in the neighborhood was wide open during the summer, so few secrets were kept. It was hard to make out exactly what was being said, but the volume and tone of her diatribes got the message across.

One day we were playing softball to the accompaniment of one of her shrieking tirades. It was a splendid day: clear sky, light breeze, not too hot. Nothing out of the ordinary was going on. Her yelling was routine, so no one thought anything of it. In the middle of the harangue a shot rang out. The husband had pulled out a gun and plugged her in mid-sentence. That was it. One shot to the noodle, and she was dead as a doornail. He then laid the gun down and phoned the police. They arrived quickly and carted him off. We never did learn the details, but it gave us something to talk about for a few days.

Growing up around Milwaukee Avenue and Saint Georges Court was really an experience. Firemen and policemen were often killed in the line of duty. Some guys did not realize that a heroin high runs perilously close to death. We did not lead sheltered lives.

A Polish family from the Wicker Park area a mile and a half in the direction of the Loop moved into a dilapidated house on Milwaukee Avenue directly across the street from Chick's hot dog stand. This house stood out as the only livable structure for blocks in either direction on their side of Milwaukee Avenue. The father was an auto mechanic. He set up a makeshift shop around the corner and worked there



Lonely House
Robert Wittig

with his two sons, who appeared to be in their late teens. He also had two teenage daughters, which ensured that there would be a lot of activity around their place in the evenings. Their front stoop was a convenient spot to congregate after softball.

The younger daughter was more attractive in both personality and appearance. The considerable and asymmetric attention paid to her did not bring joy to her sister, who could have furthered her cause with a little friendliness. Being the youn-

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gest guy in our crowd and afflicted with a bout of acne at the time, meant I was well down the list insofar as attracting the younger sister's attention. In addition to the chronic shortage of cool teenage girls in the neighborhood, that was a drag.

The girls' father once took me aside and told me that he did not care for me. He said I was not like the other guys who hung out in front of their place at night. He was correct in the sense that I was probably the only one not having wet dreams about getting in his younger daughter's pants. Presumably this is not what he had in mind. He said something set me apart and he preferred the others.

Here was this authoritative figure who did not interact with us, and out of the clear blue he tells me that I do not fit in. What the hell did he know? Maybe the older daughter, who was a piece of work, said something to him. Were it not for the lure of his younger daughter, I would have told him off right then and there. It would have been easy to outrun this beer-bellied palooka, and perhaps even kick his ass if things went that far, though that would not have been smart. His comments puzzled me. Was I really different than the other guys, and if so, how?

The family remained in our neighborhood for a little more than a year. They then beat a hasty retreat back to Wicker Park's Polonia Triangle, which at the time was the most Polish neighborhood in Chicago. Its local newspaper, for example, was the *Dziennik Związkowy*. Perhaps they simply did not fit in around Saint Georges Court. No one missed the old man, his wife, and two sons, but it was a shame to lose the princess, even if it meant putting up with her sisty ugler.



Juliet
Robert Wittig

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Summer came to an end, and a new chapter in my life began to take shape as fascination with softball ebbed and other interests and affinities developed. The broad age distribution of our softball gang resulted in its disintegration, with guys being absorbed into other groups in the surrounding areas. I took up with a crowd that hung out in the vicinity of Salmon P. Chase Elementary School a few blocks away. My parents had sent me to Saint Sylvester rather than Chase because the latter was surrounded by what they referred to as "the wrong element." Terrific, now their son was a card-carrying member of this wrong element. My membership lasted from age sixteen to eighteen. It was a rough crowd by any standard.

There was a coffee shop on the corner of Armitage and Washtenaw Avenues that was owned and operated by a Holocaust survivor who had a number tattooed on his arm to prove it. He was about thirty, not very tall, thin, wiry, and grizzled. He spoke intelligently and with no bullshit. He commanded respect and was liked, but no one could figure out why he had opened a coffee shop in such a neighborhood. The place had more than its share of wild hillbilly customers, and we were at least as much of a pain in the ass, though for different reasons. Overall, it attracted an eclectic mix of troublemakers and petty criminals, none of whom were likely to drop serious money in the place.

One day a car pulled up in front of the coffee shop and double-parked. Two guys got out, one of them carrying what appeared to be a shotgun. Some guy on the street saw them and, for whatever reason, knew they were after him. He sprinted down Washtenaw. A shot was heard, but by then we were beating it through the back door, less interested in the outcome than in getting the hell out of there as fast as possible. I guess the guy who took off down Washtenaw was not hit, or at least not seriously hurt, as nothing appeared in the newspaper the next day. Shortly after that the coffee shop owner threw in the towel and headed for greener pastures.



Photo (2013) of the original entrance to the Salmon P. Chase Elementary School: The school is in remarkably good shape today compared to what it was like in the 1950's.

Taking up with this crowd stands out as the single worst decision in my life. In fact, the word decision should not be used, for it implies that some thought went

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into the process. Not so. It was just something that happened.[‡] My brother said it best some years later: "Loneliness makes one crazy." You will soon see what I mean. Now back to high school.

Saint Patrick High School was forty minutes by bus from my home. A friend went there, and he talked me into applying. The nearby public high school was bad, and the tuition at Saint Pat's was low, so my parents thought this was a good choice. Moreover, acceptance was all but assured, as it was a low-key operation. Most of the students took courses that prepared them for likely jobs, for example, courses in machine shop and auto mechanics.



On the Bus
Robert Wittig

The neighborhood crowd, almost to a person, went to nearby John Tuley High School, at least until they dropped out. It was tempting to go there because forty minutes each way to and from Saint Pat's was not fun, and my social network was in place at Tuley. Nonetheless, it was off to Saint Pat's.

[‡] From time to time I wonder about what fates awaited the people in this crowd. What became of them? Where are they now? Which of them survived in the sense that they led a useful life? None of them finished high school, and by age seventeen many had taken to the streets. In most cases their homes were dens of abuse, violence, and alcoholism. The majority of these guys were followers. Some were misguided youth and perhaps capable of turning their lives around. One or two were callous, mean bastards with a penchant for hurting others.

Dennis Pitera stood out as the worst. He was rotten to the core. He had become a full-fledged criminal and an out-of-control alcoholic by the age of twenty. He was a monstrous bully, a wanton vandal, and as violent a person as I have ever encountered. There was not a kind or decent bone in his body. His parents were alcoholics, and it would be convenient to assume that their problems rubbed off on him. However, his parents were not mean, and his siblings seemed normal enough under the circumstances. Dennis, on the other hand, was anything but normal.

Dennis Pitera eradicated completely and permanently any romantic notion I might have had about life in society's underbelly. It is one thing to write about it from a privileged station like the one I have enjoyed throughout my adulthood. It is altogether another matter to experience such a life.

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Most of my friends and scientific colleagues are competitive overachievers who have been on a fast track since the day they were born. With few exceptions they refuse to accept my accounts of the abysmal high school academic record I amassed and my lurid descriptions of the extracurricular activities in which I indulged. They think the stories are fabricated or at least grossly exaggerated. There have been lively arguments in which they adamantly attributed my behavior and performance to boredom. Surely there must have existed in me some deep inner awareness of high intelligence.

That is sheer rubbish. In four years I achieved only a single grade of A, and that was in typing. My typing was and remains terrible, but everyone in the class got an A. My grades were B's, C's, and D's. Imagine a person conjuring up a high opinion of their intellect with such grades staring them in the face. People are pretty good at fooling themselves, and I hardly run last in this regard. Even for me, this would have been carrying self-deception to a new level. If anything, when it came to things intellectual I was diffident to a fault.

Our math teacher, Mr. Cerighino, deserved better than the gang of miscreants who greeted him daily. Toward the end of the semester he joined the Army, thinking this would surely make his life more bearable than trying to teach us math. The school scurried to get a replacement. The new guy spoke with a heavy Hungarian accent and was squirrely. He gave me quite a few black marks for unruly behavior, and those counted toward the grade. I barely avoided failing, which would have sent me to the dreaded summer school. The new teacher was bad at math and teaching in general. Teenage hormones rallied against him, and the class quickly spun out of control. He was fired at the end of the semester. Back then it was acceptable to fire a person on the basis of incompetence.

Positive influences were shunned throughout my high school years, in favor of trodding a series of dismal paths to nowhere. However reprehensible my classroom performance might have been, my behavior outside school was much worse. Life around Saint Georges Court was anything but rosy, with opportunities galore to go astray. Within a few blocks of our house, and in a short space of time, a couple of guys died from drug overdose, two more died in alcohol-related auto accidents, there were several murders, even more suicides, and many other misfortunes. As amazing as it may seem, such things were taken in stride. It was just the way things were.

And what about my own trajectory during that period? My achievements include numerous fights and brawls, inordinate amounts of time spent hustling guys in pool halls and in bars that would accept my phony identification (a draft card), a number of visits to the Shakespeare Avenue Police Station, including as an overnight guest, the usual drinking and gambling, often until sunrise, adventures with cars, not all of which we owned, and a broad range of relatively minor illegal

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activities. A loaded gun has been pointed at me at close range, and hardly in jest. On one occasion a guy in the jail cell with me pulled out a gun he had smuggled in. It had been strapped to his leg just above the ankle. He waved it around, and announced that he would shoot his way out if given a hard time.

There was the time one of the young guys working on the Mills Envelope Company dock with me, Stosh, let me drive his car. He was quite proud of it, as he had spent a great deal of time fixing it up. I did not have a driver's license, and we were both high on cheap wine, Thunderbird,[†] when I drove his beautiful machine into a parked car. Then there was the probation officer. He and his wife, a pair of devout Catholics, were in their late twenties, had eight kids, and no intention of stopping there. Try to imagine Irish matryoshka nesting dolls.

There is no way I am going to treat you to all the crazy, self-destructive stuff that went on in my life during this time. It is too embarrassing. There are dozens of episodes, each worthy of a chapter in one of Stuart Dybek's books about the largely Czech-Polish ghetto on the near southwest side of Chicago, areas called Pilsen and Little Village.

The greatest tragedy, however, has nothing to do with me. After all, this is a story told by an escapee. It is the many lives that were ruined, damaged beyond repair, before they ever got started.

It has been interesting, though bittersweet, to experience life from two vastly different perspectives. With rather few exceptions, the people with whom I now associate have little or no gut-level appreciation of the utter hopelessness engendered by poverty and stultifying routine embedded in an environment of squalor and crime. Only in the movies can such settings appear romantic. The guys on the other side are in general no better. They are clueless about what makes highly educated people tick, and uninterested in lessening their ignorance on the matter.



Sad and Lonely
Robert Wittig

[†] This rotgut crap was bemoaned in a blues song and advertised on the radio as follows: "What's the word / Thunderbird / How's it sold / Good and cold / What's the jive / Bird's alive / What's the price / Thirty twice." One could get wasted for just sixty cents. Little wonder it was popular on skid row.

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At the end of four years of high school my grade point average was a whopping 2.4 out of 4.0. I had acquired little in the way of knowledge, and this was in no way the fault of the school. The young people who constituted the neighborhood crowd were interested in many things: alcohol, drugs, sex, avoiding work, leaving home, fighting, gambling, petty crime, not-so-petty crime, and so on. Education was not on the grid. The high school dropout rate in this group was close to 100%. It goes without saying that none of them went on to college.

A popular novel at the time was titled *Where did you go? Out. What did you do? Nothing.* This sums it up. We would do anything to get out of the house. If the temperature was ten below and falling, we still would have preferred the street corner to being trapped inside the house. It even got so crazy that some of the girls became pregnant as a means of escaping the misery of life at home. This sounds nuts, but it was how things were with this crowd. We were, in fact, a lot lonelier than any of us were willing to admit. That was our common denominator, the bond that kept us together.



Tough Teenage Girl
Robert Wittig

Germany was in the grips of depression during the 1920's and early 1930's. My father was an only child, his mother a widow, and they bounced around. He was a lonely child. Later he was caught in life's swift current and swept along, trying in his own way to maintain control, to have friends, to belong. Imprints stay in the background and influence behavior.

During my high school years there was nothing at home to hold me. The Boys Club was a thing of the past, and my parents' lifestyle was taking its toll. My father was a product of the old school, the authoritarian one you read about: Spare the rod and spoil the child; children should be seen and not heard; and other such clichés. Society's misgivings about corporal punishment had not yet emerged. Though Dad had laudable goals, forcing his kids to be happy simply did not work.

An unfortunate confrontation comes to mind that took place toward the end of this period. I had been behaving horribly, and Dad told me this would cease or else. In other words, things would be done his way, or one hell of a wallop would be administered. This was bad timing. His sound-thrashing approach to discipline may have had its place when I was younger, but teenagers grow quickly, to say nothing of influences garnered from the neighborhood crowd. He was told that he was welcome to give it try, but it was his clock that would get clean-

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ed, not mine. There was electricity in the air that morning. Nothing happened, but a point of no return had been reached.

Eventually it penetrated my thick skull that this standoff had been a close call with major disaster. Dad had kicked my ass many times in the past, but I was no longer a child. There was no way it would happen again. Looking at it from his side, here was this ungrateful, seventeen-year-old punk kid of his, staggering home just as he was getting out of bed to take on a hard day's work. In half an hour he would commence nursing his jalopy ten miles through city streets to his job at Cooper-Jarrett, where he drove a truck and made deliveries throughout the city, from Printer's Row on the Near West Side to the northern suburb of Skokie.



Photo taken by Joe Wanchura of Muncie, Indiana in 1949 or around then. My father started with Cooper-Jarrett then.

Dad was right. His oldest son was indeed behaving like a jerk, and he did not deserve this. Dad worked like a dog day in and day out to provide food, clothing, and shelter for his family. And now what. This ingrate son of his shows up hell-bent on joining the ranks of the young hoodlums who were sprouting up throughout the area. I needed straightening out in a big way – a really big way. Dad did not enlist effective corrective measures, but his assessment of my behavior was on the mark. His heart was in the right place, but his tactics needed updating.

Had he taken a swing, the best possible outcome would have been that he connected and proceeded to kick my ass all over the place once again. That would not have happened, though, for he was in miserable physical shape, and by then I was no stranger to hand-to-hand combat. My father was a proud man. He would have been humiliated, and he did not deserve that. The outcome would have thrown into disarray the relationships within our family, well beyond just the two of us.

Dad was infinitely more effective at meting out discipline when he took us aside and leveled with us about what we were doing: how he and Mom were hurt by it, and so on, without the threats and physical stuff, which were remarkably useless and even counterproductive. When he spoke from the heart it was usually heard, and there was a good chance that something positive would materialize. He eventually figured that out, but only after a lot of scar tissue had accumulated.

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Dad later had no better luck with my brother. The family was unraveling. This was a tragic period. We had done well throughout the dozen years following the end of the Second World War. Little had been acquired in terms of material things, but we stuck together and were happy. Unfortunately, despite the fact that Mom and Dad had the capacity to be great parents, something started to go wrong by the late 1950's.

I was no prize and undoubtedly brought grief into my parents' lives. Much of my behavior was shameful and inexcusable. My brother would likewise prove problematic, and the older of my two sisters would make my brother and me seem like saints. It comes as no surprise that Mom and Dad were looking worse for the wear.

Maybe our family's problems could be blamed on the usual culprits: stress, drink, repetitive jobs, economics, changing times, hopelessness, and who knows what else. Most likely it was all of the above and then some. In the meantime, my lot had been cast with the neighborhood crowd. Swept along, I tried in my own way to maintain control, to have friends, to belong.



Inferno
Robert Wittig

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The rear of our house was doused at its base with gasoline and ignited shortly after midnight. We got out because my mother was returning from work and saw the blaze as she turned the corner onto our street. She ran into the house screaming "Fire!" It was a wood frame structure and a large amount of gasoline had been used. Another five minutes, and we would have been history. Our back yard was adjacent to a firehouse, but the firemen were asleep except for the guy on night duty. When the call came in, they got to our house in record time. It is amazing how quickly a wood frame structure drenched with gasoline goes up. The house next door was separated from us by a twenty-five-foot yard. Its asphalt tile siding melted. It is also amazing how oblivious sleeping people are to rooms filling with carbon monoxide.

The arson was a decoy. We lived a half block from the Shakespeare Avenue Police Station, and a nearby factory had been burglarized during the blaze. Such things happened around Saint Georges Court.

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The Saint Georges Court area today bears little resemblance to the neighborhood of my youth. It has been cleaned up and made livable: relatively safe, reasonable grocery stores, places to go, and even signs of an incipient middle class. The old Shakespeare Avenue Police Station has been replaced. The infamous Buck Eighty Club was razed to make way for the new police station. The Boys and Girls Club moved to nicer quarters four blocks to the west. On Saint Georges Court, the huge Dana Perfume Company factory directly across the street from us has been converted into condos. The neighborhood of my youth was flawed in its genetic code, whereas this one has a fighting chance.

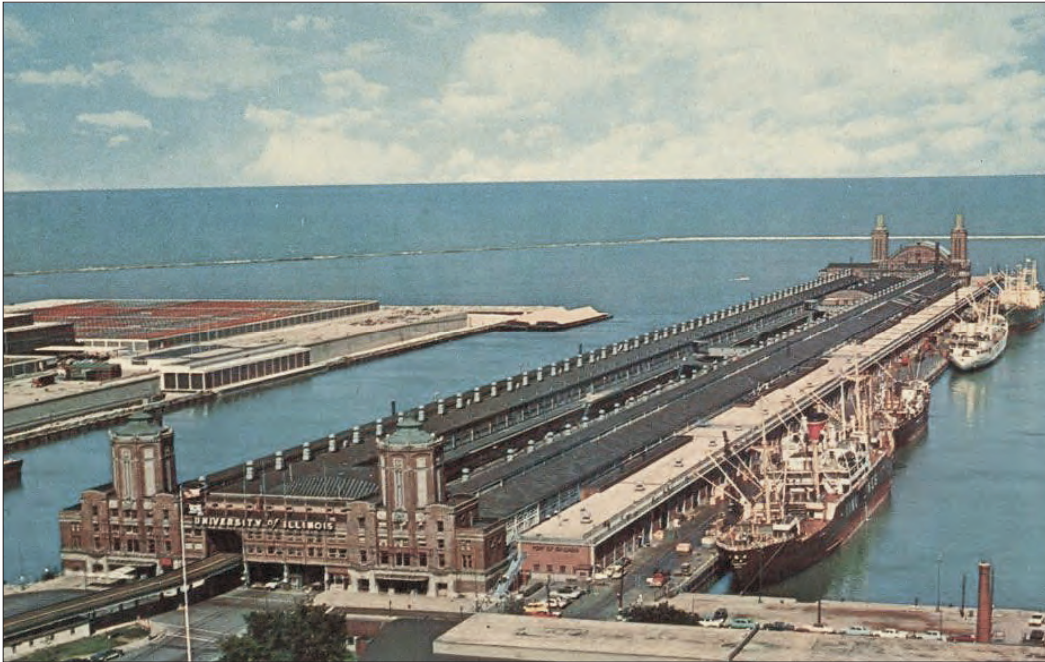
It is unbelievable. No one could have convinced me that there would be condos on Saint Georges Court in my lifetime. A smaller factory (abutting Dana Perfume and between it and the El tracks) was home to the Wold Air Brush Company, which turned out high-end airbrushes. It is long gone, and the building is now home to the Sulzen Art Studio. There are condos on Stave Street and on California Avenue. There are decent restaurants sprinkled throughout the area. Even a few upscale coffee places and a wine store have taken root. The used car places are gone, as is the gas station at the confluence of Stave, Saint Georges Court, and California. The massive cinder lots on Milwaukee Avenue have given way to shopping areas. Chick's hot dog stand is on its last legs and will soon be gone.

Gillman Hardware remains. I stopped there once in the early 1990's, and found that Rube Gillman was still running the place. It was great to see him. He had not lost his laconic style, and we chatted about the neighborhood and the 1950's. He had been a paratrooper during the Second World War, stationed not far from my father, who once pointed out wryly that neither he nor Rube would have made it to POW status had they been captured. Rube would have been killed right away for being a Jew, and my father would have been killed right away for being a German.

The most important component of the neighborhood's improvement is the schools. Businesses come and go, but education changes lives. The Salmon P. Chase Elementary School has undergone remarkable improvement, not just in appearance, but also in its teaching staff, facilities, and scholastics. Saint Sylvester Elementary School has undergone similar improvements. The area still has a long way to go, but it is headed in the right direction.

College

I spent the summer following high school on the dock and in the shipping room of the Mills Envelope Company. My friend Dennis Kasprzyk also worked there, and we constantly tossed around ideas about what to do next with our lives. The options seemed pretty exciting: hang out, young women, parties, drugs and alcohol, do crazy things, enlist in the military, and so on. We had even considered giving college a try. Dennis was the better student. He nonetheless decided to stay put for a year, which turned into several years. He then enlisted, married, and life took over. I applied to a couple of local schools but was rejected. No surprise.



The University of Illinois at Chicago

Top: The University entrance is under the left front tower. The library and cafeteria are behind the two towers near the end of the pier (from John Chuckman's Chicago Nostalgia Collection).

Right: This more recent photo shows the end of the pier, where the library and cafeteria were located. (Google Images)



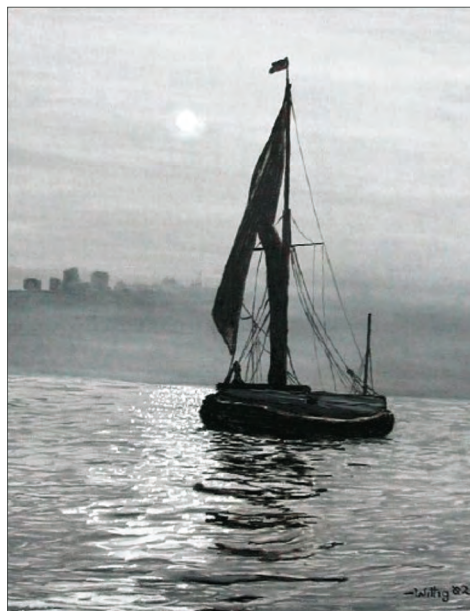
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Undeserved and unexpected good fortune entered. The University of Illinois at Chicago carried out an expanded admission experiment. High school graduates with lousy grades would be given a shot at higher education. However, it would be necessary to pair the increased influx of students with high attrition. And there was no fooling around. The door was opened quite wide, and the bar was raised to astounding heights. You will not see anything like this nowadays. Just try to get into a reasonable university with a GPA of 2.4, and just try to run a university with 70% attrition at the end of the first year. My application was accepted, leaving me elated, yet clueless like you would not believe about what lay ahead.

Chicago Municipal Pier was constructed in 1916 for commercial and entertainment purposes. It was renamed Navy Pier in 1927, and the Navy used it for training during the Second World War. In 1946 it was given to the University of Illinois to facilitate its absorption of returning veterans and the increasing number of college applicants in general. A student could spend up to 2½ years there, followed by a seamless transition to the main campus 140 miles south of Chicago in the small, contiguous towns of Urbana and Champaign. One did not apply separately to the University of Illinois at Urbana-Champaign (UIUC). It was just a matter of getting a dormitory place. This explains why the open door policy of the Chicago (Navy Pier) campus needed to be coupled with high attrition: to maintain a fairly constant flow of students.

The Navy Pier campus was designed around a corridor whose length was roughly one kilometer. The pier extended eastward, directly into Lake Michigan. The school occupied the north side of the pier, whereas the south side was used for commercial shipping. Classrooms, administrative offices, cafeteria, library, the corridor itself, and so on were painted battleship gray. The school had the romantic appeal of Folsom Prison. But make no mistake. It was a great place.

Throughout the Sputnik era anyone who could master a slide rule was encouraged, in no uncertain terms, to become an engineer or scientist, especially if that person happened to be male. My chosen major was Chemical Engineering because the Chemistry entrance exam had been passed



Barge
Robert Wittig

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and Engineering sounded cool. Courses were Chemistry, Algebra and Trigonometry (having failed the Math entrance exam), Rhetoric 101 (having failed the English entrance exam), and German (to satisfy a language requirement). Everything was different than high school. The students were all geniuses, the teachers were dead serious, and the material was even more beyond my grasp than the stuff in high school. One thing that had not changed was my uncanny ability to remain clueless. Seeking advice would have helped. That would have been sensible, though, so it was off the table.

At the end of the first semester my GPA was 2.3. Not exactly a showstopper, but it prevented me from being tossed out. This sounds trivial, but by the end of the second semester two-thirds of the freshman class had been shown the door. This transmission coefficient applied to the dozen guys from Saint Pat's who had started with me. My survival amazed the other Saint Pat's survivors, as my high-school GPA was the lowest, by far, of any of the students from Saint Pat's who started at Navy Pier. Equally amazing, a girlfriend was landed, and her father was the head of the Chemistry Department at Navy Pier.

My classroom performance in the second semester was similar to that of the first semester. German was disliked despite a good teacher, because it required a lot of work (by my standards at the time) to get even a low C. Therefore, when the semester ended my major was switched to Electrical Engineering, which had no language requirement. My reasoning was that, as a consequence of this brilliant move, my grades would automatically improve. Also, rumor had it that with a B.S. in Electrical Engineering one could get a good job. In Chemistry it was best to get a Ph.D., which was out of the question. Job prospects in Chemical Engineering were unclear, but enduring another year of German was not an option.

Summer employment consisted of packing cartons and loading trucks in stifling heat at the Mills Envelope Company for \$1.50 an hour. Additional money was picked up playing poker and shooting pool with the guys from Kentucky and Tennessee who had come north to work in the factories. They were not much at statistics and no better at the mechanics and strategy of shooting pool, especially after a few drinks.



Eight Ball
Robert Wittig

Poker was safer than pool. Those guys believed in luck, and with poker it was not obvious to them that they were destined to lose in the long haul. Pool, however, often involved a point at which they figured out they had been suckered. It turns out that pool cues and pool balls make good weapons, and there were a few close calls. It was sheer luck that I did not get knocked unconscious again. In addition, a couple

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of them were pretty good at shooting pool, in which case ultimate victory could not be taken for granted.

The head guy in the shipping department of the Mills Envelope Company had prepared a special bonus for me at the end of the summer. It was not like the corrupt money bonuses that define Wall Street these days, but something really valuable. He gave me sound advice. He took me aside and said it would be all right for me to work there during summers and on school breaks, but he would not stand for me working there on a full time basis. He pushed education quite hard and spoke from the heart. Some Greek immigrant guys who worked next to me in a factory the following summer did likewise. Again, they spoke from the heart and therefore their message was heard. I am deeply grateful to the many people who, themselves stuck in dead-end jobs, provided useful kicks in the ass. They probably do not remember me, but I remember them.

Finding summer employment was always a challenge because students flooded the job market. One year a job was secured at a small paint factory a couple of months before the end of the school year. The agreement was that part time work during the semester would convert to full time work during the summer. That is not what happened. The boss called me to his office and fired me at the end of the school year.

I almost fainted. I had worked hard, never been late or missed a day, and had made no mistakes. The boss was asked for an explanation. The reason he gave was so nuts that when asked to repeat it he could not keep his story straight. He finally enlisted executive authority. He was the boss and he was firing me. That was it – no explanation needed. I wandered off depressed and dazed. When I returned the next day to clear out my locker, my replacement was already there – none other than the boss' son, who had just returned home from college. The boss had behaved unethically. Wasting him would not have been difficult, but would have brought even more trouble into my life, so I just left.

It took a small miracle to land a job so late in the season. The summer was spent doing piecework, assembling pressure gauges at a Marsh Instrument Com-



Smokestack
Robert Wittig

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pany plant in an industrial part of Skokie. To get there required 1½ hours: bus, El to the end of the line, another bus, then walk a mile. The only good thing about this job was that the guys from Kentucky and Tennessee were no better at poker and pool than the previous lot. This kind of work destroys the soul.

Free time was spent with my girlfriend and the neighborhood crowd, though never together. The neighborhood crowd was moving on to bigger and scarier things, and it was beginning to dawn on me that the college crowd was far more to my liking. The fall semester brought Calculus, Physics, Economics, and an Electrical Engineering course that met each day. My atrocious study habits continued and grades were commensurate, namely, a disaster. The semester ended with all C's, some of which barely cleared the D range.

Electrical Engineering was not a haven after all, and there was no reason to be optimistic. The abyss was in sight and my trajectory was headed straight for it. What happened next changed me profoundly and permanently.

Were the system to take me down, it would not be without a fight. My parents used one bedroom, my brother and two sisters used the other bedroom, and being the oldest sibling translated into sleeping on the couch in the dining room. (We ate in the kitchen.) A study space was cleared in the dining room and an alarm roused me between four and five.

Lacking any understanding of how to study, a brute force approach was enlisted. Notes taken in class and book chapters were read as many times as needed for the material to begin sinking in. The texts for my courses that semester had exercises at the ends of the chapters, and each one was attempted. With sufficient stamina only a few were so difficult or obtuse that they could not be worked. Keep in mind that solution manuals did not exist back then, so there was no faking it. Because it was not possible to sneak a look at the answer, each problem was worked with great care, often from different directions, until confidence in the result had been achieved.



Buckling Down
Robert Wittig

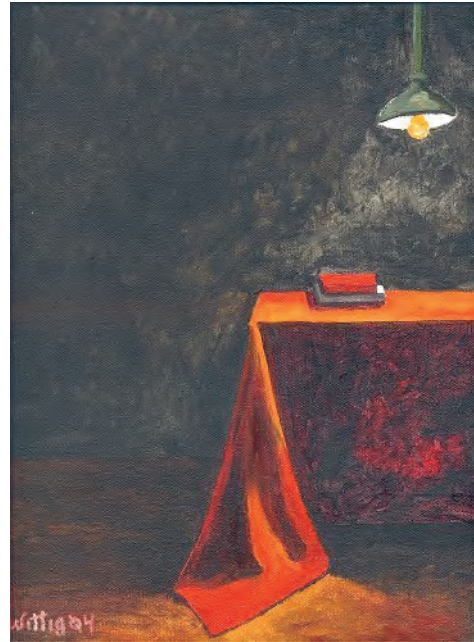
Part 1. Before the Age of Thirty

This routine was hard beyond belief, but being scared half to death served as a great motivator. College was the real thing, and a lot of heavy stuff was on the table. Flunk out and it was back to the docks or some other dead-end job, to say nothing of the accompanying environment and lifestyle that went hand-in-hand with such lines of work. My girlfriend would write me off, and who could blame her. There were many inevitable consequences, none of which were appealing. My last chance was at hand.

Perseverance did not derive from any confidence in the approach, but because there were no alternatives. In my heart there was no question about it. I was at best a borderline student. However, there were two sides to the border, and there was also no question about which side would be preferred when the smoke cleared. There would be no plebiscite to save me by rearranging this particular border. Survival, were it at all possible, was up to me. My homegrown study regimen was followed until final exams were over.

Receiving a grade of A in each class put me in a state of serious shock. It simply did not compute. Up to that point the only class in which an A had been received was typing in high school, and that was a joke. The hope had been to get more B's than C's, and no D's. Only the smart guys got A's. Never in my life had it occurred to me that I was capable of obtaining even a single grade of A let alone a bunch of them. It took a long time to begin to fathom what had happened, and some aspects are still under review. Honestly, nothing more sophisticated than raw survival was in my mind at the time. Eventually it sunk in that prior to that fateful semester I had never actually studied. This sounds insane but it is true.

Euphoria reigned. My parents were happy; my girlfriend, who had expressed confidence in me all along, was happy; and her parents were taken by surprise, having counted on a qualitatively different outcome. The game had changed overnight, and a lot of things began to fall into place in and around me. My time in Chicago was coming to an end. Winter break between semesters would find me on the train that carried students back and forth between Chicago and Urbana-Champaign, Illinois Central Railroad's "City of New Orleans." Later this train was the subject of a song written by Steve Goodman and popularized by Arlo Guthrie.



Seeing the Light
Robert Wittig

Part 1. Before the Age of Thirty

Euphoria gave way to commitment and the realization that it felt a lot better to win at this academic stuff than lose. Learning was not a drag after all. In fact, it was downright exhilarating. My fifth and last semester at Navy Pier was characterized by great enthusiasm and voracious study, for example, striving for the highest grade in the class rather than settling for a mere A. A completely unanticipated benefit was the extent to which knowledge of the basics facilitates the assimilation of new material. It was time to catch up.



Train in Snow
Robert Wittig

A course on differential equations was taken. Ira Feinstein had the reputation of being hard but fair. We hit it off right from the start. He was impressed that someone would attempt the problems at the ends of the chapters without being instructed to do so. But before him stood a lonely young man who had abandoned one kind of life in favor of a fascinating new world that he had stumbled upon. Words cannot convey how much it meant to me to be accepted into the realm of intellectual endeavor. Feinstein did not care about my rough edges.[‡] He saw in front of him a person who was willing to do however much work was required. It turned out that this newly acquired ethic evolved to a self-imposed life sentence. Habits of early satisfaction die hard.

My life now revolved around school: studying, teachers, college atmosphere, folk music, new friends, and so on. I would occasionally encounter someone from the old crowd on the street. Though a cursory attempt might be made to catch up, common ground no longer existed. These happenstance meetings confirmed that there was no going back. This part of my life was over, its vestiges manifest in wistful moments. But I was young and did not understand such matters. The following lines were written a long time ago with these thoughts in mind.

[‡] During this period of my life, many highly-educated people perceived me as having what they referred to as "rough edges." This was mentioned to me on numerous occasions and in many ways, none particularly subtle. I was an unwelcome interstitial impurity in their social lattice. Their gratuitous brandings have never, to this day, penetrated my understanding.

Part 1. Before the Age of Thirty

Early morning creeps slowly through night
Until the shrill screams of darkness
Lie muted
By the wetness of first light.
And we are restless and alone again,
Thoughts affording respite from our plight.
Let's not go backward,
Not even to retrace.
I've seen the darkness,
Looked straight into its face.
Oh darkness,
We were friends once,
But now you seem so cold.
I loved you once,
'Twas crazy I am told.

It was off to the University of Illinois at Urbana-Champaign, a big school in a small town surrounded by cornfields. I had never laid eyes on the place prior to arriving there one cold winter day. It did not take long to figure out that it was indeed a major operation. Rumor had it that academics would be more difficult than at Navy Pier.

This did not materialize. The first semester was not difficult. Nine courses the following semester, which included several laboratory courses, convinced me that such insanity was not to be repeated. As the end of my undergraduate studies approached, enthusiasm for mainstream electrical engineering waned, with engineering courses replaced by upper division mathematics and physics. Undergraduate research did not exist in engineering at the time.



Corn
Robert Wittig

Part 1. Before the Age of Thirty

Robert Wilde was smart, fast, accessible, and easy to interact with. His course, Network Synthesis, had the reputation of being highly mathematical and work intensive. Homework was assigned each time the class met, to be turned in at the beginning of the next class. By then my math skills had begun to come together, enabling me to solve the assigned problems more elegantly and efficiently than was possible using the brute force approaches taught in class. When Wilde realized this, he took me under his wing, and even had me help grade exams, including the final.

In the beginning, before we got to know one another, he would glance at what I was turning in and state, for all to hear, that my attempts at solutions were incorrect. The problems simply could not be worked on one piece of paper. We would go back and forth. As it turned out, it was in fact possible to solve the problems on one piece of paper.

Wilde wrote a letter of recommendation supporting my application to graduate school in Electrical Engineering at Urbana-Champaign and he made an interesting comment afterward. To my astonishment, he was down on my choice of a physics-dominated area. He said that I had the ability to do mathematics, so he was surprised that a math-dominated area had not been my first choice. We had interesting discussions about his perspective



Waystation, Sandspit, Dinghy
Robert Wittig

on math versus physics and related things. This was enlightening. Talk about naïveté: It had never occurred to me that anyone did research on mathematics. In hindsight, the idea of mathematics being static of course makes no sense. These interactions were as close as it got to undergraduate research.

Part 1. Before the Age of Thirty

In a very real sense the most important part of my academic story has just been told. Throughout my life I have found it virtually impossible to convince people that as a late teenager my self-image lacked anything in the brains department. And then, as if winning the lottery, some seat-of-the-pants survival scheme catapulted me overnight to the top, leaving me in shock, infinitely more surprised than anyone else. Were it not for this simple twist of fate – a chance decision made at the start of a semester – where my trajectory would have headed is anyone's guess.

My route to intellectual legitimacy was unorthodox, and one I do not recommend. More than a few bullets were dodged. It took years to fathom what happened. Scholarly things were falling into place by the end of undergraduate school. Since then, my professional life has seen drama, anxiety, and adventure. None of it, however, matches what happened before the age of twenty.

Life presents critical junctures whose outgoing trajectories accrue enormous differences. Before seeing how mine played out, some family matters need closure, and an alternate trajectory will be constructed.

How My Siblings Fared

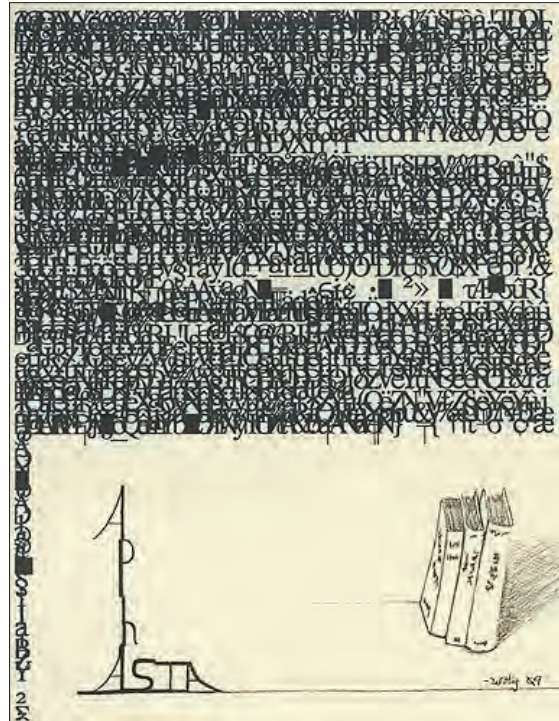
A rift developed between my parents and me over Vietnam. This elevated my brother Bob's status in the family, despite his enlistment in the Marines – extolled by my father as the act of a true patriot – being not entirely voluntary. The judge gave him a choice: Enlist or do time. He toted a radio in the jungles and was shot but recovered. He was then stationed in Hawaii. His superiors were less than euphoric about an anti-war paper he began distributing. They wanted to toss him out, but that would look bad. First send the guy to the jungles to get shot, and then discard him. He returned to Chicago with an honorable discharge.

These were difficult years for Bob: drugs, alcohol, playing guitar in South Side dives, odd jobs, and so on. His life was going nowhere fast. Fortunately, he caught himself before the big fall, the one that has no bottom. He quit drugs and drink, never to touch either again, and acquired a nice wife, Fran. They had a couple of kids, Steve and Aniel, and he worked in an antiques store, or shall we say a new-to-you furniture store.

Bob struck out for more favorable conditions in the early 1980's. He started a business that repaired high-end (mainly antique) pianos. He did the wood repair and refinishing, while another guy did the tuning. It was a hard way to make a living. Such pianos are large, and the rented space was small. Michele and I purchased a large, ancient building in an industrial area near my childhood abode on Albany Avenue. Bob adapted it for serious furniture work. A huge, heated spray booth, with a powerful ventilation system including an afterburner, was added. A dozen coats of lacquer could be applied in less than an hour. It was impressive.

Part 1. Before the Age of Thirty

Let's pretend. You get up one morning, and no matter how hard you try, it is not possible to speak. You panic and attempt to scream, but again nothing comes out, at least nothing intelligible. Maybe some noise issues from your throat, but you cannot even be sure of that. Your wife enters the room. You need to convey to her that there is a problem. Still nothing comes out when you try to speak, so you gesture with your hands. She sees that something is wrong, terribly wrong. She appears to be talking to you and asking questions. Other people enter the room, and they also talk to you and ask questions. However, this only produces strange sounds in your head. You get paper and pen from your desk, and try to write, but words are scrambled. The letters are backward and hard to comprehend. Your mind is unable to form coherent streams of words, let alone write them down.



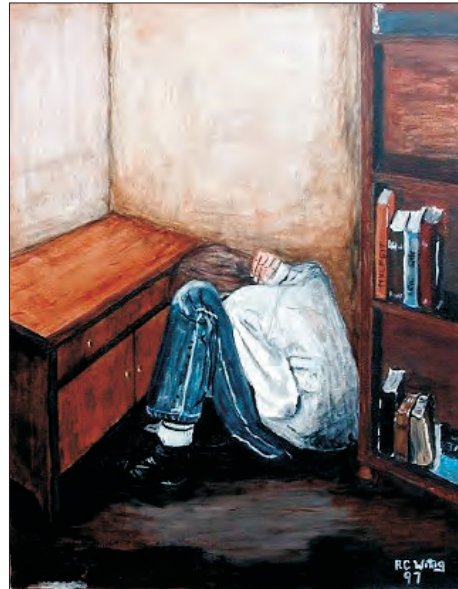
Aphasia
Robert Wittig

It begins to dawn on you that this is not some bad dream. You are not going to wake up and find that everything is all right. Whatever happened is really bad. The rest of your body works normally, but something has wreaked havoc on your communication system. A few weeks later you are informed that you had a stroke, and it left you with a condition called aphasia. The Broca region of your brain has been damaged. There is no way to fix it. You will be this way the rest of your life.

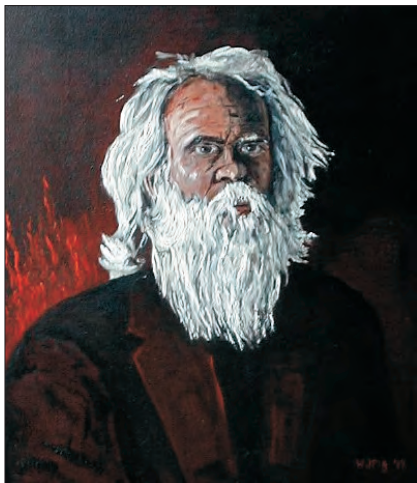
Part 1. Before the Age of Thirty

My brother Bob had a stroke in 1994 centered in the Broca region of his brain. It left him with aphasia. He lost all speech and hearing. His motor skills were affected much less severely. In fact, his motor impairment is hardly noticeable. He being incommunicado hampered the diagnosis in the beginning. His wife was unsophisticated and scared half to death, so chaos ensued. Michele and I flew him to Santa Monica and made an appointment with a neurologist recommended by a friend.

When Bob got off the plane he was almost unrecognizable. He had not washed, shaved, or brushed his teeth for at least a week. His eyes were filled with the level of terror you might expect from a person being escorted to the electric chair.



Depression
Robert Wittig



Kerosene Man
Robert Wittig
Featured on the cover of *American Psychologist* (Vol. 57, Feb. 2002)

The visit to the neurologist was a disaster. The guy spent all of ten minutes with us, and he had not looked at any of the many detailed emails I had sent him. He asked me if Bob had served in Vietnam. I answered "Yes."

He then announced, with some idiotic air of assurance, that there was no doubt about it, Bob's problem was entirely psychological. He said that he knew a psychiatrist who could help, and treatment should start immediately. We got the hell out of this fraud's office to pursue plan B. At the very least, and leaving ethics aside, you would expect him to have the common sense to appreciate that a professor at a large research university, with a lifetime of experience in quantitative science, is probably not a moron. His secretary pestered me for a few weeks, pushing the psychiatrist thing like there was no tomorrow. This schmuck should be jailed.

Part 1. Before the Age of Thirty

Les Weiner headed the Department of Neurology in the USC Medical School. We had served together on a committee a few years earlier. I phoned him, and he agreed to see my brother after hours that evening. We met at 8 p.m. in his office at the Medical School. A few straightforward tests revealed that Bob had a neurological problem. Les suspected damage to the Broca region, which is located in the center of the brain. He had a friend at Northwestern University's Medical School, and he arranged an appointment. Thorough examination confirmed Les' suspicion.

After two years, during which time the wiring in his head underwent reorganization, Bob became an artist. Since then he has made a living selling his art. His paintings have been displayed at Beyond the Coyote and the Sulzen Fine Arts Studio, both in Chicago, as well as having appeared on the cover of *American Psychologist*, featured in *Bohème Magazine*, *Mensa Bulletin*, and other publications. He also does sculpture. He has written for NY Arts Magazine and other literary magazines. He even won a Chicago-wide contest that resulted in his art being displayed on the sides of buses as part of an anti-drug campaign. His paintings are featured in my *Notes Project*, which is described later



Teepee
Robert Wittig



Fran
Robert Wittig

Bob's wife Fran passed away at the age of fifty. She never touched alcohol, but being half Navajo and half Mexican endowed her with a genetic predisposition to liver problems, in her case exacerbated by a quarter-century battle with Crohn's disease. Bob has since remarried (to Lillian Curth), and he spends a lot of time with his grandchildren.

Robert Wittig is a great guy, another survivor of our Chicago upbringing. He has an interesting take on life: "I began my career in the fine visual arts in the streets and alleys of Chicago Illinois, mostly the alleys. It was my grandfather on my mother's side who told me that it is not the streets of America that are paved in gold (as rumor has it), but the alleys. At first I thought he was just a nutty old man, but later, when I was well on my way to being a nutty old man myself, I began to comprehend the wisdom of his words." The grandfather referred to here is Martin Rolnick. He is the interesting person my maternal grandmother married not long

Part 1. Before the Age of Thirty

after her quickly aborted marriage to the nutcase drinker that followed her disastrous marriage to Frank Ware.

My sister Jennifer is another survivor. Our ages differ by sixteen years, so we got to know each other only after she reached adulthood. The family had disintegrated by the time she entered high school. My brother was going through his drugs and alcohol period, my sister Kathy had taken a wrong turn and was well into her own lifelong abyss, and my parents had fallen prey to their demons, not the least of which was alcohol.

Jen went through a difficult period herself: pregnant at fifteen (Michelle Ann, born October 16, 1975), dropped out of high school, and a six-month marriage. However, she caught her balance, went back to school, realized she is a lesbian, and went on to a successful career. She is an absolutely wonderful human being, one of the kindest persons you could ever meet. At the same time, she tells people what they need to hear, even if it is at odds with what they want to hear.

During our mother's final years before succumbing to breast cancer, Jennifer was a pillar of strength, taking on whatever needed to be done. When our father died, Mom threw in the towel big league. She announced to the world that her life was no longer worth living, and she was not averse to a quick demise. From what we could see, she was pursuing her goal with bold determination.



Jennifer Seat (2008)

Jen handled all our mother's affairs, financial and otherwise. This included thwarting frequent attempts by our crooked sister Kathy to make off with Mom's house and meager savings. For example, Kathy would go to the hospital and try to get Mom to sign checks and withdrawal slips. She even had one of her addict friends pose as an attorney and make intimidating phone calls to Jen, demanding money and the title to the house.

More recently an attempt was made to take my brother to the cleaners, in other words, relieve him of



Lantern
Robert Wittig

Part 1. Before the Age of Thirty

his house and savings. It is not as if he lives in a mansion or has a lot of money. His house is next door to the one we grew up in on Saint Georges Court. He does, however, own it outright. A woman insinuated herself into his life. He was an obvious target: a deaf guy whose wife had passed away half a dozen years earlier, and undoubtedly lonely.

No sooner was the ink dry on the marriage certificate than she demanded co-ownership of the house and access to all his finances. He balked. She went postal, chasing him around the house with a knife, and throwing things at him. He was afraid to sleep there, so he spent the night at a friend's place. She went to the police, claimed he had beaten her, and filed a complaint. A warrant was issued for Bob's arrest. The woman obtained a court order forbidding him from going near his own house, even to retrieve his laptop. The net effect was that he was on the street with limited means of communication – and without his laptop computer.

Bob's criminal wife might have pulled it off, were it not for Jen and me, especially Jen. Being in the insurance business, she had connections, expertise, and a lot of common sense. She lost no time finding a good lawyer, and she maintained contact with the police. Dealing with such matters on a day-to-day basis is hard on the nerves. One never knows what is coming next. Jen did not waver.

From far away Santa Monica, our most useful participation was financial, which is relatively easy. It was Jen who did the heavy lifting, with a great deal of help from her partner Stacy. The lawyer had seen many such cases. He counseled patience. He would make the right moves, Bob's wife's avaricious plan would flop, and she would most likely self-destruct and head for the hills. It turned



White Houses
Robert Wittig

out the police had a file on the woman that listed a lifelong pattern of such ruses, including many arrests, so my brother was off the hook. After the ordeal was over, we told Bob that if he ever pulled a stunt like that again he would deal with it on his own. He agreed, noting that loneliness makes one crazy.

Part 1. Before the Age of Thirty

We leaned on the police to have charges brought against the crook, so she could not just move on to the next sucker, but nothing happened. After all, my brother lives on Saint Georges Court.

Jennifer and her partner, Stacy Stoldt, were wed a few years ago at a ceremony in our back yard in Santa Monica. Stacy ran for public office in Chicago in 2004. She was not elected, but the person running for Illinois State Senator on the same Democratic ticket was more successful. His name is Barack Obama. They keep a few election posters as souvenirs. Incidentally, it is Jen who dug up much of the interesting archival stuff about our paternal grandmother's origin and maneuvers, as well as the lineage on our maternal grandmother's side that goes back to the part of England near Liverpool. Unlike me, she keeps good records.

The older of my sisters, Kathleen, did not weather life well. At age fifteen and pregnant she abandoned the going-from-bad-to-worse situation at home to live with her African-American boyfriend in an infamous housing project, Cabrini Green, on Chicago's Near North Side. This did not endear her to our parents. If you know nothing about Cabrini Green, you should Google it. Its last buildings were demolished in 2011, but its memory lives on.



Slum
Robert Wittig

Some years ago, the fact that Kathy had lived there came up in a conversation at a party on the Upper West Side of New York. Everyone automatically assumed she had been a social worker at the time, and a brave one at that to take on Cabrini Green. It proved impossible to get the message across that she in no way had been a social worker. She actually had resided in Cabrini Green as one of its regulars. If truth be told, she had been part of the element that gave the place its chilling reputation.

From there, Kathy's life went seriously downhill. The details extend well beyond drugs, crime, and narcissistic personality disorder. Even a sanitized version would shock the average reader of this book. It is not every mother who sends her teenage sons out on the street to peddle drugs.

Kathy is a predator. She spotted a man who was intellectually challenged, but had inherited a house, free and clear, upon the deaths of his parents. She married him then mortgaged the house for \$650,000. She squandered the money in about a year-and-a-half. Prodigal aspirations combined with bad habits will do that. Fore-

Part 1. Before the Age of Thirty

closure for failure to meet payments was inevitable. Her husband, broke and with nowhere to go, wound up in a halfway house. To the best of our knowledge he is still there. A great deal more about Kathy could be dragged out and put on display. Much of it is not so tame. I leave it to you to fill in the blanks and make extrapolations.

Speaking of survival, Kathy's two daughters, Angelite and Marina, moved from Chicago to Detroit to escape the ensnarement of their praying mantis of a mother. They did well by this move. On the other hand, Kathy's two sons stuck around home and wound up victims of Kathy's morally disfiguring influence. They became addicts, and have been in and out of prison. At the time of this writing, the older of her sons is in prison on an assault conviction, while the younger of her sons is fighting for his life. He has alcoholic cirrhosis, exacerbated by a lifetime of methadone addiction. He is thirty-nine.

Angelite's survival is an epic story in itself. Abandoned by her biological mother, she was raised by a nearby family, dropped out of school, became pregnant, and struggled to make ends meet. The future looked grim. Survival translated into getting out of Chicago. Detroit is not exactly paradise, but she had a friend there, so it offered an opportunity for a fresh start.

Angelite packed up and went to Detroit. Since then she has been in control of her life, which has not been easy. Nevertheless, it has been infinitely better than if she had stayed in Chicago. We had not seen or heard from one another for twenty years when she contacted me four years ago by email. Since then we have maintained good communication, and I have visited her and her family a few times. She landed a wonderful husband, Creighton, and their seven kids are as well behaved as can be expected, given their ages. You can imagine my surprise when Creighton told me that at the age of thirteen he became a bar mitzvah – so much for stereotypes.



Marina passed away at the age of twenty-eight. She succumbed to an exceptionally aggressive strain of breast cancer that had developed as a consequence of a mutated gene often found in Ashkenazi Jews. Her father, Lev Belyatsky, was a Russian Jew who had emigrated from Saint Petersburg to the United States. He settled in Chicago, where family connections were in ample supply, and set up a furrier business on Chicago's North Side.

Part 1. Before the Age of Thirty

Lev was a nice guy. He stayed with us for a few months while undergoing treatment for a malignant brain tumor at the City of Hope National Medical Center just east of Los Angeles. He then returned to Chicago, only to discover that Kathy had sold his entire inventory of garments and pelts for whatever she could get, in effect liquidating his business. In addition, she had borrowed more money (under false pretenses) than could be repaid, not that she ever had any intention of repaying it. Lev deserved better than my sister. Sadly, it was discovered within a year that the treatment had not worked. Lev passed away at the age of thirty-four.

Marina's death hit Angelite extremely hard. Angelite had returned to Chicago and rescued her younger sister after having stabilized her own life in Detroit. Marina also had been abandoned by Kathy and raised by a nearby African-American family. She nonetheless remained a victim of the toxic environment presented by her nearby mother. Angelite encountered a traumatized and confused Marina, and spirited her off to live with her family in Detroit.

Once on stable ground, Marina got her footing, finished high school, graduated from Oakland University, and received a Master's degree just prior to the diagnosis of her fatal illness. She had overcome some of the most formidable barriers that life can present. What a tragedy.

The rose petals fall,
Crimson tears for all to see,
Their story can't be told.
With softness of a fond embrace,
You're here but once,
We see your face,
Feel your heat,
Your quickened pace.
You're a fire burning deep within,
Keeping out the cold.

Curt Wittig



The Rose
Robert Wittig

Mom and Dad: Later Years

Tensions between Mom and Dad and their offspring ebbed throughout the 1970's, except of course for Kathy. One side might not approve of the other side's habits, politics, and lifestyle. None of these were likely to change, however, so they might as well be accepted or at least taken in stride.

Mom and Dad visited us in Santa Monica in the mid- and late 1970's, and by all accounts they enjoyed greatly these excursions. They acknowledged that we took sides opposite theirs on many issues, but nonetheless served as shining examples for our nephews and nieces. They never figured out higher education or what made us tick, but that did not matter. They knew we had done well, and that was enough. Whatever success we had achieved was also theirs. They were comfortable with Jennifer being a lesbian, and they acknowledged that Bob was trying his level best to make a go of it between raising a family, actively participating in Alcoholics Anonymous, and working extremely hard in the antiques store.

From our side, we acknowledged that Mom and Dad had developed an unhealthy relationship with alcohol, and they were hooked on their two-packs-a-day smoking routine. None of this was going to change, so we didn't press them about it. There had been a host of serious antagonisms within the family, most of which came after my departure from Saint Georges Court at the end of 1963. However, their intensity and significance had lessened with time. The accumulation of a lifetime of mishaps matures perspective.



Twilight
Robert Wittig

Part 1. Before the Age of Thirty

Mom and Dad faced serious health problems by the end of the 1970's, many of which were related to their lifestyle. Each appeared to be a great deal older than their chronological age. The emerging scene invited biting aphorism about chickens coming home to roost. Mom was diagnosed with metastasized breast cancer in May of 1981, and Dad died later that same year.



My father entered the hospital on October 21 to undergo an examination. He had been experiencing malaise, feeling lightheaded and groggy, just not himself. The examination indicated lung cancer that had metastasized to the brain. Dad fell into a coma while in the hospital, never to regain consciousness except for a few fleeting moments, each lasting no more than several minutes. My father died on December 9, 1981, at the age of sixty, a mere seven weeks after entering the hospital.

The young man, who had been born into violence and chaos on the German-Polish border, who escaped from the clutches of the Nazis by coming to the United States with his mother, unable to speak a word of English upon his arrival in Chicago, who survived diphtheria as a child and polio as an adult, who put his life on the line to help save civilization from the ravages of the Nazi butchers, was gone. The older man, who laughed and cried and loved, who could mess things up royally, who fell but always got up, who was generous, who got caught up and swept along in life's swift current, trying all the time to make friends, to fit in, to belong, who one day looked at himself and acknowledged that he was no longer the young man of his earlier life, was gone. He had seen a lot and done a lot in his sixty years.

When my father returned to Chicago after the War, like many of his peers, he displayed all the outward features of a strong young man. Deep down, however, his wartime experiences had numbed his insides. He would answer questions about the War, but he was not one to bring up the subject in a conversation. He told me that guys who talked a lot about the War had probably seen little combat. He said that, like him, guys who had been in serious combat were not nuts about revisiting it. Dad's wartime service may well have been his finest hour, but he kept it pretty much to himself. In fact, throughout his life he kept a great many things to himself, and this plagued him to the end.

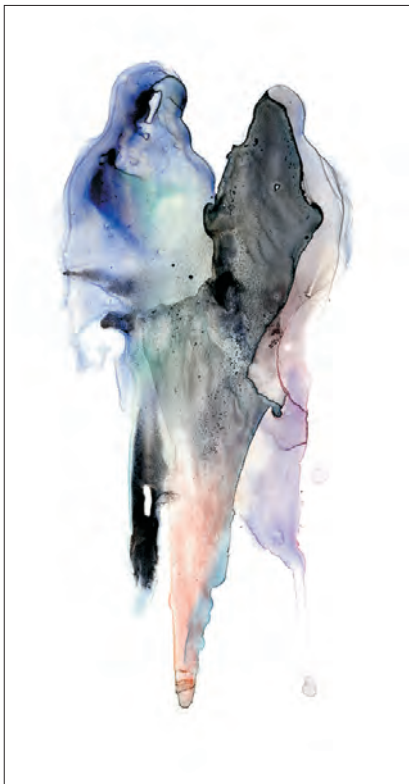
Part 1. Before the Age of Thirty

The postwar Chicago that greeted my father upon his return was raw, vulgar, and violent, but at the same time it was vibrant and exciting. Mom and Dad were finally together again, and they were ready to pick up where they had left off. They quickly became caught up and swept along in the city's energy and gyrations.

For them it was a time of drinking, smoking, running around at all hours with interesting people, and in general testing the limits of their physical and emotional endurance. Dad was an avid reader, an amateur photographer, a person interested in culture, and a follower of the Chi-



Side by Side
Robert Wittig



Melt into Me
Meirav Gebler

cago Blues scene of the late forties and early fifties. Mom was feisty, fearless, and ready to go. It was undoubtedly a memorable time for them.

That was a brief period however: a half dozen years of high-intensity living. It ebbed, and with time morphed into the depressing mess that happens with four kids, no money, and dead-end jobs. It is a hell of a thing to be swept along in life's current, years streaming by ever faster in the rush toward the end.

Mom was devastated by dad's death. They had been a team for forty years. Sure, they had argued and gotten pissed off at one another from time to time, and had done things they regretted later. But they never quit when the going got rough, when the light at the end of the tunnel seemed to be going out, when it came to taking care of one another in time of illness, when the grim reaper knocked at their door. They admitted their own flaws, taught each other tolerance, and remained lovers of life and each other until the end.

Part 1. Before the Age of Thirty

Mom survived for a number of years, but she completely lost her spirit after Dad's death. Her repeated pronouncements that life was no longer worth living were not to be misconstrued as mere emotional outbursts. She found herself alone on a sea of sorrow and depression that would have given Samuel Coleridge's ancient mariner a run for his money. Her unhealthy habits experienced exponential growth. She had led an unhealthy life until then, but now the bad habits accelerated in nonlinear fashion. Her diet went to hell, she graduated to chain smoking – first thing in the morning and last thing at night – and alcohol consumption spiraled out of control. Call it what you like. In my opinion she chose her endgame. My mother died on August 26, 1988, at the age of sixty-five.

The last few years of my mother's life did not present a pretty picture. It has proven impossible to purge my memory of this period, but to the best of my ability it has been relegated to the mind's deepest recesses. The Mom who occupies center stage is the person who took us to parks and beaches, who played scrabble and monopoly with us when we were kids, who worked insanely hard at a rotten job and made sacrifice after sacrifice for her family, who saved us all from a raging inferno at midnight, who got me my summer jobs in the shipping room and on the dock of the Mills Envelope Company, who never gave up on us, no matter what foolishness we brought upon ourselves and others, and who loved us for who we were. That is the Mom to be remembered.



Vignette: Regret and Regress

It was time to disengage. Bereavement's pall had undone Lenny's composure, and the barrage of condolences cast his way throughout the afternoon and early evening had saturated his mental state and exhausted his supply of canned responses. He maneuvered his way toward the door, muttering whatever came to mind to the sympathetic throng, not that anything special was coming to mind. It would be easier this way. He would be long gone before his absence was noticed.

The last few weeks with the old man had been painful on a great many levels. Lenny never did handle such things well, and right now he was in desperate need of breathing space: distance from the mongrel horde that had descended on the funeral parlor. The hypocrisy of the family had proven trial enough, but the endless parade of damaged souls from the local bars was too much to bear. Their voices formed a discordant chorus, an unbearable din.

Zoe had phoned earlier to register her sympathy. She would not be coming in from Denver for the funeral. Her kids were four and five, great but a handful. She would be returning to work on a part-time basis in a few weeks, now that childcare was finally settled.

The chill, late-afternoon breeze afforded a measure of relief as the door swung shut behind him. Lenny would be back tomorrow afternoon for the finale, but until then he was off the hook. He tossed what remained of the tepid swill he had picked up in the anteroom, some crap that had the color of coffee but bore no other resemblance to it. The deliberateness of his gait would conceal his signature shortcoming: Once again he was alone and confused on a journey to nowhere in particular.

An eerie numbness passed through him top to bottom, as death's finality began to exact its toll. Lenny knew he was expected to make an appearance at the gin mill to participate in a litany of nauseating bullshit about the old man's demise: how much everybody loved him after all; the doctors could have done more to save him; life is some kind of great comradeship; and other such drivel.



R.I.P.
Robert Wittig

Part 1. Before the Age of Thirty

The Buck Eighty Club sported an impressive array of cartoon characters. It would open around noon, even on weekdays, to snare any hapless strays that might be trolling the streets in want of liquid refreshment. Euphoria on tap. Then, of course, there was the need to service the constant stream throughout the afternoon of policemen and firemen, each dropping in for a quick one before heading home. The place came into its own, though, after dark.

The saloon's nighttime glow emanated a field that pervaded the neighborhood, a field whose attractive force could only be experienced by a certain brand of eccentric, a field that was transmitted by rumor and received by desperation and loneliness. First-timers were often intrigued by the prospect of a home away from home, a place where they could be themselves, unleashed and uncensored. Should they show up a second time, they would invariably buy into the fantasy – swallow it hook, line, and sinker – in effect, pledging their allegiance.

Together with the dim lighting, the cover of darkness also concealed the accumulated grime on the floors and in the corners: the place's "patina," as the regulars, the stool-sitters, were fond of calling it. The Buck Eighty Club was quite a place, and it hosted quite a crowd.

There were the querulous guys, who would hold court for hours on end, demonizing anyone guilty of the capital sin of trying to better himself or herself. There were guys who would slink in, drink themselves into a state of comatose submission, and stumble out only after their finances had been exhausted. There were self-appointed experts on anything and everything, whose vapid monologues had been known to clear the place out in no time flat. There were the fallen angels looking for that last shot at love, their feyness emerging as the juice took hold. There were many others, each offering his and her unique brand of malarkey.

Joe and Ellie Sobieski ran the Buck Eighty Club as a tag team, with the understanding that Joe was the big boss. He was an okay guy in most respects, but insistently stolid and boring as hell.

He had the looks and presence of something a taxidermist might turn out, and he was every bit as witty. Exchanging banter with Joe could lower one's blood pressure, if not one's IQ. The only time he would get fired up was when he had to pitch someone out, usually a stranger who had stepped over the line. Even then it was done with minimal flair.



Regular Customer
Robert Wittig

Part 1. Before the Age of Thirty

Ellie was livelier for the simple reason that she did not hold her liquor well, nor her tongue after the sauce had begun to work its wonders. She was an inveterate busybody – the antithesis of Joe – who would latch onto every juicy rumor that floated about and turn it into a comedic masterpiece. Her schtick was aided greatly by her having risen through the ranks of the neighborhood harpies to become the grand repository for local gossip. After getting joyously pickled, Ellie would take stock of the audience, spice up the stories accordingly, and let fly. No one was spared. Traipsing from one end of the bar to the other in her tawdry finest, bellowing all the while, was truly a sight. Her performances were spectacular. Joe's demeanor denied him the vitality of vulgarity, whereas for Ellie it was a mainstay of her ministry.

Lenny could usually tolerate the lot of them. After all, he was no prize himself. Once a few drinks had propelled him to a state of sufficient mental lubrication, their frailties morphed into an amusing interpretation of normalcy. He usually fit right in, but not tonight. Solitude was to be his elixir. His pace quickened in the direction of "anywhere else" as soon as he spotted the gin mill, meaning that he would not be stopping. He turned and started down the alley that ran parallel to the El tracks.

The sanctuary of familiarity gave way to the lure of forbidden territory. Lenny abandoned the protective shield of the tracks, crossed Milwaukee Avenue at Armitage, and began to wander: past the Oak Theater with its twenty-five color cartoons, past the decrepit Polish sausage stand whose greasy but strangely attractive stench could be picked up a block away, past the bums who used to buy cheap beer and rotgut muscatel for him when he



Changing Times
Robert Wittig

was sixteen, past the empty lots and derelict factories that gave witness to the changing times. Flitting from bar to bar in this part of Chicago as Friday night closed its grip on the indigenous required guts. But if Lenny had nothing else in this whole wide world, he had guts, especially now that the old man was gone.

Part 1. Before the Age of Thirty

Time passed unnoticed, and at some point the night became a blur. The ritual 2 a.m. closing of the bars gave rise to a godawful array of brawls, last minute romances, and guys who simply could not deal with the specter of going home. This yielded, in due course, to deserted streets that were quiet and spooky and cold.

Lenny continued to wander without purpose: past the river, past the housing projects, past the motley storefront refuges for the seedy and the needy, into the vastly unfamiliar. He wandered through the aching sinew of his dreams. He confronted the terror of a lonely tomorrow that burned in his sunken eyes of a tortured yesterday. He called out to no one, and no one called out to him. It felt good to be alone after such a day.

He had just entered a dimly-lit side street, when he spotted a small, derelict bar about half-way down the block, situated between an alley and a defunct industrial building. Its frontage could not have been more than fifteen feet. It seemed vaguely familiar, despite its advanced state of decay. The lettering on its plate glass window had given up the ghost years ago, but when he got close, he was able to decipher the name. Lenny stared in disbelief. It was as if he had stepped into the past. Before him lay what remained of June's Print Shop.



Desolation Row
Robert Wittig

Things began to register. His memory shifted into high gear, as he had wandered inadvertently into erstwhile familiar territory. Many years had passed, but familiarity is tenacious, surviving even the ravages of time. Lenny used to prowl these streets nightly during the summer of sixty-one, right before he turned eighteen. And he had been no stranger to the Print Shop back then.

The area seemed even more run-down than he remembered, and he remembered it as having been pretty run-down. Twenty years ago the streets had been dark, dirty, infested, and infected, as befits a moribund dock area. And life, when

Part 1. Before the Age of Thirty

it existed at all, did so in shadow, pantomime, and for the moment. Dostoevsky's Raskolnikov would have blended in, felt right at home.

He wondered how long the Print Shop had been closed, and what had become of June, the tall, attractive blonde, probably in her late thirties at the time, who had owned and run it, who could see straight through you and deep into your soul, who never held court, who had known damned well that he was under twenty-one, who also had known damned well that his legal tender was as green as the next person's. June had been a class act, the floor model of Audrey Hepburn, a person who kept her secrets intact and her demons in check.

The Print Shop had displayed all the trappings of a hole-in-the-wall bar in a semi-industrial area. It offered a bit of shelter to the area's strays, and an escape hatch to its mutineers. It picked off guys who were on the fence when they got out of work. There was no air conditioning, but the drinks were cheap. And so on. However, it also had a seductive air, a lure, an intangible attraction to an impressionable seventeen-year-old who was still wet behind the ears.

Its regulars had migrated north from Printer's Row to try their luck on the nearby docks. And sure as hell they could have used a change of luck. These were guys who had not given up just yet, but it was getting close. They were grubby, had been around the block a few times, and wore sailor hats fashioned from newspaper in a rakish manner off to one side, which pegged them as area dockworkers. They were forever on the lookout for something better.

They had come of age in the immigrant ghettos of Little Village and Pilsen, the Poles and Czechs of Kerouac's dreams and madness, the sausage eaters. They were the progeny of Eastern European pessimist culture, wherein the cynics would bend the rules to suit their own purposes, and the opportunists would bend themselves to accommodate the rules. They viewed it as a matter of honor to maintain the tradition. Some rented dingy flats above street level, where every so often they would treat themselves to boiled fresh kiełbasa with raw



City of Industry
Robert Wittig

Part 1. Before the Age of Thirty

onion and plenty of cheap beer. Some got into cars and drove home. Some simply dissolved into the night. June's had been their place, their haven, no suits or ties.

Lenny had taken to the crowd that would gather there nightly. They had been, almost without exception, friendly, kind, and at times even thoughtful, despite a few obligatory rough edges and venial character flaws. Here was this obviously underage guy who appeared out of nowhere and plopped himself down in their midst, and they absorbed him without so much as a second thought. Sure, each of them had been idiosyncratic in some way, but overall it had been a decent crowd. In any event, that was the impression June's Print Shop had made on Lenny in the summer of sixty-one.

It would be morning in a few hours, and a new generation of sausage eaters would arrive to trade their toil on the docks for paltry sums. They would shuffle in, make a beeline for the coffee and donuts, toss a few wisecracks, hit the pisser, and begin their routines. Maybe they would sport the same sailor hats made of newspaper, a fresh one each day, recite the same stale jokes decorated with the same hackneyed vulgarities, share the same depressions, and live their lives within the same square mile as did their predecessors. They would be no more successful than were their predecessors when it came to finding love and romance.

Still, there had to have been more to this crummy, out-of-the-way dive that Lenny had adopted when he was seventeen and roaming. He just couldn't put his finger on it. It had without doubt cornered a cohort of the sad young men Scott Fitzgerald, himself the quintessential example, had written about, and Roberta Flack had immortalized in song: "All the sad young men, choking on their youth, trying to be brave, running from the truth." Lenny knew this brand of life only too well. Maybe this was the connection he sought.



Mixed Bag
Robert Wittig

Part 1. Before the Age of Thirty

Maybe Nelson Algren and Simone de Beauvoir had sensed it, as well, as they cavorted among the junkies and prostitutes on nearby skid row. West Madison Street, ground zero for this fascinating, unique slum, was just a few blocks to the south, across the river via the Wells Street Bridge. It also occurred to him that the old man would have revered the Print Shop. It was his kind of place, and they were his kind of people. Their thick human brew bore testament to the survivability of the underclass.

Lenny mused over this sector of his past. The summer of sixty-one had come and gone in a flash, an odyssey that had finished before it had begun. He had never returned to the Print Shop, or to any of the other seedy haunts in this eclectic semi-industrial pocket a few blocks from Chicago's notorious skid row. A minor miracle had intervened: acceptance at the University of Illinois at Navy Pier. It had been a mere six blocks from the Print Shop, but it stood a world apart.

He had started at Navy Pier in the fall of sixty-one, and he had spent a couple of years there testing the waters of higher education. His grades had been on the survival side of the pass-fail border, though just barely, for the first three semesters. However, a disastrous fourth semester resulted in his ouster. The courses ganged up and overwhelmed him, mauled his already frail self-esteem without mercy. He lost control, froze up inside, and descended into a state of resignation and depression, which resulted in him bombing test after test. His less than miserable performance in the fourth semester got him tossed out, an academic failure whose self-esteem had been beaten to a pulp. His aspiration to become an electrical engineer was history.

Maybe he should have studied harder after having been handed a golden opportunity to make something of himself, but that was water under the bridge. The way he rationalized his failure to those who asked was that

he had been unable to wrap his head around the higher education scene long enough for anything serious to take hold. His problem stemmed from straddling



Choice Point
Robert Wittig

Part 1. Before the Age of Thirty

two cultures, never sure on which side he belonged, or even which side he preferred. This romanticized version was the story he told to the curious.

Internally, Lenny chose to interpret his stint at Navy Pier as an experiment. The fourth semester had been one of life's many and varied choice points whose outgoing trajectories guide a person for better or worse toward his or her destiny. The trajectory his life would have taken, had he not crashed and burned, was anyone's guess.

As it happened, his exit had been remarkably subdued. He made no show of bravado, uttered none of the oblique philosophical bullshit that the defeated often enlist out of defense. He simply tucked his tail between his legs and retreated to the familiar territory of Logan Square, Wicker Park, and Milwaukee Avenue.

The Navy Pier thing had, however, raised hell with his head. He had been clobbered by the emotional equivalent of septic shock. His considerable skill at self-deception had abandoned him when he needed it most. He had not realized how much he appreciated and respected the academic stuff until it was too late. In the words of Tom Paxton, it was "a lesson too late for the learning."

His parents and grandparents were devastated. Nothing needed to be said, as their eyes spoke volumes. Lenny had been oblivious to his parents' emotional investment in his education. There had been not a trace of such interest during high school, when he had amassed a record of considerable notoriety. His acceptance at Navy Pier had surprised them as much as it had him. However, it had also kindled in them an ardent pride. Their previously lackluster son had gotten into college.



Little Schoolhouse
Robert Wittig

Lenny's parents had not cared about his grades, as long as they were passing, including barely passing. The precipitous end of the college thing, though, shook them. His father tried to make him feel better by plying him with words of consolation, but it was not clear which of them was more in need of consolation. His parents had counted on Lenny getting a degree, and electrical engineering at the University of Illinois during the Sputnik era was as good as it got.

Part 1. Before the Age of Thirty

His grandparents were tough people who had experienced and survived hard times and misery, self-inflicted and otherwise. They had been through two World Wars, the Great Depression, divorce, alcoholism, poverty, and who knows what else. They had completed only the seventh grade, yet they espoused education big league: the doors it opened, and its effect on a person. They had not given a damn what their grandson studied or how long he had to stay in school, as long as the process yielded a degree. And now the whole shebang was up in smoke.

Without blame or whining, they told him they loved him unconditionally, and gave him credit for trying. Lenny's angst was to be shared, in effect diluting it. They had known much harder lives than he ever would, college or no college. They knew that values and character defined the person. They told him all this and more. He was moved.

Lenny's thoughts and feelings overwhelmed him in the quiet seclusion of his bedroom. He cried his eyes out. He had not blubbered so hard since the fifth grade, when the teacher lost her cool and berated him at full volume in front of the class. Ironically, that had been one of the few times he was innocent. The teacher had misunderstood his question. He had even raised his hand, another rare event.



Lonely Bedroom
Robert Wittig



Solitude
Robert Wittig

His grandparents had spoken from the heart, and the impact was profound. He had let them down this time, but he swore to himself that in the future he would make them proud of him. Had he listened carefully, it might have sunk into his thick skull that they were already proud. However, listening had never been one of Lenny's strong suits.

Lenny was clueless about what he could have done to avoid the disastrous outcome of that fateful fourth

Part 1. Before the Age of Thirty

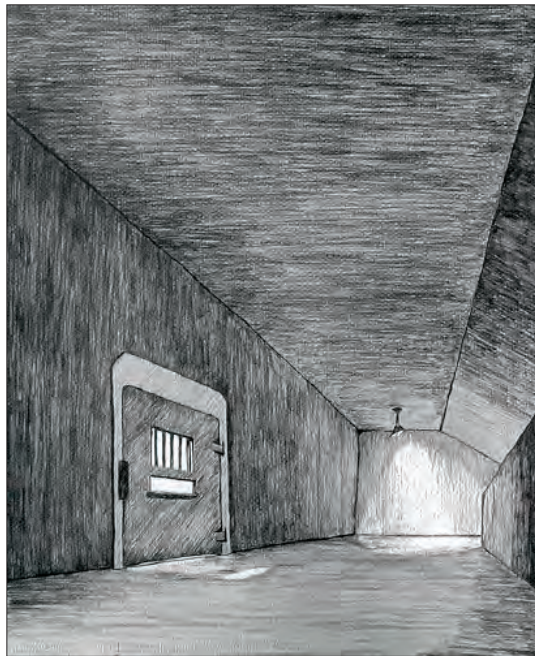
semester at Navy Pier. Regardless, one thing was clear. He had disappointed a lot of people, and that could not be brushed aside. Even his yeoman effort at self-deception had not removed this albatross. He and higher education were through. The divorce was final; one sound thrashing had been quite enough. Perhaps his siblings would have better luck, but he would forge ahead in his own peculiar way, no longer the callow youth whose blunders were to be excused and forgiven.

Lenny contemplated possible next moves, but to no avail. None of his ideas got traction, though each presented genuine, if at times fleeting, allure. He was still all messed up inside, unable to put the Navy Pier debacle behind him, especially in the middle of the night when his demons descended in full array to pummel his emotions. He sulked and moped his way through a healing period (a term he thoroughly detested) that lasted for damned near a year, all the while licking his wounds.

Finally, with resignation born of surrender, and without looking back, he settled on the one art form with which he felt affinity: groping and stumbling through life. This turned out to be his true calling, loath as he was to admit it.

One crummy factory job led to another, to the point where Lenny could hardly tell them apart. Sometimes he got fired; sometimes he quit; and on one occasion he walked off the job in a huff, never to return, not even to collect his pay. He simply did not give a damn. He could see that he was entering a downward spiral, but he lacked the determination and courage to do anything about it.

When Lenny had been in school, his summer jobs had been endured by virtue of there being a light at the end of the tunnel. They were but comic sideshows. With this psychological camouflage now off the table, he viewed such jobs as shortcuts to hell. His coworkers had cultivated, and touted as proof of their virility, the men-



Light at the End of the Tunnel
Robert Wittig

Part 1. Before the Age of Thirty

tality that accrues from reading only the sports pages throughout life. The front page had long since surpassed their ken.

Worst of all, the deadly repetition of assembly lines and piecework was punishment to the soul. It was a shame Steinbeck had not looked into Chicago's factories. He would have hammered them roundly, exposed them for what they were, and turned out a few best sellers in the process. Upton Sinclair's 1906 masterpiece *The Jungle* had revealed the (even more dire) problems faced by workers in Chicago's meat processing industry. A sequel was in order.

Lenny enlisted in the Army after bouncing around for a couple of years, ostensibly to get his military service out of the way before the thing in Vietnam really heated up. If truth be told he enlisted in large part because he could no longer deal with working in the factories and all that that existence engendered. Army life presumably has its place, but he soon realized it was not for him. Its rituals and putative glories were as bad as church. The rules, red tape, mysterious logic, and blind obedience to authority were simply too much, to say nothing of getting one's ass shot off.



Placeholder
Robert Wittig

Lenny sampled a few more factory jobs following his stint in the Army. Finally he gave in and signed on as a truck driver. Like father, like son, as they say. No wonder the old man had opted for driving a truck from one end of Chicago to the other. It came with a modicum of freedom relative to the factories.

Between the Army stint and the onset of driving a truck, Lenny took a shot at marriage. She was a nice woman. They had little in common, however, and disenchantment set in after the initial elation faded. They must have been nuts to think such a union had a chance, but at least they came to their senses before starting a brood. They remained friends, though at a distance, as she had moved far away. He was pleased to learn she was doing well: remarried, two cute kids, the works.

Actually, that was the version Lenny chose for general distribution. The marriage and its aftermath were not at all like that.

Lenny and Zoe

Lenny's memory of their time together was like a hawk that had sunk its talons into him and would not let go. There were things about their relationship, especially toward the end, that haunted him even after eight years. Zoe had expected better of him, and he had let her down, and himself in the process. There was no point in trying to fool himself about assignment of blame. He had messed up many things, and this was right up there with the Navy Pier disaster, if not worse.



Bird of Prey
Robert Wittig

For the life of him, Lenny could not remember what, if anything, had lured him on the day they first met to the massive concrete and granite blocks that abutted Lake Michigan. Maybe it was to read or muse or scheme. Zoe had also made her way to "the rocks," as they were called. She had plopped herself about thirty feet from him, a safe but not reclusive distance.

Lenny enlisted his courage, walked over, and said hello. Pleasantries led to safe exploration: Where are you from, where do you live, what do you do? Strictly small stuff. Zoe had grown up and gone to college in Colorado before moving to Chicago to take a position in the field of social services. She was dead serious about her work, and without a doubt Chicago needed it.



The Chicago lakefront is a continuum of attractive places to walk, sit, read, and so on.
(Google Images)

Part 1. Before the Age of Thirty

Lenny first realized there was something special about her from her eyes, how they darted about, focused with such intensity. He could never figure out exactly what it was about a person's eyes that revealed so much. Zoe had been in Chicago less than a year, and she was living in Wicker Park, just off Milwaukee Avenue. He told her that he also lived just off Milwaukee Avenue, but farther out. Her job involved helping single mothers: childcare, obtaining work, birth control, nutrition, and so on. He told her that he had studied engineering for a couple of years. He was vague as hell about why he had not yet finished a degree. The more they spoke, the more he was attracted to her. Their conversation was not idle chitchat. Zoe did real talk with real meaning.

She enjoyed going to places like No Exit, Second City, and The Back Room. She was interested in politics and what was happening in the world. She knew the best bookstores, Myopic Books being her current favorite, and she was an avid consumer of their stock.

What are you currently reading? How could Ferlinghetti do something so utterly cliché as open a bookstore in San Francisco; he'll never write again. Is this guy Hunter Thompson for real? Zoe was living not far from Saul Bellow's place, and she knew where he hung out. She was smart: real smart, cool smart, hot smart, poetry smart.



Wicker Park café (Google Images)

Her demeanor nailed Lenny, and she was nice looking to boot. She was about five-foot-eight, with short brown hair, small perky breasts, and attractive features. She was thin and had great muscle tone. She walked with a slight limp. Her legs were of unequal length, and consequently she wore shoes with one sole thicker than the other. She wore jeans and a colorful tee-shirt, pegging her as Wicker Park Cool. They spoke for over an hour before she announced that she had to get going. He took her phone number. It was agreed he would call during the week, and they would go out. Christ almighty he was excited. This woman was electric, the best female he had come across in years. There were insufficient data to justify his rabid enthusiasm, but that was the way he saw it.

Part 1. Before the Age of Thirty

Lenny lost his wallet the very next day. He searched high and low, but to no avail. It was maddening. He did not give a damn about anything in the wallet except Zoe's phone number. He was pretty sure her last name was O'Meara, but there was no one in the phone book under Zoe O'Meara or any similar name. Lenny was so upset he could not sleep. They had only interacted for a little more than an hour, but he liked her, and he had been looking forward to going out with her. She might think he changed his mind and decided to not call, perhaps scared off by her limp. Hell, he wanted to call like anything.

Lenny scoured the part of Wicker Park where he thought Zoe might be living, but had no luck. Weeks passed, and he could not get her out of his head. Losing her phone number was one of those annoying things that happen in life, and there was nothing whatsoever he could do about it. Eventually he shook her out of his head, though not entirely.

Chance Encounter

A couple of years passed, and the lost wallet incident faded from Lenny's memory. At least that is what he thought. He was on his way home one evening when he glanced sideways, and there was Zoe, sitting by herself in a nondescript coffee shop near the Polonia Triangle, the confluence of Milwaukee, Ashland, and Division.

Explaining why he had never called was not as difficult as feared. Zoe was smart. She knew he would not be standing there, delivering an absolutely incandescent plea, if he had simply lost interest. She probably saw the sincerity in his eyes, as well. And who would ever cook up such a story? Zoe was still committed to social work, still nostalgic for Colorado, still running with the same tight circle of friends. She hinted at a brief, failed relationship, but she was still the same exciting person he remembered.

The fulfillment of fantasy sure as hell beats the fantasy of fulfillment. Lenny had arrived at heaven and gotten past its front gate.



Encounter
Robert Wittig

Part 1. Before the Age of Thirty

This time everything fell into place. The electricity in and between them exploded, and pent-up emotions found release. They were each hungry, not in the same way or for the same things, but each was hungry.

After oscillating between his flat and hers for a couple of months, Lenny gathered his essentials, gave away or tossed what remained, put Hugo the bunny in his traveling cage, and moved in with Zoe. Her place was clean, neat, and had low rent. The noise level from the nearby El was tolerable, and the neighbors minded their own business. The neighborhood was more than a little sketchy, but Lenny had seen a lot worse when he was a teenager, when he had been no slouch at kicking ass. Most importantly, Zoe took to Hugo right away and vice versa. Just how cool was that!



Six months later, Lenny and Zoe got high on a lazy Saturday afternoon and decided to get married. No sense in over-planning. They took the required blood tests the following week, and a storefront church agreed to perform the ceremony. It would cost fifty bucks including the legal paperwork. They handed over the money and told the preacher to skip the ceremony. It would have been for just the two of them, and the preacher's didactic locution would have fallen on deaf ears. Thus began their idyllic journey to the land of marital bliss, or at least the idyllic part of their journey.

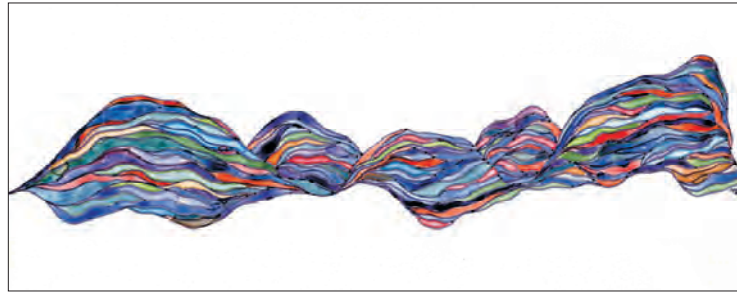
Lenny and Zoe adored and explored one another. The picture of innocence, they discovered some resonances and invented others. They would take turns cooking, from baking bread to preparing boiled fresh kielbasa with all the trimmings, visit flea markets and thrift shops with a passion, and on weekends they lay together in postcoital rapture until Hugo rattled his dish to alert them that it was carrot time. Their tiffs were infrequent and unremarkable, in no way suggestive of the problems that were brewing.



Find Me in the Darkness
Meirav Gebler

Part 1. Before the Age of Thirty

Lenny and Zoe visited her family in Denver, where she introduced her prize catch to her parents and two younger brothers. Lenny had never seen a mountain before, and Zoe had promised to take him to dizzying heights when they got to Colorado, whatever that meant. He did not know what to expect, but given that his own family was certifiably nuts, how bad could it be? Besides, he was determined, and had been told in no uncertain terms, to be on his best behavior.



Blue Mountains
Meirav Gebler



Taking a Hike
Robert Wittig

The visit was a mite strange but bearable. Zoe's parents were more staid than Lenny expected, and they were understandably suspicious of this character that their save-the-world daughter had married on the fly. They seemed nice enough, despite some edginess in the interactions. Their bottom line was that if the marriage was okay with Zoe, it was okay with them. She may have appeared a bit zany to them,

what with her marching off to Chicago to fix humanity. However, she was the first of their line to attend college, let alone obtain a degree. Her brothers were clean-cut to a fault. They seemed boring as hell.

Lenny was struck by how deftly Zoe switched identities the minute they arrived in Denver. It was as if she had never left home. They stayed for a few days, and then headed back to Chicago following an emotional departure, the main player in the drama being her mom. They left armed with enough "food for the road" to get them to China. As they drifted onto the plains of eastern Colorado, their relationship seemed no worse for the wear, at least on the outside.

Part 1. Before the Age of Thirty



The Great Plains
Robert Wittig

The visit convinced Lenny of one thing. Her family and his existed on opposite poles. Her parents were prim and proper, with many traits that apparently had not rubbed off on Zoe. They displayed the straight-backed strong scaffolding of character reminiscent of an earlier time. It was impressive, but unlikely to survive the diffuseness and complexity of emerging generations. Her father impressed Lenny as stalwart from the word go. Her mother, though servile, was perhaps different, with a face of such delicacy as if made of parchment or etched in fine ink.

His parents stood in stark contrast. They would let fly, at the slightest provocation, a string of epithets that could stop a prison guard in his tracks. Lenny had no interest in subjecting Zoe to his insane family. It was not as if he had ever entertained seriously such a ludicrous notion, but this trip was the clincher. She hammered him with questions about his family all the way back to Chicago. She asked why so little time was spent with them, what were they like, what were his siblings up to. She touched on a lot of delicate stuff.



Storm Front
Robert Wittig

Little did Zoe know. And the less the better as far as Lenny was concerned. He ducked her queries as best he could.

Consequences

As the geometry of their relationship continued to acquire form, the topographies of their life experiences were projected onto its structure. It was during this period that communication problems emerged. The difficulties Lenny and Zoe faced originated less from what was said than from what was not said.

The bottom fell out of the marriage during its third year. Lenny should have seen it coming. Right afterwards, he tried to convince himself that if only he had been a better listener, he would have caught himself and changed his ways. They would have survived as a couple. Upon subsequent introspection, he relegated such self-pity to its rightful place in the trash bin.

Zoe had tried, until she was blue in the face, as the saying goes, to get her message across. She had been consistent, determined, and clear, but not pushy. She wanted to share the depth of her love, her innermost feelings, hopes, and aspirations. This was, however, not something she could do alone. They would have to meet halfway. Lenny was apparently oblivious to her need for communicating, and this wore on her, eventually becoming offensive. Their connective tissue was on the chopping block, and he either did not get it, or did not care.

From the beginning, Zoe had loved him with every shred of raw, sensual, intellectual energy and emotion in her soul, and she had tried her damndest to continue loving him with such fervor. After all, Lenny possessed many wonderful traits. At the top of Zoe's list was kindness. Time and again she had seen him stop what he was doing to help a perfect stranger. However, there were things in their relationship that she sensed would wreak havoc in the long run. Indeed, some of them were already wreaking havoc.



Isolation
Robert Wittig

She had assumed all along that he would return to college, that the last few years had been a hiatus, during which time he would bank a fair piece of change and settle on a goal. It eventually dawned on her that Lenny had no intention of

Part 1. Before the Age of Thirty

returning to college. In fact, he had never harbored such intention. He had been ducking or, worse yet, misleading her whenever she had raised the issue. His low-end jobs were not steps on the road to something better. They were all that Lenny aspired to do for a living.

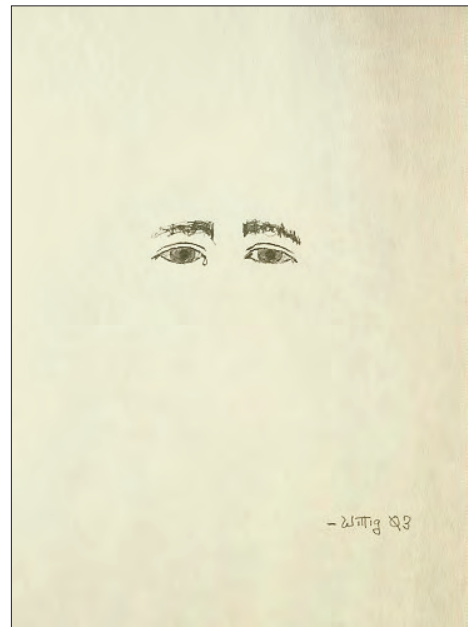
The prospect of such a life sentence freaked Zoe out. She knew that scars remained from the Navy Pier disaster, but years had passed, and it was time to move on. She felt rejected and depressed when he refused to discuss the matter, but instead retreated inward.

Then there was the time they went, at his suggestion, to some dump called the Buck Eighty Club. This garbage pit was life's last stop for the most ridiculous collection of morons, misfits, and uncouth slobs she had ever laid eyes on – philistines one and all. At home that evening she put her cards on the table. She told Lenny of her disappointments and frustrations, how long they had been festering, how she had been trying without success to get through to him, and where she saw them headed unless he altered his trajectory. She felt that they could make it if they worked together, but they had to have common goals.

Delivering her message proved gut wrenching. It left Zoe physically exhausted and emotionally drained. Worse yet, she went to bed that night with a sick feeling. She doubted that Lenny had appreciated the earnestness and seriousness of her plea, and certainly not the implied consequences.

Not surprisingly, they began to drift apart and develop separate outlets. Zoe had always been committed to her work, to an extent that Lenny found amazing. That commitment now began to dominate her life with the force of an imperative. Often she would get home after ten o'clock, only to deal with crises that would arise in the middle of the night, more often than not involving abuse by a spouse or partner. She had no interest whatsoever in spectator sports, and she became even more closely aligned with her cabal of young progressives. It went without saying that one visit to the Buck Eighty Club, or anything that resembled it, had been more than enough.

Zoe acknowledged that Lenny was smart. He was a whiz at abstract thought, demonstrated uncanny ingenuity, and he had even written poetry. But all this



Sad Eyes
Robert Wittig

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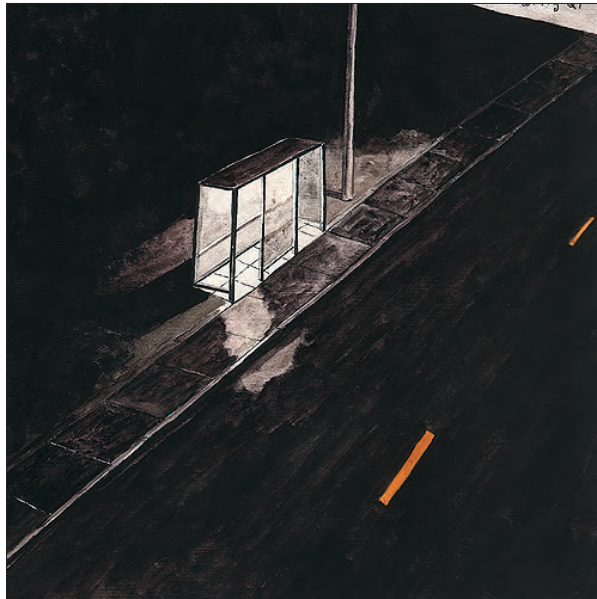
talent was going to waste, and Zoe had no interest in living out a Greek tragedy. For his part, Lenny began to cultivate a serious interest in moping. None of this augured well for a shared future.



The axe finally fell. Two months after Zoe's gut-wrenching ultimatum, she informed Lenny that their relationship was over. She was ending the marriage. She would be returning to Denver, where she would stay with friends until she got settled. Finding work of a similar nature to what she had done in Chicago would not be a problem, as she would get a stellar recommendation from her boss. Moreover, Denver was experiencing more than its share of social problems – grist for her line of work. A friend from work would handle the divorce paperwork in her absence. She hugged and said goodbye to Hugo the bunny, and some friends helped her move out of the apartment later that same day.

Lenny never laid eyes on Zoe again. They spoke on the phone a few times as the divorce papers wended their way through the legal system, and also years later.

Lenny entered a near-catatonic state following Zoe's departure. Talking to another human being, or even something as noninvasive as eye contact, proved so difficult as to be out of the question. He was so distraught that he was unable to cry. He holed up in the apartment, ventured out only to the corner store, held Hugo in his arms and confided in him, slept erratically, sometimes hardly at all and other times fifteen hours, and ate almost nothing. He was a mess, and he continued to be a mess for some time. He loved Zoe a great deal, but his idiotic behavior had destroyed their relationship.



Middle of the Night
Robert Wittig

He could think of nothing but her: the look on her face when he would come home with roses, her perfume, her languid nakedness, her witticisms, their intimacies, how she was terrific with kids, the time when she saved Hugo from the

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neighborhood tomcat, her empathy for people in need, the respect she held for intellectual life. He had gotten it right the day they first met on the rocks that abutted the lake. She was electric, the best woman ever. She was his first and only love, and he had blown it.

Their relationship had expanded Lenny's view and appreciation of the world, and it had opened many doors: to Zoe's interesting and eminently decent friends, some with an infectious, insouciant eclecticism, to a vast portfolio of experiences, to an intellectual companionship that he had never before known, and even to an opportunity to recover from the Navy Pier disaster.

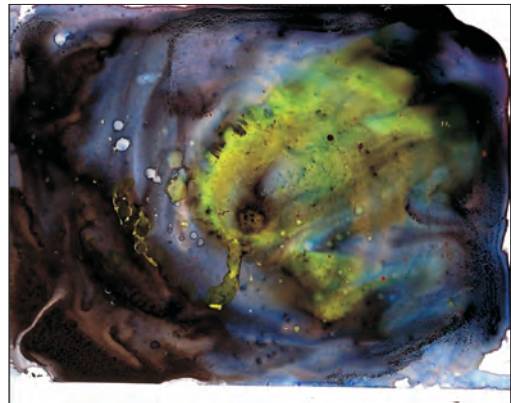


Conversations
Meirav Gebler

He shuddered to think of another such emotional maelstrom. He might have signed up for a rematch were he alone, but there was no way he would let it play out in front of Zoe. Sadly, he had not been willing or able to confide in her this anxiety. He kept it to himself, a part of his own private hell. In the end, this arid internal exile proved toxic.

Zoe had wanted so very much to continue and even deepen the love she and Lenny had discovered. She had been attracted to him from when they first met at the waterfront – crestfallen when he failed to call, but elated when serendipity brought them together two years later.

Their start had been truly idyllic, but after a couple of years she found herself witnessing his withdrawal, as he spiraled into a vortex of self-doubt and insecurity. He was warm, intelligent, and had enormous potential, but he was also vulnerable and frail inside. It wrenched her heart that his emotional baggage had rendered their life together untenable.



Vortex
Meirav Gebler

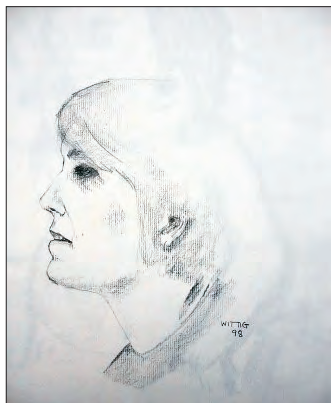
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The abruptness and finality of her departure had been intended to minimize damage on both sides. In the days that followed, Zoe maintained a stiff upper lip during the day, but nighttime was a different story. She gave in to incessant sobbing with intervals of fitful, reluctant sleep. She achieved solace only by reassuring herself that the demise was inevitable. It was a major ordeal, but she knew she would come through it intact, and she hoped he would, as well.

In the end Zoe harbored no animosity toward Lenny, though his internal turmoil had squelched her first experience with real love. Each had grown and matured during their time together with imprints and memories woven into the fabrics of their lives.

Zoe returned to Denver and had what some would consider a normal life. She married after a couple of years and had two wonderful children: a son and

a daughter. Lenny was never forgotten, though communication between them waned and eventually ceased. It always bothered her that she had been so committed to helping others, but had been unable to help the person she cared about most. At times Lenny would come to mind in the middle of the night, weaving in and out of dreams, Roberta Flack singing "The First Time Ever I Saw Your Face" while they played with Hugo. Such fantasy passed by morning.



Pensive
Robert Wittig



Springtime in the Rockies
Robert Wittig

But every so often – from out of nowhere and without warning – Zoe's demons would pounce, and she would catch herself thinking differently about her time with Lenny. His problems were put to the side, as she confronted her own attempts at self-deception. She had never confided in Lenny the extent to which the Zoe that showed up in Chicago differed from the Zoe that had grown up in Colorado.

There she had been a conservative and nerdy kid-going-on-young-adult: a bit quirky, a bit naïve, and a bit bored. After four years at a small liberal arts col-

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lege in Denver, she mustered her courage and decided to make the big move. She would strike out on her own. When the internship in France fell through, she rebounded and landed the job in Chicago, where she hit the ground running. She tried her damndest to be cool, and it seemed to work.

Chicago had been an experiment, a trial run. And then she met Lenny, who added new dimensions and vitality to her life. And there was no getting around it: She really did fall in love with him. But had the experiment run its course, come to its end after a few years? Deep down was she terrified of the next step? Was the return to Denver nothing more than retreat to a safe haven? Was this the real reason she split with Lenny? Was her insecurity the root cause of the demise of their relationship? Heavy stuff but water under the bridge.

Lenny never forgave himself for the hurt he had inflicted on the one he loved so dearly. All that had been required of him to ensure their future together was to reciprocate her love with the openness and intensity she deserved, and accept her partnership in dealing with whatever difficulties life threw at them. She would not in a million years have given up on him as long as they were a team.

Instead, he hid parts of himself from her, not out of malice, but to guard against an emotional hurt he feared. In hindsight he realized it could have been endured easily, had it materialized. Zoe had wanted so much to be a part of Lenny's life, but he had shut her out. And, tragically, for no good reason.

From this time forward, Lenny began to recognize things in himself that he loathed and feared, but was not able to change. He began to discover, and in due course would learn only too well, that knowledge of one's self is bittersweet, its achievement often a pyrrhic victory.



Awaiting Rebirth
Robert Wittig

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The year that followed was a period of regret and regress. Not a day passed without Lenny agonizing over what might have been. Then, one morning, he woke to the realization that the previous day had come and gone without him thinking once of Zoe. It was the first time since the breakup that a full day had passed without the lash of memory's whip. At the same time, he wished to never forget her, to always have her near, so he arranged a secret place for her in his heart, a place he could visit from time to time to indulge in dream and thought and fantasy unfettered by the friction of life, where he would be safe from his own demons.

On warm summer nights, a wisteria vine would dispense its fragrance throughout the courtyard garden below Lenny's apartment. From time to time a gentle breeze would waft across the sill of an open window, carrying the plant's potent scent to where he sat, reading or listening to music late into the night. The fragrance would remind him of Zoe, as wisteria had been one of her favorites. When that happened, Lenny would cease whatever he had been doing and enter the secret place he had set aside in his heart. There he would love Zoe once again. Never again would he hold her tenderly, as he once had, but he would love her just the same.



Middle Years

The years rolled on without relent. Driving a truck paid the bills, but it came up short insofar as the long haul. Lenny had signed on with the trucking company intending to work there only until he got his bearings. He would then move on to something bigger and better. Ten years had passed, but instead of moving on, he had adapted as best he could to the stultifying routine of driving a truck, day in and day out, through the mean streets of Chicago.

At least he had avoided the steel mills that dominated the landscape from South Chicago to northern Indiana. Generations of Chicago's strong young men had been seduced by the high-paying jobs they offered. Their strategy was to work like hell for a few years, save a bundle, and walk away rich. Guys would sign on in droves, never bothering to check with the previous generations of mill workers to see how it had played out for them.



Chicago Steel Mills
Robert Wittig

The old man had warned him about the mills, having witnessed their satanic carnage back in the old country. His exaggerations usually tested the limits of credibility, but in this case he had been spot-on. The air in the mills was a lethal blend of ash, asbestos dust, and sulfurous fumes. The dry heat from the furnaces would send guys on puking jags until they figured out these were due to dehydration rather than the cheap booze they had ingested the night before.

One look at the sorry souls that worked in the mills told the story. Their ebullient starts had been quickly and permanently quashed, replaced by a placid, bovine fatalism. They were beaten men: shuffling as if on a chain gang, skin turned to

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alligator hide from working around molten steel, with nary a hint of laughter in their conversation. The guy next door had been a mill guy. He was dead on the inside and all used up before the age of forty.

Lenny had escaped the mills, but just barely. He had been ready to sign on in a grand gesture of self-flagellation after losing Zoe – walk a sad, lonely road into the sunset. The old man's spirited diatribes against the mills, though, saved him from himself. Who knows what direction his life would have taken had he succumbed to this death wish.

Lenny's current goal was to own a hardware store. He had considered a bookstore or coffee house. While they were utopian at first glance, those enterprises would most likely either go bust or he would have to adapt to a hair-shirt, ascetic lifestyle, which always sounds better than it plays. The hardware store was his homage to pragmatism.



The Oil Cans
Robert Wittig

He had managed to save some money, to the chagrin of the gin mill, but a fair amount more would be needed. His plan was to work like crazy, bank as much as possible, avoid the Buck Eighty Club, and carry out the transition from driving a truck to owning a hardware store before he reached the ripe old age of forty.



Paratrooper
Robert Wittig

The gold standard of hardware stores was Rube Gillman's place on Milwaukee Avenue. Rube had served as a paratrooper in the Second World War. He was a tough guy, a force of nature, and he was not about to sell the business he had started right after the War. Rube ran a first-rate operation, and Lenny idolized him. No one of sound mind would open a hardware store within a half-mile of Gillman Hardware.

Lenny had his eye on a couple of locations in Wicker Park, which was undergoing a remarkable and long-overdue makeover. That was where he would make his debut into the business world. Anyway, that was his plan. Or rather it was his dream.

Going Home

The night's coldest hour hinted that Lenny's therapeutic outing was coming to a close. By now he had wandered past the T-junction where the Chicago River separates into its north and south branches, to where the Fulton Market, marooned in that lingering paralysis that precedes urban transition, used to bustle with the early morning frenzy of its meatpacking industry. The area used to bustle with other frenzied activities, mainly of youthful persuasion, as well. But that was way back in sixty-one.

A great deal had transpired since then. That is, a great deal had transpired with almost everything and everybody around him, whereas his own life, following Zoe, had

remained pitifully stagnant. Notwithstanding his fantasies about bookstores and hardware stores, it was high time he got his act together. Lenny had bounced around in the years following Zoe without making any real friends. He had acquired what could pass for male friends, but they were really just acquaintances. He missed having female friends like the ones he had met through Zoe. Even if it did not lead to romance, it still would be nice to have a few friends who were women.

Somewhere along the line, Lenny had come to realize that he would never develop any lasting friendships, irrespective of gender, without letting go, without doing things for people, important things, out-of-the-box things. He would turn forty in a couple of years, and the demon he feared most was loneliness. It was harsher than all his others combined.

He had, for the past several years, taken a group of neighborhood kids fishing in Lake Michigan. Personally, he could care less about catching fish. It was something he had done as a kid, and its appeal had worn off by the time he was fourteen. The neighborhood kids really enjoyed themselves, and in turn Lenny found that these outings had become a high point in his life, something he looked forward to on Saturday mornings. In a couple of years this group of kids would lose



Bridge House
Robert Wittig

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interest, and he would then round up the next batch. Funny. He would not have predicted that something like this would ever materialize in his life.

Morning finally arrived, its hoarfrost signaling that it was time to call it a night. Lenny said goodbye to the vestiges of June's Print Shop and to the faint stirrings that were beginning in the dilapidated docks and factories. Without the varnish of sentimentality they were seen as cold, old, and ugly. His final trek would entail a couple of blocks on Kinzie, followed by a straight shot down Milwaukee Avenue, past Wicker Park's Polonia Triangle, past the Polish bars that used to sell sloe gin to him and his underage friends in the heat of the summer, past where he and Zoe had lived, past the no man's land between North and Armitage Avenues.

Zoe's call the previous afternoon had reminded him of Kundera's *The Unbearable Lightness of Being*. A life is divided into segments through casual, yet pivotal, decisions made along the way. It had been several years since he and Zoe had spoken. They treaded carefully at the beginning, feeling out the emotional landscape between them, keeping familiarity on a leash. Eventually they relaxed, reverted to the rapid-fire communication style they once had shared. Her son and daughter were now four and five, the marriage was stable and probably happy, though he could not be certain, and sure as hell was not about to ask. Her many



Sour Orange
Robert Wittig



Sweet Orange
Robert Wittig

nearby friends and relatives constituted a great support system.

Their paths had crossed at a time that now seemed long past. She had never lost that magic, that fire in the belly, and she never would. Each had derived understanding from the conversation. For Lenny, it was time to put nostalgia aside, for the melancholy he had felt for so long to shed its cocoon and emerge as maturity. He had achieved as much closure and catharsis as life permits.

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Lenny's final trek would take him past the Congress Bowl. The night cleanup guy back in sixty-one had been a kindhearted one-time alkie named Wally, who had fried a fair bit of his noodle with booze. He would let Lenny and his pals in after the place had closed, so they could shoot pool, bowl, and drink beer, all free of charge. Wally enjoyed talking with young people. He had acquired a street wisdom accessible only to the city's underclass, and he spent hours passing it on to them, also free of charge. And let's face it: The midnight shift at the Congress Bowl could get awfully damned lonely.



Stop
Robert Wittig

Lenny turned off Kinzie onto Milwaukee as the news and tobacco stands were setting up their wares in anticipation of the Saturday morning onslaught. The long stretch that lay ahead would take another forty-five minutes, or maybe a little more, as the night had worn him out.

Sunrise did no favor to the Near Northwest Side wasteland that Lenny called home. He had embedded himself in its depression and sleaze long enough to become acclimated to it, bleach his senses, turn him into a part of the madness. But from now on things would be different. He would keep the promise he had made to the old man near the end. He would break out of his rut, out of the mental stasis that had defined his purview for so long.

Lenny's tenement hovel greeted him with open arms, mocking his sophomoric sincerity. Its heat pipes hissed and clacked their own morbid soliloquy as he drifted off. They had been there before with him, and with others like him. They knew better.

Part 1. Before the Age of Thirty

Graduate School

My undergraduate education had been a magnificent learning experience on many levels, and its 4½ year duration made sense in light of an amazing start that included remedial math, a switch of majors, an intellectual awakening, and transitioning from Navy Pier to Urbana-Champaign. Imagine trying to predict the outcome from the way it began. As the end of this period drew near, employment loomed. Interviews at Bell Labs and the Johns Hopkins Applied Physics Laboratory were behind me and a couple of other interviews had been lined up, should those fail to yield an offer. At the last minute (early November) an application was submitted to the UIUC Electrical Engineering Department for spring semester admission to their graduate program. Why not? Moreover, my girlfriend was in Chicago, and staying nearby might help our tenuous relationship.



November Silo
Robert Wittig



Paul D. Coleman

A secretary showed up at one of my classes and handed me a note. A professor wished to speak with me right away. The reason was unclear from the note, but it was not every day that someone important wanted to speak with me. It turned out he had seen my application and liked it: respectable physics and math for an engineering student, and obviously not allergic to hard work. He had studied in the Physics Department at MIT, receiving his Ph.D. with a famous guy named John Slater.

He informed me that he was placing me on a research assistantship. He showed me to my office and introduced me to the secretary and the electronics technician – an irascible character named Tom Newkirk, who was a lot of fun after you got to know him.

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He gave me keys to the lab and building, noting that they would be needed in the evenings and on weekends. He told me that he only took Ph.D. students; the M.S. degree was a step along the way. He advised me to sign up for courses taught by the Physics Department in the spring semester. All of this transpired in less than an hour. He had an interesting approach to recruiting graduate students: tell don't ask. I had just met the person who would become my Ph.D. advisor, Paul D. Coleman, known to the inmates as Uncle Paul.

Graduate school was great. My family knew it was good, though they were uncertain about what it meant. Things like enjoying work, voluntary long hours, not punching a time clock, and so on were foreign to them and to everyone around them. Regardless, they were aware that my life had taken a turn for the better. Neither of my parents or any of their ancestors or siblings had attended college. No one in the neighborhood attended college. My siblings did not graduate from high school. And so on.

Graduate school brought with it financial security. Throughout high school, newspapers were delivered, clothes were sorted at a nearby dry cleaning place, and summer work, in addition to being menial, was sporadic. After high school, summer employment was essential. The goal was to acquire enough money to last until the following summer. This cash cache invariably ran out halfway through the second semester. My parents would give me five bucks from time to time, but they were broke. At the start of graduate school, most of my texts from previous years had been sold. My wardrobe consisted of two pairs of pants, three shirts, three pairs of underpants, and three pairs of socks. Though never one to overdress, this was carrying things too far. The assistantship enabled me to get by, and compared to the past, get by rather well. I have never again been poor.

It was time to enroll in classes. The number of required courses was sixteen, reducible to fourteen with an M.S. thesis. Full of spirit and more than a little lacking in common sense, three graduate courses were taken from the Physics Department: Quantum Mechanics, Electrodynamics, and Solid-State. An undergraduate degree in Physics, as well as the fall semester courses that served as prerequisites, would have been a great help. No one



The Wall
Robert Wittig

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informed me that my plan was certifiably nuts, and Uncle Paul even gave it his blessing. Can you imagine advising a student to pull such a stunt nowadays. As if the courses were not enough, being supported on a research assistantship meant a laser system had to be constructed. On the bright side, that enabled me to take enough data during the summer to write an M.S. thesis.

The courses were unbelievably hard, and the Physics Department graduate students attacked the problem sets in teams. It was de facto impossible for an Engineering student to join one of these teams. The courses were passed, but being overwhelmed was a drag. On top of it all, the fragile relationship with my girlfriend dissolved in the middle of the semester. She was a nice enough young woman, but we were no longer well matched. Despite having done a lot of growing up together, our trajectories were headed in different directions. In hindsight it was clear that we each dodged a bullet.



Feeling Low
Robert Wittig

My first semester in graduate school had been difficult, but there was no one to blame but me. There was no sense crying over spilt milk. It was time to move on, keep one's eye on the ball, so to speak.

The entering graduate classes in Electrical Engineering were large. Typically seventy to eighty students entered the program each fall. Only two of the courses needed for the Ph.D. had to be taken in Electrical Engineering. The rest could be taken in Mathematics, Physics, and the other Engineering Departments, if one wished. The two required Electrical Engineering courses were considered killers, so a number of students arrived early to get through one of them during the summer. There were usually about twenty students in each of these summer classes.

To take both of these classes in the summer required a petition. My thinking was that the pair of them could not possibly present so terrifying an opponent as the previous semester's classes. I submitted the petition and it was approved, Electromagnetism and Circuit Analysis were taken, and modest effort netted the highest and next-highest grades. The Physics courses I then took in the fall semester were the prerequisites that had been missed earlier, so A's were netted without undue difficulty. Classes were now downhill. It turns out that it helps to pay atten-

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tion to prerequisites. Remaining courses were taken from the Physics and Mathematics Departments (plus Magnetohydrodynamics and Uncle Paul's course), the foreign language requirement for the Ph.D. (German and French) was met, the M.S. thesis was submitted, and the screening and qualifying exams were passed without ado. It was time to devote full time to research.

A prominent sign at the entrance to the Electrophysics Laboratory read "Give your all for Uncle Paul." The expectation was that you would devote yourself entirely to your research. Paul held the bar high. If he decided you were not made of the right stuff you were history. Some students did not survive his filter and others were scared off or sought something different. For whatever reason, the atmosphere, work ethic, and camaraderie of the group was to my liking. A short discussion with Uncle Paul resulted in a Ph.D. project. He said something to the effect "Go invent a chemical laser, but make sure it is not a hydrogen halide, as some guy at Berkeley has already done this." The guy at Berkeley was George Pimentel. Five years later, a year would be spent as a postdoc in his lab. This brief meeting of the minds imbued me with the useless confidence that befits a truly naïve graduate student.



Ink and Glasses
Robert Wittig

The next year was spent pursuing reactions that were believed to yield vibrationally excited HCN. These reactions were complicated, but a group that shall go unnamed had established rates and propensities, and their results had been reported in a series of papers. The goal was to build a chemical laser based on these reports. Unfortunately, these systems could not in a million years result in a chemical laser. The authors had misinterpreted their data. A lesson was learned. Do not believe everything you find in the literature, even if it spans a series of papers.

Another good thing came out of that year. The HCN chemical laser project had no official funding, so the decision was made to write a proposal. Uncle Paul had taken quite a number of chemistry courses when he was a student, and he had even considered doing his Ph.D. in Chemistry at MIT. Nonetheless, I was ahead of him when it came to the chemical laser and molecular dynamics, so it was agreed that I would write the proposal. Paul approved it with no changes, it was submitted to NSF, and it was funded.

Now there was no excuse for not making progress. As mentioned above, toward the end of that year it became clear that the HCN idea was based on an in-

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correct premise. The proposal would not have been written had we waited. It is interesting how things play out. Uncle Paul and I had a nice discussion about this period just a few months ago. He is ninety-six and still in there pitching.

Working in the Coleman group was like having an extra family. It was a bit dysfunctional, but that was nothing new. It was no match for my family in Chicago. There were a couple of early birds, but in general things got going between eight and nine, and most people left for dinner or the gym by six. Around seven a number of us returned for the evening shift. This lasted until ten or so, often followed by pizza and beer at a place down the street called the Wigwam. On weekends we arrived at the lab before noon and left around six on Saturday and later on Sunday.

In my first year an apartment was shared with a blind musician, jazz pianist Don Heitler, a person of immense generosity and kindness. Later he was in New York recording albums with George Shearing (also a blind jazz pianist, and a rather famous one) when my wife stopped there on her way back from England. He took her on a tour, pointing out the sights, which is impressive for a blind guy. Being a musician, Don and his friends introduced a vibrant social element into our gatherings, with impromptu parties sometimes starting around midnight.



Room in College
Robert Wittig

After Don left for one of his New York adventures, a bunch of us rented the main floor of a bungalow at 203 Healey Street. We called the place the 203 Club, and it was understood by all our friends that there would be a party every Saturday evening unless told otherwise. Most of the guys who shared this place came from the Irish enclaves on the South Side of Chicago. The drink of choice was cheap beer, the food was popcorn, and the music was our one Rolling Stones album played over and over. There was a lot of dancing and everyone had a good time. A few of the local Irish Catholic priests were invited. With one exception they left the church. One of them married a young woman I had dated. Their wedding took place on the steps of the Student Union.

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Adventures were undertaken and new avenues were explored with my favorite companions. Bill Walsh and Gene Moriarty were pillars of Chicago Irish culture. Later, an apartment was shared with a nice and interesting guy, Steve Martinich. Bill was an English major and Gene studied Electrical Engineering. We were the greatest of friends throughout graduate school and beyond. They drew to the surface the small percentage of Irish in me. We all wound up in California, Bill in the insurance business in San Francisco, Gene on the Electrical Engineering faculty of California State University at San Jose, and Steve in an engineering outfit in the East Bay.

Michele Jeanine Andrisin entered UIUC in the fall of 1966 as a beginning graduate student in the Psychology Department. We met through a mutual friend and began dating in January 1967. She was and remains the real deal. This also added a new dimension to the menu of parties. We married in June 1968 in Parma, Ohio, which is a suburb of Cleveland. This is without doubt the best thing that happened to me in my life – marrying Michele, not doing it in Parma, Ohio. My friends told me that she was too good for me. Her friends told her that she was too good for me. That is what friends are for. No one in his or her right mind would have argued the point.



My knowledge of chemistry was essentially zero, so running ideas past a couple of physical chemists was in order. I already knew Jim Yardley because he had collaborated on some experiments with Don Akitt in Uncle Paul's lab. His advice was valued. We talked a couple of times, and he said a guy named Rudy Marcus was really smart and knew about such things. Rudy greeted me warmly and we discussed reactions that might yield population inversion. No details were forthcoming, but our meeting was interesting and inspirational. To my surprise and satisfaction it seemed that my ideas were not so unreasonable after all. A quarter century later Rudy was awarded the 1992 Nobel Prize in Chemistry for his contributions to the theory of electron transfer reactions in chemical systems.

This time it was decided that the reaction: $O + CS \rightarrow CO + S$ was worth a try. Namely, vibrational population inversion in CO appeared likely. A setup was ar-

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ranged to measure infrared spontaneous emission. A resolved spectrum would reveal whether inversion was present. Having been burned with the HCN project, the strategy was to find out as much as possible about the nascent CO vibrational excitation rather than simply trying to get lucky.

There was a great deal of infrared emission. It was not feasible to resolve it, however, and its broad $\Delta\nu = 1$ envelope was not revealing. Uncle Paul noted that things were going nowhere and suggested that perhaps something more down to earth should be pursued. Stymied but stubborn, my decision was to stick with it. A lot of effort had been invested, no red flags of a scientific nature had emerged, and the project gave me the feeling it had a good chance of success. It was a gamble, but risky projects are the backbone of scientific research.

Good fortune was on my side. A paper by Gus Hancock and Ian Smith appeared in which a clever trick enabled them to decipher the infrared emission that arose from, of all things, the reaction: $O + CS \rightarrow CO + S$. When the overtone spectrum was recorded, each P-branch was aligned with the R-branch of the adjacent band. This yielded a lumpy spectrum that enabled relative vibrational populations to be extracted. Indeed, there was vibrational population inversion. It would in fact be possible to construct a laser based on the above reaction.

Without their work it is questionable whether the CO chemical laser project would have succeeded, at least on anything resembling the incredibly short timescale that followed their publication. When told of this a few years later, Ian said they had thought about trying to obtain stimulated emission. Being clueless about lasers, they let it go.

A week of relentless fifteen-hour workdays yielded an apparatus that would hopefully become a chemical laser. It was a Rube Goldberg affair if ever there was one: a glass tube with inlets for oxygen atoms and CS_2 , gold coated mirrors mounted internally on bellows to permit angular adjustment, a hole in one mirror to extract radiation, sealed with wax and a scrap piece of sapphire, a neon sign transformer to make oxygen atoms using a discharge, Golay detector, oscilloscope, and so on. The experiment was ready.



Could Go Either Way
Robert Wittig

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It is a pity no pictures were taken. The crudeness of the apparatus reminds me of photographs of Marie Curie's workbench. A bottle of CS_2 was obtained. A hole was drilled in a rubber stopper, and vacuum grease helped guide a glass tube through the hole. The stopper with its tube was then jammed into the CS_2 bottle like a cork in a wine bottle. Rubber hose connected this to a valve and from there to the main flow tube. You cannot imagine how crude this looked. And the inelegance did not stop there.

Gold-coated mirrors were prepared by breaking into the technician area after hours and using their equipment to vacuum deposit gold onto glass substrates. The head technician, Al Wilson, finally gave me a key. He said my advisor was a world-class cheapskate who refused to pay for the services of the technicians, but he did not want the lock on the door damaged. Holes in glass mirrors were drilled using ultrasonic vibration of a squared-off elephant hypodermic needle that rested on a taped mirror surface as abrasive slurry was passed over the surface. Mounts were homemade. An optical table was made of plywood. There was much more. Uncle Paul did not believe in purchasing things that could be put together with string and sealing wax. There was no sense in overkill.

Was Uncle Paul really as parsimonious as Al Wilson claimed? After all, he made sure we got paid and cared about our general well being. On other matters, though, he could be cheap like you would not believe. At conferences we inevitably found ourselves in a restaurant with Uncle



Tools of the Trade
Robert Wittig

Paul. We would conspire to leave a tip for the waiter or waitress when Paul was not looking. He did not believe in tipping. Worse yet, if he tipped it would most likely appear to be an insult, like leaving \$6 for a bill of \$5.98.

We also wandered about town looking for free or almost-free stuff. To facilitate this, the lab had its own truck, which had been obtained as surplus equipment. The 1939 Ford van did not have first gear or reverse. Should it not be fixed? No way. Such overkill had no place in the Electrophysics Lab. It was easy to start in second gear when going forward. To exit a parking place in reverse one bounced the van off the concrete wheel-stop in front of it. The bottom line is they threw away the mold after making Uncle Paul. Now back to the fateful experiment.

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It was Sunday evening and only a few of us were still in the lab. Introduction of CS_2 into the oxygen flow yielded a pretty blue glow. It had nothing to do with the desired reaction, but it indicated the reaction's spatial extent. After minor adjustments the detector took a hit that almost cost it its life. My yelling caused another graduate student, Glenn Sherman, to run to the rescue. He assumed a loose electrical lead had been touched. A few things were checked. We then stared in awe.

Sure enough, stimulated emission was originating from the place where the reaction was taking place. No discharge was present, just chemistry. The strange contraption on the bench was a chemical laser. Uncle Paul was phoned, causing him great happiness. Michele came over from her office in the Psychology Department. The Wigwam greeted us with open arms.

Uncle Paul entertained half of humanity the next day: faculty and their groups from Engineering, Physics, and Chemistry. He phoned the National Science Foundation to inform them that they had, in fact, bet on the right horse. I would graduate within a year unless tossed out for demonstrating against the Vietnam War. Research progressed and things fell into place with kaleidoscopic speed. Papers were written, and there were invitations to present the work at conferences. Nothing unusual happened.



Mill Evening
Robert Wittig

On one occasion Uncle Paul arranged for me to give an invited talk at a big meeting in Seattle. This went well despite being on crutches. A sprained ankle had been acquired playing basketball a couple of days earlier. Clumsy things called lantern slides were made the evening before the flight using some Polaroid equipment that was surely someone's idea of a practical joke, all the while hobbling about with an ankle the size of a soccer ball. This was memorable. Uncle Paul did not accompany me on the trip, so it was easy to leave tips at restaurants.

Paul assigned several students to projects that defined the beginning of the chemical laser era of his Electrophysics Laboratory. He kept this going for a decade, as funding was all but assured. The government eventually invested over 100 M\$ (1970 dollars) in various laboratories, including several in universities,

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before they figured out that the CO chemical laser had no future as a practical device. A clever undergraduate could have told them that.

To receive the Ph.D. under Uncle Paul required you to assume complete ownership of your research. The boss was no fan of handholding. Win, lose, or draw it was your baby. This means technical training was traded for independence. Group seminars took place in an unused part of the lab. Folding chairs were set up and the presenter used a chalkboard plus an easel with large pads of paper and a felt-tip pen. These seminars were characterized by highly spirited discussions that were not suitable for the faint of heart. By the time graduation rolled around you were a complete package: lab work, theory, writing, presentations, etc. Uncle Paul instilled professionalism and responsibility. It was great training.

Graduation is best accompanied by employment. Michele was offered a faculty position in the Psychology Department at California State University at Northridge (CSUN). Our timing was good but not perfect. She would not be finished with her thesis by September, when the CSUN appointment was scheduled to begin, and when my thesis would be turned in. She had hoped to finish in four years, but needed another month or two. Michele



Heading West
Robert Wittig

was a big catch, however. Consequently, CSUN agreed to hire her anyway and let her start in September, with the understanding that she would complete her thesis within a year, which she did. Bill Steier offered me a postdoc at USC. He is a former student of Uncle Paul, who had made a strong pitch on my behalf. There was also a postdoc offer from Terry Cool at Cornell, but there was nothing for Michele in the area, so the Cornell offer was dead in the water.

Bill went from Illinois to Bell Labs to USC. He was Chair of Electrical Engineering Electrophysics, with a lab in the brand new Seaver Science Center. He wanted me to work on a scheme to detect pollutants using a parametric oscillator. It was not my first choice of a research topic, but Michele and I were not exactly drowning in offers that would place us in near proximity to one another. Bill's offer was accepted gladly.

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My final oral exam took place on a Friday afternoon. There was a memorable party that evening that included a Russian visitor, music, dancing, and some locally grown substance. On Saturday morning the 1960 Buick was packed and the trip west commenced. Michele would stay behind for a few weeks to finish some work and then fly to California. Hopefully the Buick would survive its passage through the Rocky Mountains.

With any luck we would find an apartment in an area that came highly recommended by one of Michele's fellow graduate students in the Psychology Department at Illinois. Lee Cooper was a Southern California native and a UCLA undergraduate. He told us the coastal city of Santa Monica would suit us well. Smart guy. In any event, we were off and running.



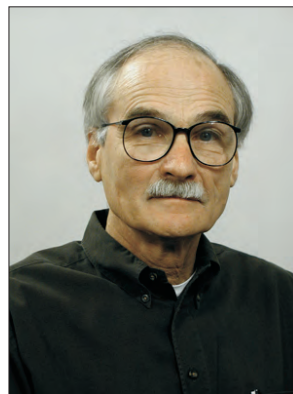
Misty Hills
Robert Wittig

Postdoctoral Years

"It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of light, it was the season of darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to heaven, we were all going direct the other way – in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only." (Opening paragraph of Charles Dickens' *A Tale of Two Cities*)

The early 1970's were wild times. The bottom had fallen out of the job market in engineering and science, and the political situation in the United States seemed to be going from bad to worse. We arrived in Southern California and rented a place in Santa Monica, which provided comparable commutes to Northridge and USC. Michele's position was tenure track, so she had at least six years of uninterrupted work. That seemed like infinity at the time.

My postdoctoral appointment with Bill Steier was for one year, with the possibility of a second year, assuming mutual satisfaction. The project was aimed at monitoring gas phase pollutants by measuring the attenuation, over a path of several kilometers, of a frequency-tunable infrared source. This source was a parametric oscillator (OPO), and in 1970 building one of these beasts was not trivial. The group had a Q-switched YAG laser that was dedicated to the project. To complement this, a pulsed Xe ion laser was constructed. This required only a couple of months, despite its large size, as I had developed decent scrounging skills and hands-on experience with most of the ingredients while in graduate school. The YAG laser gave low energy pulses with good mode quality, whereas the Xe laser gave high energy pulses with awful mode quality.



William H. Steier

There were two students working on the project. Dan Gonzales had several years of industrial experience that served him well. Raman Basu was the son of Satyendra Nath Bose, as in Bose-Einstein statistics. This translated into carrying a lot of baggage through life. For example, the great Bose was not pleased that one of his sons would pursue something as lowly as a Ph.D. in Electrical Engineering.

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Parametric oscillation was not achieved with the Xe laser, though it yielded high-energy pulses. The laser's multimode nature prevented sufficient energy from being contained in any single mode. The modes of an optical resonator are orthogonal, so mode-matching the Xe laser to the OPO meant that each mode had to exceed threshold. There was enough total energy to damage crystals, but not enough energy in any one mode to reach threshold. The bottom line is that a paper on the interesting and unique properties of the laser could be written, but using it to pump an OPO was not in the cards. It became clear with time that such a paper would not be important, so the rough draft was tossed. This was done from Cambridge after it was clear there would be solid publications from the work there.

Our first year in Los Angeles was an important part of our lives, not just because of what came later, but because it opened our eyes to many new things. Bill and Sarah Steier had us over several times. There were social interactions centered at USC and Northridge, hikes in the Sierra Nevada Mountains, and weekend trips to San Francisco. We would scribble silly little things down on the Sunday evening flights back to Los Angeles. The better ones have been lost. A few survivors are given below.

Reckless abandon, our senses to flight
Furtive enjoyment the great Chinese night
Firecracker lotus in cold charcoal rain
Watching their desperate and nearly insane
And our own heartbreak crazy is with us again.
Music of living and giving and gone
Deuterium, neutron, the war can't go on
We sat in the doorsteps to be not yet seen
So they won't take our freedom or ask where we've been
The world had exploded and caused us to see
What we were to the others, and wanted to be
And how strong we became when we finally were free.

The curling smoke, the stars, vacant sounds
Punctuate the night.
Come see us mood beauty
Bring your magic into sight.
Near the river, in our tents, our sleep,
In our warm and longing bodies
Take away the fright.

To a person so special, exquisite, and rare,
Whose presence exudes precious love, warmth, and care,
We loan you our hearts, trust them to you,
Give you our spirits, and when you are through,
We'll comfort and hold you and ask in return
The grace that goes with you, and passes in turn.

Bundling our memories
With feelings made of lavender
Our timeless love
A crimson sepulchre
Harnessing our sorrows
With latches made of gold
Maybe getting older
But never getting cold.

To feel love and warmth
When in a lonely place away from everyone
Is to know beauty.
To feel emotions
In a dark room, alone and tired
Is to know love.
To help a perfect stranger
Is to be in love.

Full of terror, full of fright
Trusting ever out of sight
Furtive marks our happenstance
And in our lusty innocence
We dance again at midnight.

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Toward the end of my graduate studies, I asked Ian Smith about the possibility of doing a postdoc in his group. He was keen and suggested NSF as a possible funding source. That had been forgotten, but while at USC an announcement from NSF for postdoctoral fellowships to study abroad came to my attention. The program even had the word interdisciplinary in the title. Unfortunately, it was being phased out and would end in a year. However, the way things were going in the States it seemed that the world we knew might not survive for more than a year.

Michele liked the idea of living abroad, and one year seemed right. She thought it might be possible to get a leave of absence from CSUN, though that was a long shot. She also sensed my frustration: Who could get excited over bouncing an OPO beam off a corner cube reflector on another building to prove that the air in downtown Los Angeles was polluted. The air quality was obvious, and reliable methods were already available for collecting quantitative data.

I submitted an application to NSF. To our surprise it was approved, and Michele obtained a leave of absence, despite having spent only one year at CSUN. She had made a great impression. We would go to Cambridge in September, I with the NSF fellowship and Michele teaching undergrads. No one would have accused us of over-planning.

It dawned on me somewhere along the line that Ian Smith was a chemist. He presumably expected the people in his group to know something about chemistry, and for all practical purposes that left me out. The thought of again getting in over my head was not appealing, and the ball was squarely in my court. In other words, it would be necessary to look into and address my ignorance of chemistry before showing up on his doorstep.

Good fortune entered. Gus Hancock had joined Kent Wilson's group at UC San Diego as a postdoc in early 1971. We drove to La Jolla on a Saturday afternoon, went to a party that evening at the home of Kent's film technician, and stayed



Clockwise from upper left: Ian and Sue Smith, Rosie and Gus Hancock. These photos were taken at a retirement banquet in honor of Gus Hancock (September 14, 2012).

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overnight at Gus' small apartment. He let us use his bed, and only later did we learn that he slept on the kitchen floor that evening.

Gus provided information that enabled us to integrate quickly into the Cambridge social scene. He also assured me that Ian's research bore no resemblance to research in preparative chemistry. He pointed out that the Physical Chemistry Laboratory (PCL) was a stand-alone operation that occupied half of a large U-shaped building, the other half belonging to Organic and Inorganic Chemistry. The building's mirror symmetry resulted in considerable duplication, even two tea rooms, each with its own staff. The two Cambridge Nobel Laureates in Chemistry: Ronald G.W. Norrish (physical) and Alexander R. (Lord) Todd (organic), hated each other's guts. This accounted for the separation. One came close to needing a visa to cross the border between the two halves of the building.

We arrived in Cambridge, rented a flat, bought a 1956 Morris Traveler, and got to work. I set up an experiment to measure energy transfer among CO high vibrational levels at temperatures in slight excess of 77 K. The equipment and techniques were reasonably familiar, so data collection began in about a month. This went well. By spring there were a couple of papers on vibrational energy transfer, as well as a short communication on a chemical laser based on the highly exoergic ($41,400\text{ cm}^{-1}$) reaction: $\text{O} + \text{CSe} \rightarrow \text{CO}(v) + \text{Se}$. The latter was not noteworthy scientifically, but my synthesis of CSe_2 on the PCL roof resulted in the evacuation of a nearby girls' school, and this indeed was noteworthy.



Ian Smith

The energy transfer stuff was timely and well received. Back then, 77 K was considered low temperature insofar as vibrational energy transfer was concerned. Our equipment was unsophisticated, but we had the good sense to keep the pulsed electrical energy input low enough to ensure that the gas temperature during the period of measurement was not much higher than the 77 K wall temperature. Another group subsequently obtained higher S/N and inferred rates that differed from ours. They announced that we were obviously wrong, basing their ambitious conclusion solely on their superior S/N.

However, they had used high energy pulsed discharges. These gave good S/N, but also raised the gas temperatures to unknown large values that only reached the 77 K wall temperature on a much longer time scale than that of the measurements. The work was sufficiently important that a third group carried out measurements

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with excruciating care in order to settle the dispute. They reproduced our results. There is more to experimental research than S/N.

Living abroad was a valuable experience for Michele and me. Ian and Sue Smith were great hosts and became friends for life. We have seen them regularly over the years, for example, in September 2012 at a retirement celebration for Gus Hancock, and in June 2014 in Cambridge. We made many friends in Cambridge, a number of whom we keep in touch with, though less than we should. There was no shortage of Americans in the PCL: Rick Heidner, John Wiesenfeld, Henry Weinberg, Robert Carr, Bob Brinton, Richard Martin, Dick Airey, Charlie Parmenter, and probably others whose names escape me right now.

A most interesting character by the name of Ernie Cox ran the stockroom. He believed that foreign postdocs and visitors who worked in the Department (and in virtually all cases were funded through their home countries) were intent on taking advantage of England. More-



Two and Two Again
Meirav Gebler



Horse in Fog
Robert Wittig

over, Ernie had convinced himself that it was his moral duty to protect the country from their assaults.

Ernie was once asked by one of these scheming vermin for a stopcock – clearly an effort to abscond with her majesty's resources. Not to be outfoxed, he responded that this would not be possible, as there was only one left and someone might need it. Another time, Mr. Cox complained bitterly and loudly because

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I took two rolls of toilet paper from the storeroom rather than just one. Toilet paper was used in place of Kimwipes. Mr. Cox was an institution unto himself.

Our time in Cambridge was wonderful. Eccentric characters abounded, and on occasion we joined their ranks. Poems were written, and we began to discover things about ourselves, like who we were when unfettered by the expectations of others. Lunch at the Panton Arms and tea twice daily were not to be missed, and spicy curry at least once a week was a ritual. We took long walks through the nearby fens (low marshlands), often sharing paths with horses, sheep, and cows. We are fortunate to have lived in Cambridge during this period in our lives. It was a special time and a special place. Much had transpired following our respective departures from Saint Georges Court and Parma, Ohio.

A postdoc from Göttingen soon appeared on the scene, also to work with Ian: Reinhard Zellner. His lab bench was next to mine, and we hit it off right from the start. He acquired a girlfriend, Patti, and later they married, albeit briefly. We visited Reinhard after he returned to Germany, and he visited us in Los Angeles. It was not long after he left Cambridge that he emerged as a major player in combustion and atmospheric chemistry.

Martin Braithwaite was a beginning graduate student with Ian. He had a degree in Chemical Engineering from Imperial College. Idiosyncratic, with an interesting and addictive sense of humor, Martin knew every pub within a few kilometers of Imperial College. His girlfriend, Paula, was sociable and complemented Martin nicely. The six of us became great friends, with many adventures in Cambridge and even London.

We invariably pushed our luck on the return trip from London. Good timing was needed to arrive at Kings Cross or Euston Station in time to catch the last train to Cambridge, the infamous mail train. It stopped at every station along the way to drop sacks of mail, all the time reeking of kerosene and coal fumes. The inconvenience was worth it.



Smokey
Robert Wittig

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Photos from 1971-72: Top row: Curt and Michele in the courtyard of Kings College, Cambridge; Venice, Italy. Middle row: Reinhard Zellner punting on the river Cam; Michele in southern Germany; Michele punting on the river Cam with Martin Braithwaite and Paula seated in the punt. Right: Paris, Eiffel Tower in the distance.



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Martin came to Los Angeles several years later to postdoc with Steve Leone. He and Paula married in a church in downtown Los Angeles. It may well have been the first time Martin set foot inside a church. Someone told me that Reinhard retired recently, undoubtedly a vicious rumor.

We made a few trips to the Continent, totaling perhaps three weeks. Those were great adventures for a couple of Americans who had never been outside the United States before arriving in Cambridge. We got to try our luck with languages we had studied in school. Michele had taken two years of French, and miraculously I could remember a lot of what had been absorbed in my ordeal with German as a freshman in college. The English Channel was crossed in massive things called hovercrafts. Try to imagine a low flying inner tube.

Travel on the Continent was almost exclusively by train. Inexpensive Eurail passes could be obtained with the help of student discounts, which at the time also applied to postdocs. We took the Morris Traveler on one of the trips. Its steering wheel was on the wrong side for travel on the continent, which added to the excitement of driving in Paris, not that driving in Paris was not exciting enough already. We literally pushed the Morris onto the hovercraft for the return trip from the Hook of Holland to Harwich on New Year's Eve. The trip from Harwich to Cambridge involved the engine dying a number of times, followed by push starts, with Michele popping the clutch and me doing the pushing. Such stuff was taken in stride. The Morris never again saw service on the Continent.



Hovercraft (Google Images)

Those excursions to the Continent were fantastic high points, as valuable a set of learning experiences as we could have imagined. We visited museums, wandered aimlessly, slept in unbelievably low-end places, ate and drank cheap stuff on the run, and had a hell of a good time. It is important to do such things when one is young, without much money, and to a large extent fearless.

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The NSF fellowship was for one year, and our plan was to return to the States at the end of summer when the fellowship ended. There was no skype, no email, no word processing, no nothing. Letters were typed one at a time on a manual typewriter and copies were kept using real carbon paper. Jobs were scarce. Rejections were courteous, with the person writing the rejection letter sometimes commiserating about the dismal state of the job market.

Only once was there a questionable reply. I had written to the Electrical Engineering Department at the University of Arizona. The Chair replied with a gruff letter that ended: "If you receive an offer of employment you would be well advised to take it." Years later Marlin Scully approached me about the possibility of a move to Arizona, where he had established its highly successful Optical Sciences Center. Marlin had amusing, and not at all complimentary, things to say about the person who had written the letter to me.



Stormy Weather 1
Robert Wittig



Stormy Weather 2
Robert Wittig

We had a few offers and possibilities, but landing two half-decent positions in (even roughly) the same location was proving to be nearly impossible. A trip was made to the States in late spring to promote my case. It was a whirlwind tour, with five visits in a week. General Motors Research Labs offered me the sun, moon, and stars, but there were slim pickings for Michele in the area. Likewise with McDonnell Douglas Research Labs in Saint Louis.

Ralph Cicerone is currently the President of the National Academy of Sciences. He was at Ann Arbor at the time. We knew him and his wife Carol from UIUC, where Ralph and Carol had been graduate students in Electrical Engineering and Psychology, respectively. Ralph had a friend in the Physics Department at Michigan, Jens Zorn, and he recommended to Jens that he offer me a postdoc, as it appeared that Michele might land something temporary

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in the Psychology Department at Michigan. My seminar in the Zorn group was at 8 p.m. It went well, but he opted for someone with spot-on experience. We never again met face-to-face, but Jens wrote a few times over the years congratulating me and commenting wryly on his decision. He struck me as a very nice guy. UIUC was willing to offer me a position, but there was nothing for Michele, so this was off the table.

The last of the five seminars on this whirlwind tour was at the Naval Research Laboratory. Dick Airey was my host. He had spent half a year in Cambridge as a senior visitor, and we had developed a good rapport. He arranged the seminar to help defray travel expenses: a generous honorarium plus dinner and overnight stay at his house. He and his wife were cordial hosts, but it had been a hard week. I fell asleep at the dinner table. Dick did me a good turn when it was needed, and that has not been forgotten.

Being a two-career couple – nowadays referred to as the two-body problem – is not easy today, but it was a lot harder in 1972. Strife was often unavoidable. For example, Frank Jameson at General Motors Research Labs went ballistic when his offer was declined. The idea that someone (a male) would take a spouse's career into consideration was anathema to his way of life. And he was not alone.

At the same time, I did not take at all kindly to being told how to live, or derided for my choices. As you might imagine, things became contentious on more than one occasion. Ian offered to keep me on as a post-doc. However, had we stayed another year or two, we may well have stayed permanently in the UK, though surely not in Cambridge. This was not to be taken lightly. I am no slouch at the art of self-deception, but this was not the time to indulge in fantasy. We kept trying to find something in the States.



Canal
Robert Wittig

A miracle happened. George Pimentel at Berkeley offered me a postdoc, and Michele landed a temporary position at California State University at San Jose. It was part of the California State University System, so she kept alive her chance of

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returning to Northridge, should something open up for me in Southern California. Berkeley and San Jose are forty-six miles apart. Splitting the distance gave commutes that were manageable, though nontrivial.

The Smith family: Ian, Sue, Fraser, and Andrew (Katie and Tracy came later) would also arrive in Berkeley in the fall. Ian's sabbatical coincided with our time there. Ian had written to George a couple of times on my behalf. His help at this critical juncture enabled me to have an academic career. Constant moving around and its attendant uncertainty had not been easy on our nerves. It was hoped that opportunities would materialize once back in the States. In the meantime it was onward to California.

George had gone to the Berkeley administration and explained that he needed money to support me as a means of obtaining preliminary data. A proposal would then be submitted to the Environmental Protection Agency, and a large amount of money would be garnered for George's group, a person in Engineering, and a person at Lawrence Livermore Laboratory. The idea was to build a CO laser, which offered an abundance of frequencies, select one frequency for each pollutant, bounce the beam off a distant reflector, and detect the returned radiation. Pollutants would attenuate the beam in proportion to their column densities. There is more to it, but that captures the gist.



George C. Pimentel

The project did not warm my heart. It was a step down from the work in Cambridge, but beggars can't be choosers. Besides, a supportive letter from an important scientist like George Pimentel would help land a position.

We met regularly with our partners, Frank Roble from Engineering and Gil Leppelmeier from Livermore. You could not ask for nicer scientific collaborators. It soon became clear that the laser part was just a matter of stamina and care, with the understanding that stamina and care require time and money.

That laser oscillation needed to be restricted to one transition at a time was news to George. He nonetheless agreed to purchase an intracavity grating, though following spirited discussions. We also needed a servo loop to lock a cavity mode to a given transition center frequency. This went over like a lead balloon. There was no way to convince George that a cavity mode needed to be controlled to obtain stable operation. He was a really smart guy, but stubborn like you would not believe, even about things well outside his sphere of expertise.

Bill Steier phoned in February. A senior faculty member in the Electrical Engineering and Physics Departments at USC, Walter Faust, had returned to the East

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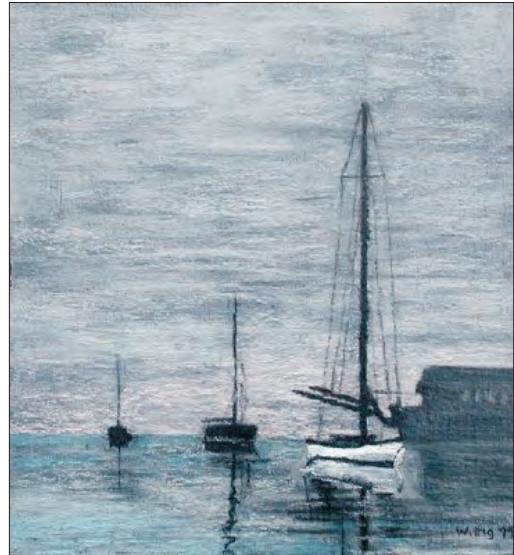
Coast on short notice, citing personal reasons. One of the likely suspects from the Bell Labs/IBM mafia had been approached to fill the vacancy created by Walter's departure, but he had turned them down.

Bill had discussed the situation with several Electrical Engineering and Physics faculty members and with the two relevant Deans. He offered me the position of Assistant Professor, including the Faust labs, on the spot. This is how many, if not most, faculty appointments were made at the time. Having spent my whole life outside the old boys club did not endear this approach to me. I was nonetheless elated and grateful, and almost dropped dead from surprise. Michele was able to retrieve her position at CSUN. Thus, the USC offer was accepted. All this transpired in a couple of weeks. Talk about feast and famine.

Another half year would be spent in Berkeley, but now there was light at the end of the tunnel. Something better lay ahead. There was no way for me – or any scientist with a modicum of judgment – to be enthusiastic about the smog project. Let's leave it at that. On the other hand, I was determined to make it work. Call it ego, pride, stubbornness, or anything you like. If no publication resulted, that would be fine with me, as the work had no intellectual merit to speak of. Regardless, I was determined to not leave George's group with the experiment hanging in midair. This kept me going.

The faculty position at USC came with 13 k\$ of startup money, some of which could be spent right away. A system to actively control the laser cavity mode was purchased for a couple of k\$, as it would be used for the USC experiments anyway. Using it for the Berkeley experiments provided, at the very least, a few months of practice. It proved trivial to lock the center frequency of each CO laser transition to a cavity mode, yielding stable output and linewidth of a few MHz. Absorption cross-sections were then measured with good accuracy. George came to the lab and we all basked in the success.

The control box with a cable going to a mirror holder puzzled George. He was told what it was, and that it was on loan until late summer. He did not care much for high-tech approaches, but he certainly appreciated the results. I think they



Three Ships
Robert Wittig

Part 1. Before the Age of Thirty

brightened his day. Incidentally, the servo system was about as high-tech as a hula-hoop.

The group was broke by the time summer arrived. Consequently, all orders were put on hold. In addition, between Michele's job and mine, it was clear that we would not see the light of day for years. Thus, we took off for a month and traveled around Spain with one of the graduate students in the group, Enrique Cuellar. It was quite a trip. We took on a passenger for the leg of the trip from Bilbao to Barcelona, as this would help with expenses. We met Munser Awami on the charter flight from London Gatwick to Bilbao, and the deal was cut en route. He was an Algerian medical student studying in Barcelona.

We all crammed into a tiny rental car with a luggage rack on the roof. The Seat was the Spanish version of a small Italian Fiat. A Volkswagen Beetle was a monster by comparison. Munser did not believe in bathing, so the air in the car would get ripe by midday, even with the windows open. He preferred cologne, but this did not do the trick. The three of us from Berkeley conspired to stop frequently for a swim in the early afternoon, and we would literally push Munser in the water. Yes, it really was that crazy. We lived on the cheap, from the Pyrenees Mountains and the Basque country of the north to the deep south, with its Moorish influence. There were bullfights in Malaga, drinking wine from a bota, and dealing with the blistering mid-summer temperatures of Cordoba and Seville. And there was a lot more. Upon returning to Berkeley, a report was written, and Frank Roble and Gil Leppelmeier bailed out, which reflected favorably on their common sense. The project died for lack of money and interest.

My time with George was not scientifically fruitful. This was no one's fault. George's stab at the smog stuff was one of those things that arise every so often and are destined to flop. I was desperate, for obvious reasons, and George was in it for the money. Regarding the latter, there is scientific research and the funding of scientific research, and these are not to be mistaken for one another. The former is great, whereas the latter has been known to coerce normal people into say-



Heat
Robert Wittig

Part 1. Before the Age of Thirty

ing and doing strange things. In my opinion the funding agencies are more culpable than the scientists. Regardless, when a research direction is recognized as unworthy of further pursuit, it is best to cut losses and move on. Everyone involved in the smog project did this.

On the personal side, George and his wife Jeanne were charming and we had many nice times with them. George passed away in 1989 at the age of sixty-seven. We have seen Jeanne in Berkeley and Santa Monica. She is great.

Carrying out postdoctoral research at three different places in three one-year aliquots had its pluses and minuses. The two projects aimed at probing atmospheric pollutants were of no intellectual value, at least to me. This was my judgment at the time, and it remains my judgment today. Had three years been spent in the Smith group in Cambridge, a great deal of scientific output and maturation would have been forthcoming. At the same time, whether this would have proven better for me in the long run is not obvious. Keep in mind that this is hindsight speaking. Moreover, it is moot in light of the two-body problem we faced. The postdoctoral period of the early 1970's was a time when we learned the meaning of the word compromise.

At the other extreme, had a full three years been spent on either the Steier or Pimentel smog projects, my best guess is that this would have led to a high level of frustration, regardless of how much progress was made. These projects were just plain boring. The stage would have been set for one of life's choice points, with its many and varied outgoing paths. Even with the wisdom of hindsight, our trajectory from there would be a tough call, anyone's guess.

As it turned out, the seemingly bizarre combination of a year here and a year there with dramatic variation in apparent productivity, followed by a faculty appointment, was not as bad as it sounds. In Uncle Paul's group there had been an unmistakable tradeoff. There was less technical training than would have been achieved elsewhere, but to compensate for this deficit, one learned to function independently. The training deficit, carried into the first real job, translated into an immediate disadvantage, whereas the enhanced ability to function independently enabled one to progress rapidly. It was often interesting to see how such things played out.

Don't get me wrong. I am sure as hell glad there was not yet more instability and uncertainty in our lives. Our mettle had been tested quite enough already.

Part 1. Before the Age of Thirty

In the case of my eclectic postdoc years, those remarkably useful things called hunger and ambition mitigated what was lacking in acquired scientific knowledge. My arrival at USC in the fall was not going to be hampered by wasted efforts and whining. After what we had been through, minor obstacles like landing research grants, building a group, publishing, getting tenure, and so on were not going to stand in the way. We could look beyond these things, and we did.

These years were special, never to be forgotten or updated. We never went back to the fens or to the Panton Arms or to the Dandelion Café, or went punting again on the River Cam or picnicked in Grantchester, where the poet Rupert Brooke had lived in the Old Vicarage. Some memories are fragile, best left alone, safe from the arrow of time. These places and events are, for us, to be remembered as they were a long time ago, during our period of innocence.



Part 2.

After the Age of Thirty

The Early Period

The opportunity to run an independent research group was finally at hand – a dream come true. Ideas about areas and projects had been accumulating since graduate school, and it was time to make it happen. A decade earlier the abyss had been faced. Getting tossed out of college would have translated to a life spent working on the docks and in factories. A ferocious approach had saved me then, and surely it would come through again. Failure was not an option. There was simply too much at stake. In short, Michele and I were prepared to work insanely hard.



The laboratory that I inherited from Walter Faust contained a great deal of unsophisticated but useful equipment. Faust had come to USC from Bell Labs, where he had made a big splash as co-inventor of the CO₂ laser, with Ross McFarlane and Kumar Patel. Martin Gundersen was a Faust student during my time with Bill Steier, and we became friends. He would receive his Ph.D. under Faust, despite the fact that Walter was no longer around. Walter would simply return for the thesis defense.



Down to Earth
Robert Wittig

Martin graduated in 1972 and joined the Texas Tech faculty in September 1973. He stood guard over the Faust Empire during the interim. His presence and demeanor constituted a formidable barrier to those wishing to avail themselves of goodies left by Walt. Martin returned to USC a few years later, eventually serving as Chair of Electrical Engineering Electrophysics and being honored with an endowed chair. He currently maintains a highly successful research group.

Part 2. After the Age of Thirty

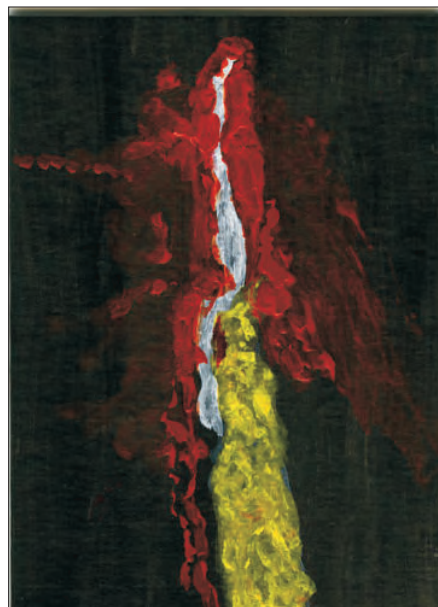
The lab occupied two rooms on the fourth floor of the Seaver Science Center. The larger room was tackled first. Vacuum systems were assembled and wood tables were retrieved from storage, fitted with cross-bracing, and topped with thick aluminum slabs obtained from a NASA surplus place. Each slab was bestowed with a matrix of drilled and tapped holes for securing optical components. No job was beneath me. There was a lot of work but little uncharted territory insofar as setting up experiments. Two systems were ready by late fall.

The smaller room contained two enormous CO₂ lasers that sat on a heavy-duty wood table that could have supported an aircraft carrier. The lasers spanned the length of the table and were replete with all sorts of bells and whistles, lest one overlook Walt's seminal contribution. Massive power supplies were affixed to a rack suspended from the ceiling. The whole thing was a sight to behold. Walt had agreed to let students from the Materials Science Department use the lasers to irradiate samples, and we inherited the fruits of his generosity. This soon became tedious, as these students knew nothing about the lasers and often broke them. And guess who got to fix them.

One of the Materials Science students once informed me that more power could be obtained by replacing the 60% reflecting output couplers with 100% transmitting windows. He pointed out that only 40% of the available power was being extracted. I am not making it up. That is how bad it was. As glorious as those lasers were, my group had no plans for their use. Research is not done with white elephants. Thus, I spent an entire weekend dismantling them single-handedly. On Monday morning there was nary a trace.

Three students were recruited in the first semester: Alan Petersen, Joe Tice, and Bob Quick. Three proposals were submitted and two were funded. By the second year the group comprised two postdocs and five students. Early projects were not overly ambitious. The idea was to launch working experiments quickly to motivate the group. By the third year there were three grants, more postdocs and students, and journal articles were rolling out.

Bill Steier provided a lot of support. He directed students my way and let me teach courses that could be handled, and from which benefit could be derived.



Rocket Launch
Robert Wittig

Part 2. After the Age of Thirty

Each year an upper division course on electromagnetism was taught, and in the other semester a course on quantum electronics, or something close to it, was taught. Bill Steier bet on me when no one else would, and for this I am forever grateful. His conclusion about the smog project differed little from mine.

Steve Leone joined the USC Chemistry Department in 1974 as an Assistant Professor. We had been across the hall from one another in Berkeley, me with Pimentel and Steve with Brad Moore. Steve went straight from graduate school to a faculty position without doing a postdoc. This was highly unusual, but then again Steve had been a quite atypical graduate student. Moreover, Steve's Ph.D. advisor, Brad Moore, had also gone straight from graduate school to a faculty position (Berkeley), and it had not exactly hurt his career.



Stephen R. Leone

Steve lived in Santa Monica not far from where Michele and I lived. Like us, he also jogged around Santa Monica, and there were social gatherings at our respective places. Steve pointed out that electronic-to-vibrational energy transfer almost certainly implanted excitation selectively into the CO_2 (101)/(021) Fermi diad. In other words, a population inversion could be created, inviting stimulated emission. My group was adept with lasers, so we decided it would make sense to submit a joint proposal.

Bob Lontz was a program officer in the Physics Division of the Army Research Office (ARO). He remembered me from his visit to Uncle Paul's lab a few months



Out on a Limb
Robert Wittig

prior to my departure. A white paper was sent to him explaining how a novel class of lasers based on electronic-to-vibrational energy transfer could be invented. He suggested we submit a full proposal, and he invited me to a workshop at which a number of likely suspects were giving talks in an effort to obtain funding.

Presentations included liberal use of a chalkboard. Finally it was my turn. Simon

Bauer from Cornell had just announced that population inversion would be forth-

Part 2. After the Age of Thirty

coming from some bizarre four-center reaction. I erased his stuff, told the audience it could not possibly work (which was true), and gave my talk. The idea was to get Lontz's attention and then present something that might not shake the earth, but was easily understood and would almost certainly work. At the end of the workshop, Lontz told me that we would be funded. Phone calls were made to Steve and Paul Christensen, the third member of our team. Celebration was in order, and nothing less than the best would do. Pizza and red wine were ordered.



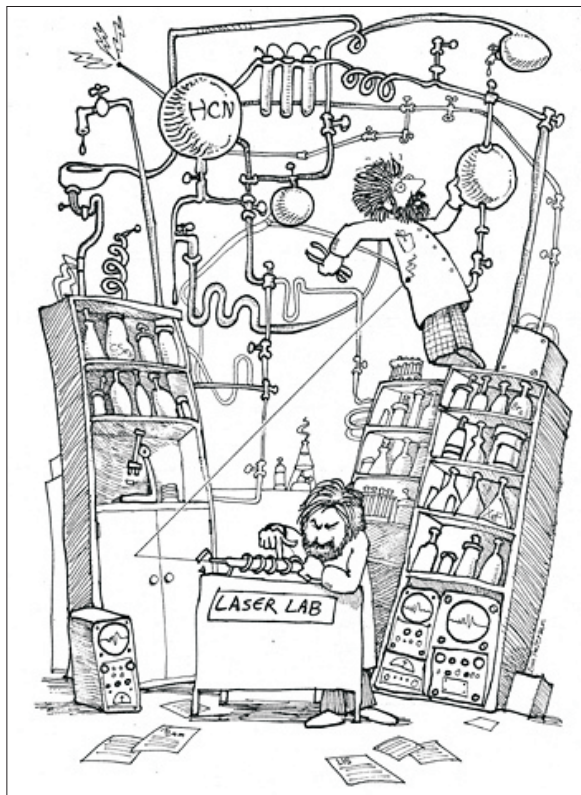
Part 2. After the Age of Thirty

Simon Bauer was born in Lithuania in 1911, and his family emigrated to the United States in 1921. He grew up and received all of his schooling in Chicago, which incidentally has the largest Lithuanian community outside Lithuania. He was a truly spirited individual. He probably forgot about my comment at Lontz's workshop, as we were good friends afterwards. Simon Bauer passed away in 2013 at the age of 101. He was strong until the end. He attended and spoke at a symposium in honor of his 100th birthday.

I gave a seminar at Duke University a few years ago. Bob Lontz had retired, but he kept in touch with several of his physicist friends at Duke. He was out of town during my visit, and we had not been in contact for over thirty years. He nonetheless passed something to me via his friends. The front-page headline of the Raleigh News and Observer was "Wittig Not Yet in the Clear." A local politician named Wittig had gotten nailed in a scandal. Or maybe Lontz had me pegged all along.

Alan Petersen was assigned the task of inventing lasers based on Steve's electronic-to-vibrational energy transfer idea. The premise was sound, and before long stimulated emission was obtained from many small molecules: CO_2 , N_2O , OCS , H_2O , HCN , C_2H_2 , and NO . A talented Physics graduate student, Akbar Hariri, was assigned the task of measuring rate coefficients and figuring out mechanisms for these and similar species, notably CS_2 . In the beginning, he was mystified at how a stopcock works, whereas he did not flinch at multipole expansion of charge distributions and calculations of energy transfer cross sections.

We worked assiduously on this stuff for several years. Steve then went to JILA, Paul Christensen went to NSF, and Alan and Akbar graduated. Akbar went on to an excellent scientific career, writing several textbooks that included topics such as lasers and optics.



This depiction of our lab was made by Alan Petersen's brother (ca. 1976). Alan once (accidentally) burned a hole in a lab door with the output of a CO_2 laser.

Part 2. After the Age of Thirty

Steve's departure was a major loss for the USC Chemistry Department. One had to be nine cents short of a dime to not realize he was a winner. Arthur Adamson was Chair of Chemistry, and if anyone was going to be oblivious it was Arthur. And I am being kind. He was stubborn, obstinate, and set in his ways. He was not a fan of quantum mechanics, uncomfortable with lasers and suspicious of anyone who used them, and convinced that the mathematics of complex variables was, in his words, an instrument of the devil.

About ten years later Arthur and I were seated next to one another at a lunch. He was disparaging quantum mechanics roundly because it could not explain spontaneous emission. I pointed out that everything falls into place when the electromagnetic field is quantized. Arthur got red in the face, which happened frequently in our discussions, and he told me in so many words that field quantization was rubbish, and I was spouting a lot of hot air. I went to my office after lunch, took out some class notes, and sent Arthur the appropriate derivation. He was livid. He claimed it was a trick, and he would have none of it. That is what it was like to deal with Arthur.



Hot Stuff
Robert Wittig

$16\text{-}\mu\text{m}$ spectral region, and the laser separation of uranium isotopes might be achieved via the strong ν_3 absorption of UF_6 in this region. It was not difficult to convince them we could invent lasers that operate in the $16\text{-}\mu\text{m}$ region. Funding at first came from Los Alamos. Later it was transferred to DOE headquarters in Germantown under the watch of two great guys, Kent Hancock and Walt Polansky.



Jean-Pierre Morand (on sabbatical leave from Bordeaux, late 70's) participated in our early picosecond-resolution experiments.

Early one morning in 1976 a person from Los Alamos phoned me at home, in fact waking me. Martin Gundersen had given them our phone number. He was interested in a 1969 paper about an electrically excited NH_3 laser. This was one of those papers that have no obvious value when published but could conceivably prove useful later. Finally awake, I asked him why they were interested in something so useless. He answered that the laser transitions lie in the $16\text{-}\mu\text{m}$

Part 2. After the Age of Thirty

Joe Tiee set up an optical pumping apparatus using a high-energy pulsed CO_2 laser. Banging away at candidate molecules yielded a few promising lasers. The one that drew the most attention was CF_4 . It could deliver high-energy pulses and was line tunable in the 16- μm region. Back then we were fearless when it came to brute force approaches. At one point, we considered having a cooled cell run the length of the fourth-floor hall, in which case the round trip distance would have been roughly fifty meters.

Instead, Joe set up an optical pumping arrangement in the lab. Cooling the cell was essential, as this lowered dramatically the population of the lower laser level. Joe cooled a pair of 3-meter glass cells to 77 K by pouring liquid nitrogen into glass jackets that surrounded the cells. Insulation was provided by a Styrofoam box and vermiculite filler. He achieved 70 mJ of 16- μm radiation and used it to photodissociate UF_6 . Joe was a phenomenon. If he could not make something work, you could rest assured, for all practical purposes, it could not be done.

Earlier we had introduced a two-color infrared approach to laser isotope separation. To demonstrate the effect, an optically pumped NH_3 laser excited SeF_6 with Se isotope selectivity. These tagged molecules were then dissociated via their absorption of many CO_2 laser photons, so-called infrared multiple photon dissociation (IRMPD). As you might imagine, the IRMPD of UF_6 using CF_4 laser radiation drew much more attention. At

one meeting, each slide was greeted by audible clicks from camera shutters. The noise was enough to be disruptive. There were invitations to labs in Moscow and we returned the favor. Notably, all of this came from a modest university effort surviving on a tiny fraction of the funding of our competitors. Joe Tiee graduated and took a job at Los Alamos, where he remained until his recent retirement.

Security issues loomed, centered around the fear that laser isotope separation might turn out to be easy, which remains a serious concern. In the late 1970's two Iraqi scientists entered the lab uninvited and began asking questions. One of the students came to my office and informed me of their presence. No time was wasted getting to the lab and asking them what was going on. These guys were somewhat unpleasant. They were shown the door, and they left without alterca-

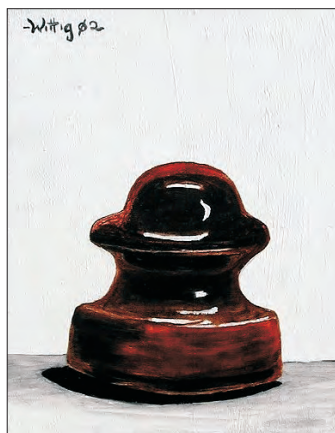


Joe Tiee: 1978 and 2014

Part 2. After the Age of Thirty

tion. In hindsight their names should have been obtained, either with or without their cooperation, and the authorities contacted.

By 1977 there were more students and postdocs, and many papers were being published. The group had impacted significantly the area of laser isotope separation. Specifically, we had invented the only laser capable of doing the job (CF_4), we had proposed and demonstrated the double resonance method of isotopically selective infrared excitation followed by IRMPD of the tagged molecules, and we were the first to demonstrate the IRMPD of UF_6 . We had carried out respectable work on several vibration-vibration and electronic-to-vibrational energy transfer processes, and with Steve Leone we had cornered the market on lasers pumped by electronic-to-vibrational energy transfer. My promotion to Associate Professor included a joint appointment in Physics. All was well. We had even survived the machinations of the *enfant terrible* of the Physics Department, the irascible Marc Levenson.



Seal of Approval
Robert Wittig

Hanna Reisler joined the group in 1977, arriving from Israel with her husband Emil and their young son Ron. Emil has served on the faculty of the UCLA Department of Chemistry and Biochemistry ever since. He is not only a first-rate scientist, but he had an exceptionally successful deanship. It is noteworthy that it was the faculty who judged him to be exceptional. Hanna was a Research Associate for one year, then held non-tenure-track positions of Research Assistant and Associate Professor in my group. This continued until 1987, at which time she became Associate Professor with tenure.



Hanna kept a tight schedule in the beginning, as her son was young. She arrived early, left a little after 4 p.m., and there were no wasted moves. Productivity was exceptional. Her first publication at USC was highlighted in Jim Yardley's book on energy transfer. One did not need a crystal ball to see her worth. Much will be said when we get to the 1980's.

By 1978 a trajectory had been set. The topics under study included: energy transfer between halogen atom spin-orbit states and molecular vibrations, vibrational energy transfer between small molecules (collisional) and within larger

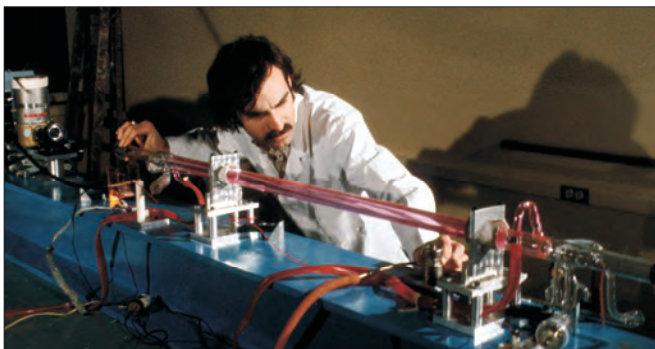
Part 2. After the Age of Thirty

molecules (IVR), infrared multiple photon excitation (IRMPE) and dissociation (IRMPD), unimolecular reactions, optical pumping of molecules, for example, as a means of creating population inversion, laser isotope separation, in particular the technique developed in our laboratory in which IRMPD is used to dissociate tagged molecules, and optical time-of-flight spectroscopy.

You might be getting the idea that life in the Wittig Group was all work and no play. This was not at all the case. There were many interesting gatherings in Santa Monica and nearby Venice with Paul Christensen, Len Braverman, Guy and Debbie Brown, and a collection of characters, the likes of which seem to have disappeared from the face of the earth. There were trips to Europe, weekends in San Francisco, camping and hiking in the Sierra Nevada Mountains, and other such adventures. Guitar lessons were taken at McCabe's Guitar Shop, and poems were written. Of course, there was also a lot of hard work.

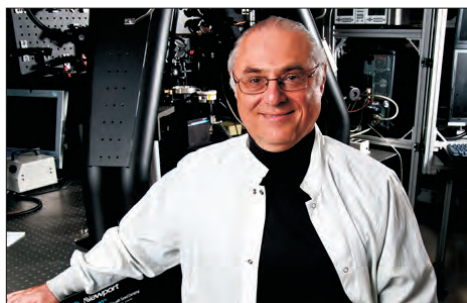


Deborah and Guy Brown ~ 1980



Clockwise starting from the left: Alan Petersen in the Wittig lab around 1975, Janis Stevenson with Curt and Michele Wittig on the Santa Monica Beach in 1978, Alan Petersen in 1978. Janis and Alan are married.

Part 2. After the Age of Thirty



Henry Helvajian: 1978 and 2013

Henry Helvajian, the group's undisputed night owl, had cornered the 9 p.m. to 9 a.m. shift. On one occasion he charged down the hall, pounded on my office door with great vigor, and loudly proclaimed some sort of victory. It was 3 a.m. Apparently he was ecstatic because he had achieved a major breakthrough in the lab. He knew full well that I would not be in my office at 3 a.m., but he did it anyway. The achievement was a pretty big deal, and excitement encourages people do interesting things.

You can imagine the look on Henry's face when he was told to enter. It is good to shock one's graduate students every so often. Henry went on to be a major player in applied physics. He never lost the enthusiasm and drive that he displayed as a graduate student.

Thomas Fischer was hands down the best basketball player ever to join the group. He was also an excellent engineer and quite a character. I owe a great deal to David Rockwell at Hughes Research Laboratories in Malibu, California for steering Thom our way and for helping him obtain a Hughes Fellowship. Thom had worked at Hughes for several years before returning to school to obtain the Ph.D. Incidentally, David Rockwell had been an undergraduate at the University of Illinois at Chicago (Navy Pier).



Thom Fischer: 1980 in St. Thomas, Virgin Islands, and in 2012 with wife Patty after a volleyball match in Cocoa Beach, Florida



Part 2. After the Age of Thirty

Thom would park his large motorcycle in the hall outside the lab for safekeeping. The freight elevator had the habit of failing every few months, in which case he would sleep in the small conference room at the end of the hall. Thom lived far away, and there was no reasonable way to get the motorcycle to the ground floor without the elevator.

The laser invention era was ending, and Thom was responsible for the last batch of optically-pumped lasers to emerge from the group, among them NSF. He understood this kind of research implicitly, routinely displaying the mature, high-level judgment one expects of well-established scientists. We were confident that oscillation near 16- μm could be achieved. However, NSF is not something one buys at the store. On a trip to Göttingen, Rüdiger Mews told me that making it was easy, assuming one starts with the right precursor. He sent some $\text{Hg}(\text{NSF}_2)_2$ to us. Making NSF indeed was easy, the laser worked as expected, and the results were published in a paper entitled *Optically Pumped NSF Molecular Laser*.

Before long the National Science Foundation informed me, rather indignantly, that we had no right to use the name of their agency to label some laser we invented. At the time, our NSF funding was from the Engineering Division. It took a few phone calls to explain that the NSF referred to in the paper is a molecule, not a government agency.

The group trajectory continued to lean more and more toward chemical and molecular physics. Momentum was gathering, with some experiments laying the groundwork for long-term, in-depth studies. During that time the group underwent its major transition from engineering to science. My promotion in 1979 to Professor included a joint appointment in Chemistry in addition to the one in Physics. By 1980 the new directions had acquired enough momentum in the areas of unimolecular reactions and reaction dynamics of small molecular systems to ensure decades of work. This section ends with a few examples, limited to thrusts initiated by 1982 that continued, in some cases for a decade or more.

Hanna participated in a number of projects and spearheaded many of them. An early one that stands out is the chemistry of C_2 in its ground $^1\Sigma$ and low-lying



Hydrocarbons
Robert Wittig

Part 2. After the Age of Thirty

³Π states. Hanna did her M.S. in organic chemistry, so carbenes were familiar, though never one as primitive as C₂. She and Metin Mangir carried out the work in 1979 and 1980. Metin was a talented postdoc who had earned his Ph.D. in Solid-State Physics under the direction of Bob Hellwarth. It was quite a switch, from solid-state to reactive scattering, but Metin made the transition deftly.

Metin left our group after a few years to assume a position at Hughes Research Laboratories in Malibu, California. It was a terrific fit, and he spent his entire career there. A few years ago Metin was honored as a Distinguished Alumnus of our Department.

The reaction: C₂ + NO → CN + CO is a textbook example of a system that passes through a four-center configuration on the way to electronically excited products.

We knew at the outset that the entrance channel does not involve direct formation of a four-center arrangement. Rather, an intermediate is formed in which the nitrogen is bonded to a carbon, with oxygen protruding outward. The large enthalpy release upon the formation of this intermediate provides ample nuclear motion to access the four-center arrangement. This work resulted in many publications and review articles. It was prescient. It engendered new projects and directions, from diabatic and adiabatic correlations, to internal conversion and intersystem crossing, and years later to work on conical intersections.



Bridging the Gap
Robert Wittig



Bob Quick
USC 1977
Los Alamos
2014

Bob Quick was a superb handball and racquetball player. It was Bob who came up with the artistic depiction of our lab (a half dozen pages back) drawn by Alan

Part 2. After the Age of Thirty

Petersen's brother. Bob carried out meticulous, seminal studies of photoinitiated unimolecular decay via tight transition states. Following Bob's exhaustive work on the IRMPD of fluorinated ethanes and ethenes, we advanced to C_2H_3CN , with state resolution of C_2 and CN products. Jim Campbell initiated this work. He imported a great deal of technical expertise that he had acquired as a postdoc in Karl Welge's group. This work set the stage for the C_2 studies mentioned above.

The C_2H_3CN system was interesting, but way too complicated. The C_2 and CN products were the result of sequential photodissociation steps, each proceeding via IRMPD. Sadly, Jim succumbed to AIDS several years after leaving the group.

The jewel in the crown of the studies of unimolecular reactions brought about by IRMPD was CF_3CN , again with state resolution of the CN product. Hanna spearheaded this. It involved extensive experimentation on our part and collaborations with a USC computational trio: Everitt Thiele, Jim Stone, and Myron Goodman, and also the group of Gus Hancock at Oxford. Myron is now a major player in Molecular Biology at USC. It was during this time that we began to look at the physics that underlies statistical theories of molecular dissociation. We had no idea that this was the start of a decades-long odyssey into chaos, quantum statistics, and so on.

Our first sabbaticals were in spring 1981, with Michele at Boston University and me at Harvard. Dudley Herschbach was a gracious host. He is a warm individual who happens to be unbelievably smart and inspirational. One always walked away full of enthusiasm and optimism regardless of the topic. Dudley was awarded the 1986 Nobel Prize in Chemistry for his role in the development of the field of molecular reaction dynamics, notably the molecular beams technique.



Dudley Herschbach (Google Images)

We lived in a charming bungalow at 1000 Memorial Drive. It was adjacent to the Charles River, which ensured that there would be a great deal of jogging along the Charles. We found Cambridge Massachusetts every bit as delightful as Cambridge England, despite the differences between them.

At the outset, what actually happened on sabbaticals was a mystery. Stories about people using the time frivolously and retiring in place afterwards were terrifying. This first sabbatical taught me that a strong work ethic combined with long stretches of uninterrupted time could improve one's research qualitatively, as opposed, for example, to simply turning out more papers.

Part 2. After the Age of Thirty

My time in Electrical Engineering was over. The Department had treated me well. Nonetheless, there was no viable future without a significant change of research direction, which was not going to happen. After short discussions with the Provost (Neal Pings), the Dean of Natural Sciences and Mathematics (Bill Wagner), and the Chair of the Chemistry Department (Jerry Segal) my appointment was transferred in early 1982 from the School of Engineering to the Division of Natural Sciences and Mathematics. Bill Steier was understandably upset. This should have been handled with appropriate sensitivity and a lot more intelligently on my part. The same endpoint could have been reached with less turbulence. It is interesting that my last student from Electrical Engineering, Delroy Baugh, is on the Chemistry Faculty at UCLA.



Sculpture: Getting a Grip on Things
Robert Wittig

Early Group Photos



From the left:
Bob Quick,
Michele and Curt Wittig,
Joe Tiee holding his niece,
Ming-Hsing Yu
This was a graduation party
for Bob and Joe (1978).

Part 2. After the Age of Thirty



Rear from left: Henry Helvajian, Joe Tiew, Anita Renlund, Bob Quick, Thom Fischer, Curt Wittig, and Metin Mangir. Front from left: Martin Levy, Tom Watson, Julio Caballero, and Hanna Reisler.



International Photochemistry Conference, University of Maryland, 1983. Rear from left: Anita Renlund, Bob Quick, Hanna Reisler. Front from left: Henry Helvajian, Joe Tiew, Israel Nadler. (Photo by Gouri Radhakrishnan)

Coincidence

Zohrab Kaprielian was a legendary builder and leader. His vision and commitment set the stage, starting around 1960, for many of the dramatic advances that ensued, particularly in Engineering and the Physical Sciences. He was testimony to the fact that dedicated administrators bring about positive change, not those whose main goal is their next administrative post. He was Dean of Engineering in 1981 when he died of a massive heart attack at the age of fifty-eight. A senior faculty member in the School of Engineering, Melvin Gerstein, served as Interim Dean. Somehow he knew George Pimentel.



Zohrab Kaprielian

Mel mentioned in passing one afternoon that he had grown up in Chicago. His family had lived in the Humboldt Park section, and he had attended the Salmon P. Chase Elementary School. The area was nice when he was young, but it took a dive: drugs, murders, assaults, and a lot of crime in general. His family got out and none too soon. I asked Mel what one saw on the left side of the school when facing its front. Stunned, he thought for a while and responded that there was a low, flat-roofed section. Rolling up my shirtsleeve revealed an old six-inch-long scar, including many stitches. The injury had resulted from falling on the sharp edge of the cyclone fence that surrounded the steps to the flat roof. I had been scaling the fence to retrieve a ball from the roof.

Saint Georges Court was two blocks from the Salmon P. Chase Elementary School. You could have heard a pin drop.



Chase School (2013): (left) low, flat-roof section to left of main building; (right) The cyclone fence that surrounds the stairway has been covered with sheet metal to discourage climbing to the roof. The building in the rear is new.

The Middle Period

William G. Wagner earned a Ph.D. in Theoretical Physics at Caltech in 1962 under the supervision of Murray Gell-Mann, who was awarded the 1969 Nobel Prize in Physics for his work on elementary particles. When it comes to the brains department, Bill runs with a fast crowd.

Bill Wagner was Dean of Natural Sciences and Mathematics at USC in the early 1980's. He is extremely intelligent, not afraid to think outside the box, and the antithesis of a bean counter. This set him apart from other USC administrators of his era, as well as later ones. Born with cerebral palsy, he walked with an unsteady gait and writing was not easy. None of this could hold him back. He was and remains determined and tough. I have seen him give a one-hour Physics Department seminar without notes or props, just the board. He introduced radical changes that were applauded by research-active faculty and disliked by the upper administration. He foresaw the important role that neuroscience would play well before it was the vogue.

On one occasion he and his wife got together with Michele and me in Paris, and we had dinner at a fancy restaurant. The skies opened and it began to pour as soon as we walked out of the restaurant, and we had no umbrella. Bill suggested we make a run for it, so we took off down the street, heading for our place on the Left Bank. He held his own. People like Bill Wagner are not a dime a dozen.



Turning the Corner
Robert Wittig

The transfer of my appointment from Electrical Engineering to Natural Sciences and Mathematics resulted in a main appointment in Chemistry and a secondary appointment in Physics. Neal Pings was Provost. He assured me early on that the transfer would not require moving or contracting my labs, which were extensive. This was nontrivial, as boundaries between Engineering and Natural Sciences and Mathematics were constantly being contested.

Dean Wagner offered the option of Chemistry or Physics for the main appointment, at one point asking what it would take for me to agree to Chair the Physics

Department. My spontaneous response: "a high fever for a prolonged period" confirmed his good sense of humor. The guys in Chemistry were more personable than the guys in Physics, and the subfield of chemical physics was based in chemistry departments in the United States, whereas it was nearly always based in physics departments in Europe.

Before making a final decision, I obtained texts for chemistry courses on three topics: quantum mechanics, statistical mechanics, and organic chemistry. A fair amount of time was spent reading these books. Quantum and statistical mechanics were easy, as had been expected. On the other hand, organic chemistry seemed impossible. The field's value and underlying strategy were clear enough, but what seemed like an endless string of unjustified assumptions and models were hard to swallow. This was strictly my problem.

Physical Chemistry was deemed appropriate, so my lot was cast there. I went to see Jerry Segal, who was Chair of Chemistry at the time. He wasted no time. He cleared it with Wagner and called a special Department meeting. The appointment was handled deftly and professionally by Jerry, and it sailed through. The time elapsed from my visit to Jerry's office to the Provost's signature was unbelievably short, about six weeks as I recall. This begins what shall be called the middle period, which ends with my chairmanship of the Chemistry Department.

The NCNO Era

By the early 1980's experimental and theoretical studies of unimolecular reactions at the state-to-state level had become fashionable and had achieved a respectable level of sophistication. Our entry ticket, CF_3CN , had served us well as a starter project. However, it presented too many obstacles to justify its continuation. It gave way to the work on NCNO discussed below.

The photoinitiated unimolecular decomposition of NCNO is a textbook example of a system that behaves according to statistical mechanics when subjected to the highest level of state-to-state scrutiny. This work had an interesting inception. We were finishing the CF_3CN experiments, with nascent CN detected using laser-induced fluorescence (LIF). Energy in excess of reaction threshold was known only roughly; none of the CF_3 internal excitations could be measured; and there were other limitations, not the least of which was a spatially inhomogeneous CF_3CN internal energy distribution. This inhomogeneity arose from the CO_2 laser beam's unruly spatial distribution. Namely, the local intensity of the radiation field dictated how many photons a molecule would absorb on average prior to its dissociation. This inhomogeneity was included in the mathematical model, but the

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needed parameters could only be obtained through educated guesses, which was not satisfying.

John Light and his brilliant graduate student Phil Pechukas had developed a phase space theory that was applicable to barrierless unimolecular reactions. It was straightforward and germane to our work. I explained its underlying physical basis and mathematical development to the students on the project, and it did not take long for them to write a program that enabled computer experiments to be carried out. These led us to conclude that an excellent experimental benchmark would be a stable molecule that undergoes internal conversion following the absorption of a single photon, and decomposes into two small radical fragments, each of which could be detected state selectively. It would also be nice if the fragments have comparable masses and rotational constants. Such a system would enable detailed comparisons to be carried out between a broad range of experimental observables and a theory based on an ansatz of chaotic dynamics among nuclear degrees of freedom, namely, the phase space theory.

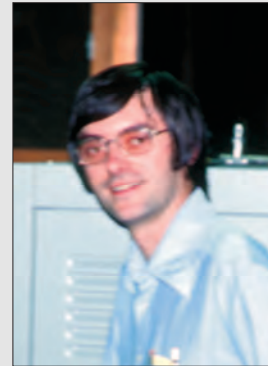
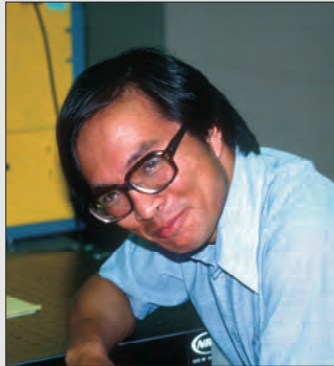
A few candidate systems were discussed, and it was Hanna who came up with NCNO. Unfortunately, it had a serious downside. It is toxic and explosive. A person named Joe Pfab had published a paper on its photophysics. We were skeptical of his interpretation. However, he was quite skilled at making molecules, and he stated that NCNO is to be treated with utmost respect during its synthesis. This curbed our enthusiasm.

It certainly pays to be lucky. There was a large conference in Munich and Joe's name was on the list of attendees. We had never met, and there was no Internet back then, so something as trivial as finding him had proven challenging. On a trolley headed toward the city center, the person standing next to me (also apparently one of the conference attendees from the looks of the badge appended to his shirt) dropped a piece of paper without noticing. When I picked it up and returned it to him, the name on his badge came into view: Joe Pfab.



Meeting
Robert Wittig

Part 2. After the Age of Thirty



Top row: Hanna Reisler and Israel Niv (1984), Israel receiving our Department's 2005 Distinguished Alumnus Award (2003)

Middle row: Charles Xiao-Wu Qian, Ming-Hsing Yu, and James Campbell

Bottom row: Marcus Noble (1985), Marcus Noble (2013)

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There was no sense in beating around the bush. He was asked on the spot if he would like to discuss NCNO, perhaps collaborate, and even come to Los Angeles to participate in experiments. This of course took him by surprise. In addition to the abruptness and novelty of our meeting, my hair was long and my clothing less conservative than now. Nonetheless, everything fell into place. Travel and housing were arranged, and a vacuum line was set up in anticipation of the synthesis.

Joe Pfab was an inorganic chemist from Heriot-Watt University in Scotland with leanings toward physical chemistry and photochemistry. He arrived ready to go. Unsure of our facilities, he brought with him a lab coat and some glass pieces, just in case. He taught us how to prepare NCNO, and he participated in the first experiments together with Hanna and two postdocs: Gouri Radhakrishnan and Israel Nadler.

Gouri had earned her Ph.D. with Ron Estler at USC. Israel was a Weizmann Fellow from the group of Zamik Rosenwaks at Ben-Gurion University. Later he changed his surname to Niv. He is an extraordinary entrepreneur and nice guy. Our Department has honored him as one of its Distinguished Alumni. It is interesting that his daughter Sharon, who was born when Israel was a postdoc with us, just received her Ph.D. in Psychology at USC. Joe later told us it was all great fun, but we work entirely too hard. He explained to us how life in Scotland is different.

It was impossible to go wrong. Experimental results poured out of the machine, calculations were carried out, and our understanding progressed in concert. Joe's presence was intermittent, a month or so at a time, and Gouri moved on to study photoinitiated reactions in complexes. Steady state was maintained nonetheless, as a new postdoc, Marcus Noble, joined the project. Charles Qian was a new



Water Under the Bridge
Robert Wittig

Part 2. After the Age of Thirty

graduate student who signed on shortly thereafter. Results continued to accrue at a phenomenal rate.

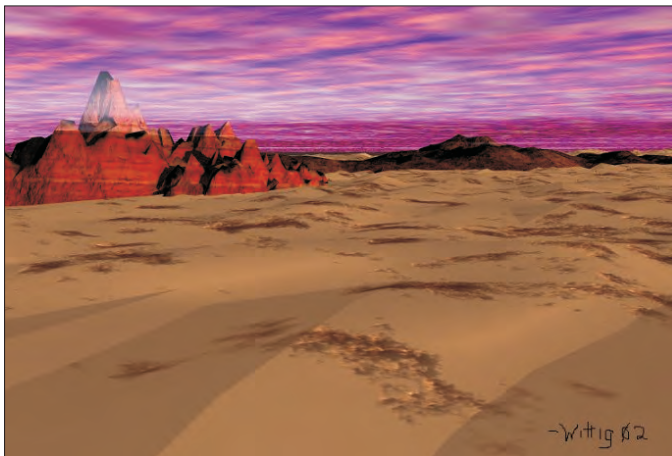
There is an amusing story about how Charles Qian came to be a graduate student in the Physics Department at USC. He was completing an M.S. in Physics at CSUN, where Michele taught. One of Michele's colleagues, Alice Hawkins, rented rooms to students at a minimal rate. Alice was not in it for money. She had a big heart and liked to help students, and Charles happened to be one of them. He got my name via Alice and Michele, and he contacted me. One look at his record plus a few phone calls sufficed. The guy was first-rate. The file was sent immediately to John Nodvik, who was in charge of accepting Physics graduate students.

John was a pleasant enough guy, but he was unbelievably suspicious. If something positive came his way, it had to be a trick. He refused to accept Charles. The reason he gave was that Charles would have to be a teaching assistant and his English was bad. It was pointed out that Charles spoke English quite well. Indeed, we had spoken at length, and besides, he would be on a research assistantship. John was not buying it. Surely this was a trick of some sort that would land him in an awkward position and victimize the Physics Department. Had John's perceptive skills been taxed he would have gotten a rebate.

Charles was phoned and invited to campus, as I was annoyed and not about to take no for an answer. When he arrived we went straight to John's office, where they spoke for about ten minutes. After Charles left, John told me that of course Charles would be accepted. There was no question about it: a talented student, and his English is great. You would think it was John's idea all along from the way he was prancing about. Anyway, Charles joined my group and proved to be stellar, eventually receiving an award given each year for best Ph.D. thesis in the Natural Sciences and Mathematics.

The body of work on NCNO constitutes an impressive package. It is featured in the book by Tomas

Baer and Bill Hase, *Unimolecular Reaction Dynamics: Theory and Experiments*, and in a large number of review articles. One particularly exciting discovery



Laser Sky
Robert Wittig

comes to mind. A dye laser was being used to excite expansion-cooled NCNO. Internal conversion yielded vibrationally excited NCNO that underwent unimolecular decomposition. A second dye laser was used to record an LIF spectrum of the nascent CN. As the energy above D_0 was lowered, the CN rotational distribution became progressively colder. It eventually became so cold that the $N=0$ rotational level contained $> 95\%$ of the population. The system was barely above threshold. A couple of wavenumbers lower and the signal disappeared completely. This was an unmistakable signature of barrierless unimolecular reaction. You should have heard the yelling and hollering that afternoon.

Eventually product state distributions for both CN and NO were obtained from threshold to 4270 cm^{-1} above threshold, and correlated distributions were obtained, as well. The results were fitted using statistical theory, including a model developed by us.

An interesting feature involves so-called roaming. In a classical picture, suppose a bond is elongated to the point where the system looks like two fragments barely held together. This would apply at energies just below and just above the threshold for a barrierless reaction, the former being a frustrated reaction. Just above threshold, the incipient fragments have freedom to roam. In the case of NCNO, the fact that most of the CN and NO products are formed in their ground rotational levels is reconciled if they rotate rather freely relative to one another. Reaction threshold permits only $J = 0$ diatoms, which are spatially isotropic, to pass into the product space. This is an example of roaming.

Photoinitiated Reactions in Weakly-Bound Complexes

Another intellectually stimulating and highly productive area was photoinitiated reactions in weakly-bound complexes. Steve Buelow joined us following his Ph.D. with Dudley Herschbach. He set out to examine an SN2 reaction, but ran into difficulty with interference from halogen ion pair states. Steve was a brilliant experimentalist. I doubt this has changed. He had spent many months setting up an arrangement in which VUV spectra were recorded using phase matched third harmonic generation, only to have his efforts spent in vain. Undaunted by so much hard work for naught, he suggested that other reactions might work, a consolation prize so to speak.

Over the years we had acquired a great deal of experience with LIF, and OH was one of the easiest species to detect using LIF. The gas phase reaction $\text{H} + \text{CO}_2 \rightarrow \text{OH} + \text{CO}$ had been studied by a number of groups, so its choice was a no-brainer. The first weakly bound complex on our list was $\text{CO}_2\text{-HBr}$. The idea was

that HBr photodissociation would propel the hydrogen atom toward CO₂, thereby initiating reaction.

An important aspect of the environment presented by the complex is that the range of H + CO₂ impact parameters is determined by the zero-point amplitudes of the intermolecular modes. Contrast this, for example, to a molecular beam experiment, where all impact parameters are present. There are other important aspects as well, as discussed below. It was not long before Steve, Gouri, and Joe Catanzarite had results.

Our first paper on photoinitiated reactions in weakly bound complexes was published in 1985 as a JCP Communication, followed by a full paper in JCP a few months later. Benoit Soep wrote to me and pointed out that we were not as original as we had believed. His group in Orsay had photoinitiated reactions in binary complexes by electronically exciting one of the complexed species. We were, however, the first to use



Clustering Near the Tracks
Robert Wittig

the restricted environment afforded by van der Waals precursors to impose entrance channel specificity on reactions that transpire via ground potential surfaces. These are akin to counterpart gas phase radical-molecule reactions, making them very attractive indeed.

The work was well received, and it provided many opportunities. For example, the H + CO₂ reaction proceeds via the vibrationally excited HOCO[†] intermediate, so it would be possible to measure the HOCO[†] unimolecular decomposition rate by monitoring OH while varying the pump-probe delay. A proposal was sent to Dick Miller at ONR requesting funds for a subpicosecond laser. He declined the proposal for some reason that made no sense. Regardless, many papers accrued using H(D)I and H(D)Br complexed with CO₂, N₂O, and OCS. The time-resolved experiments were not forgotten, but they would have to wait.

Dick Bernstein visited us a year or so after our first papers. He was on the UCLA Department of Chemistry faculty at the time, but he had teamed up with Ahmed Zewail at Caltech, who was engaged in photodissociation studies using short laser pulses. He was interested in every detail of our work on photoinitiated reactions in weakly bound complexes.

Dick was an incredibly focused person in general and, figuratively speaking, he was on steroids that day. Notes were taken and no stone was left unturned. Shortly thereafter, the Zewail group and Dick Bernstein combined our strategy of using weakly bound complexes as precursors with their short pulse expertise. This resulted in their 1987 publication reporting the rate for $\text{HOCO}^\ddagger \rightarrow \text{OH} + \text{CO}$: the so-called birth of a molecule. In 1990 they reported rates for a range of photon energies. The femtosecond stuff caught on and became a big deal. Ahmed Zewail was awarded the 1999 Nobel Prize in Chemistry for pioneering work in this area.

The geometric structures of the $\text{CO}_2\text{-HX}$ complexes were unknown when the photoinitiated studies began. During the period 1990-1992 we established these and many other zero-point averaged structures using infrared diode laser spectroscopy. This was a joint effort with a microwave spectroscopist in our department, Bob Beaudet. The resolution of our diode laser, 10^{-4} cm^{-1} , was low by microwave standards but adequate for obtaining geometries of small binary complexes. Steve Sharpe had received his Ph.D. with Phil Johnson. He was a postdoc with us for several years, during which time he oversaw the diode laser spectroscopy of a large number of weakly bound complexes. He was central to the project's success.

Something had been unsettling from the outset about the Zewail group's HOCO^\ddagger decomposition rates. They were too small. We knew how to use and interpret statistical theories such as RRKM, as well as what physics underlies them, and we believed that such small rates could not be reconciled. Dick Bernstein argued that the system was therefore non-RRKM, which was hard to buy. Consequently, we measured the HOCO^\ddagger decomposition rates with excruciating care and found that they agreed with RRKM theory. My guess is that the Zewail group's measurements included contributions from higher-than-binary clusters.

This was the first in a series of studies carried out in our lab (1992-1997) of reaction rates of hydrogen atoms with small molecules using binary complexes as precursors. Our best-ever time resolution was 150 fs. This is unimpressive by today's standards, but it was the mid-1990's, and the experiments required two independently tunable ultraviolet pulses, each with respectable energy. The students and postdocs who carried out the work on photoinitiated reactions in complexes were stellar. The work received recognition through the Broida Prize (1993), the Bourke Medal and Lectures (2000), and a few other named lectureships.

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Center for the Study of Fast Transient Processes

The Army Research Office (ARO) announced in 1986 that it would fund one or more university-based centers to carry out basic research on chemical and physical processes germane to energetic materials. That sounded attractive. We were already working on elementary bimolecular and unimolecular reactions, and adapting our efforts to the chemistry of energetic materials required only modest imagination. I suggested to Bob Beudet that a proposal should be submitted, and he said he would be happy to participate. A team was put together composed of Bob, Hanna, Jerry Segal, who was on sabbatical in Paris at the time, and me.

The proposal was submitted, and we survived the first triage. Amazingly, we survived the second round of filtering as well. The two finalists were Berkeley and USC. Each team would host a site visit. The Berkeley group was loaded with heavy hitters. For example, Yuan Lee won the Nobel Prize that year, and they were not short of National Academy members. Our strategy was centered on organization and minimal hype. We hoped that two awards would be made. A team from ARO



Red Books
Robert Wittig

and a few other defense agencies arrived, and we presented our proposed program. It was choreographed like you would not believe.

A couple of months passed, and we were informed that we would receive the sole center grant. This was unbelievable. Later, we were told it helped greatly that our proposal was cohesive. There was no question about how the various projects related to one another, whereas the Berkeley proposal was of high quality, but the projects were relatively disjoint. Of course our proposal was cohesive. One person wrote it.

The grant lasted six years, after which time there was a competition for another such grant. Again, it boiled down to us versus Berkeley, and again we pulled it off. This time we wound up partnered with a mechanical engineering group at Penn State. However, there was too much distance between chemical physics and

mechanical engineering for meaningful collaboration to reach threshold, so these efforts in the end were carried out separately. The person at ARO in charge of our center for all eleven years was Bob Shaw. He is very smart and an eminently decent guy, the most intellectual individual I have ever encountered in a funding agency.

Faculty Development

It was early 1987 when Hanna told me it was time for her to move on. She had been in the group ten years, and her research had gone well. Unencumbered by teaching, committees, and other faculty duties, she had amassed an excellent research portfolio. She is also exceptionally talented.

Options were discussed. I suggested a full-court press to land her a faculty position in the USC Chemistry Department. Hanna thought it would be great but had the chance of a snowball in hell. It was certainly without precedent in the USC Chemistry Department. This did not strike me as a big deal, however, as many good things were without precedent in the Department back then. Anyway it was time for some excitement.

It is good to think outside the box every once in a while. My best achievements in life often have involved goals that have been considered risky by me and long shots or worse by others.

A number of people thought my mind had gone soft and were not shy about saying so. The project was launched nonetheless. Each faculty member was visited and given an explanation of the benefits that would accrue. Some were supportive, most were bewildered, and a few were dead-set against it. Going from office to office took several weeks, and for the most part it was a drag. It was, however, effective.

Years earlier my decision to join the Chemistry Department had been made despite the presence of Arthur Adamson on its faculty. And now the impossible was at hand: trying to convince Arthur to support something that sounded like physics, which he hated. My efforts with Arthur and a couple of others were to no avail, but we pushed forward. We had the support of George Olah and the Chair,



Bird Outside the Box
Robert Wittig

Part 2. After the Age of Thirty

Bill Weber, which ensured a good shot at the goal. The complete story would make an interesting novel. What follows are a few memorable items.

Hanna also spoke separately to each faculty member, and in due course she presented a departmental seminar. Progress was being made. She then went to see Robert Douglas, Dean of Natural Sciences and Mathematics. He had been appraised of the situation, so he knew it was coming. He set a record that stands to this day for just how unpleasant a Dean can be. At one point, I phoned Bill Spitzer, who was Dean of the College of Letters, Arts, and Sciences, namely, the top Dean in the College. We had known each other for many years. He was from Electrical Engineering and Physics, and he had carried out important work in semiconductor physics. It was suggested that if he did not intervene there would be a fight the likes of which he did not wish to experience. There would be no safe distance. I believed that Bill Spitzer deserved a "heads-up."

A few years later, as head of our Graduate Recruitment Committee, it was my duty to present to the Dean a plan whose goal was qualitative improvement in our recruitment of graduate students. A key ingredient was a departmental brochure. The total cost for 500 copies of a seventy-two-page color brochure that would catapult us past our competition came to roughly 10 k\$. Dean Douglas refused to pay for such a luxury. His department did not have a fancy brochure, and I could not prove it would work.

Great effort had been made to minimize cost. For example, an excellent local photographer, Tom Randolph, had been enlisted for a modest fee. Regardless, nothing I could say or do was about to curry favor. There was no sense arguing, and begging is not my style. The cost was borne by yours truly. The end of the season brought major success. Qualitative improvement had been achieved. When the results were presented to Dean Douglas, his overt display of anger left our Chair, Otto Schnepf, in shock. It is sad when a person in authority loses sight of their responsibilities and plays petty games that jerk people around. Everyone suffers. Many of the Dean's shortcomings could have been forgiven, but not the meanness.

Still operating outside the box, I offered Hanna a third of my lab, including ongoing experiments – lock, stock, and barrel, so to speak. Among other things, this obviated the need for set-up funds. My belief was that Douglas would have turned down any request for set-up funds, thereby taking the appointment off the table. Despite my capacity to bungle things, considerable energy can be focused on a goal, particularly if sufficiently pissed off. On one occasion there was a discussion with Hanna and her husband Emil of the likelihood of the appointment going through. Hanna gave it a ten percent chance of success. I turned to Emil and

Part 2. After the Age of Thirty

stated emphatically that he would not see me killing myself for a measly ten percent. It was fifty percent at a bare minimum.

A faculty meeting was called at which the Chemistry Department voted on an appointment at the level of Associate Professor with tenure. The tally was seventeen in favor and four against. Of the four against, one was in favor of an appointment at the level of Associate Professor, but suggested delaying tenure to ensure smooth sailing through higher committees. Thus, it was eighteen to three in favor of Hanna's appointment.

The file went to Dean Spitzer, who signed off on it and sent it to the Provost's Office, where it was approved. Two labs were cleared on the sixth floor with the cooperation of Bob Beaudet, Larry Dalton, and John Aklonis. A student with an NSF Fellowship (Amy Ogai) and a postdoc (Julian de Juan, Ph.D. with Ian Smith) moved upstairs. My group had two NSF grants, and a call was made to NSF asking permission for one of the grants to be used by Hanna, who would apply for its renewal. NSF agreed. She was added as a full participant to the ARO Center grant and as co-PI to an AFOSR grant. By the time the fall semester started, experiments in her labs were ongoing.

The rest is history. Today, Hanna Reisler is one of the most important faculty members in the College of Letters, Arts, and Sciences, if not the entire University. After a few years, Bob Douglas was no longer a Dean, and Steve Sample was the new President of USC. The University has been doing significantly better ever since.

This was quite an episode. It gave me great satisfaction then, and it continues to do so. It was a turning point on many levels: a first in engineering anything of this nature or magnitude, with a pronounced and lasting affect on subsequent interactions within the Department and with the Administration. Hanna and I learned a lot. For example, the experience



Copse
Robert Wittig

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proved invaluable when we each served as Department Chair some years later. Good understanding of our colleagues had been acquired, and we were not naïve about the institution that paid our salaries. In my forty-one years on the USC faculty, beyond any shadow of a doubt, this is my best contribution to the institution, and in particular to the Chemistry Department.

The Center for the Study of Fast Transient Processes ran from 1986 to 1997. It resulted in many good things happening in the Department, and especially in Physical Chemistry. Graduate student recruitment took off, was maintained, and continues to do well. Excellent faculty members were hired: Chi Mak and Bruce Koel. It is interesting that, despite the money, which was substantial in the beginning, the Center did not improve my research. The role of Director carried with it too much administration, and time marches forward never to be retrieved. I regard it as a service to my colleagues and the Department.

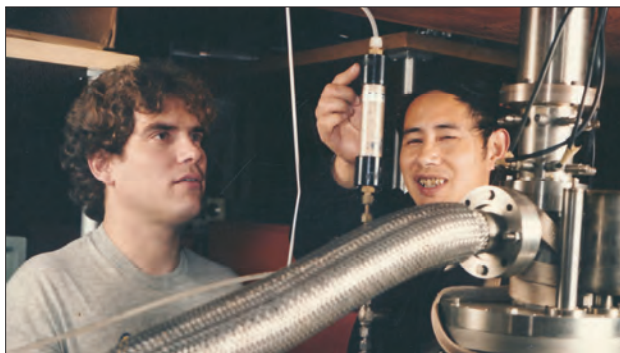
Throughout this period, little time was set aside for exercise, and my habit of nervous eating when under stress took over. My weight skyrocketed. In 1997 this was reversed. Seventy pounds came off, and my weight has remained stable to this day. Keeping my weight down is a life sentence.

Jerry Segal became Dean of the College of Letters, Arts, and Sciences in 1989. He was a great Dean who labored under a do-nothing upper administration. Not long after he assumed the deanship, he told me that I would receive an endowed chair: the Paul A. Miller Professor of Letters, Arts, and Sciences. This was delightful and took me completely by surprise. There was even a fancy dinner at which the honor was bestowed. Sitting next to me at the table was a guy named Pat Haden. It turned out he had played football at USC and was quite good at it. My ignorance of this was amusing, albeit understandable, never having gone to a football game in my life, except once in Chicago. Pat had been a Rhodes Scholar at Oxford, so at least we had something to talk about.

In the mid-1990's a major university asked me to consider moving. I had been approached by universities a half dozen times before then, but had declined their overtures without informing USC. This time USC heard about it early on, and chose to act pre-emptively. My agreement to stay was premised on the condition that Physical Chemistry would grow, though not at the expense of the rest of the Department. This resulted in more outstanding hires: Steve Bradforth, Anna Krylov, Peter Qin, and Andrey Vilesov, again improving the Department, this time qualitatively. Now back to research.

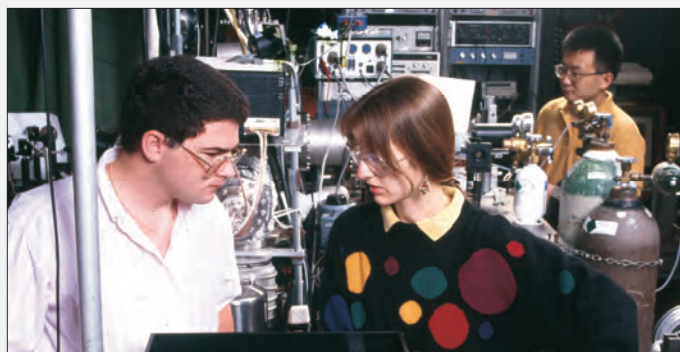
Project Overviews

Brent Koplitz received his Ph.D. from Princeton in 1985 and then joined us as a postdoc. In addition to being intelligent, organized, and having excellent hands, he was the gold standard when it came to attitude, helpfulness, and inspiring students. Brent and a graduate student, Zhude Xu, carried out studies of photodissociation dynamics using hydrogen atom detection,



Brent Koplitz and Zhude Xu (1987)

and velocity-aligned Doppler spectroscopy was developed. This set the stage for the Rydberg-tagging studies that were carried out in our lab a few years later. Brent joined the Tulane Chemistry Department faculty in 1988. He has served as Chair, guiding his Department through the nightmarish Hurricane Katrina period. Brent was honored recently as one of our Department's Distinguished Alumni.



Clockwise from top left:
Mike Dulligan, Ellen
Böhmer, Ye Wen, Jing-
song Zhang, Christoph
Riehn, Floyd Davis, Lin-
da Valachovic

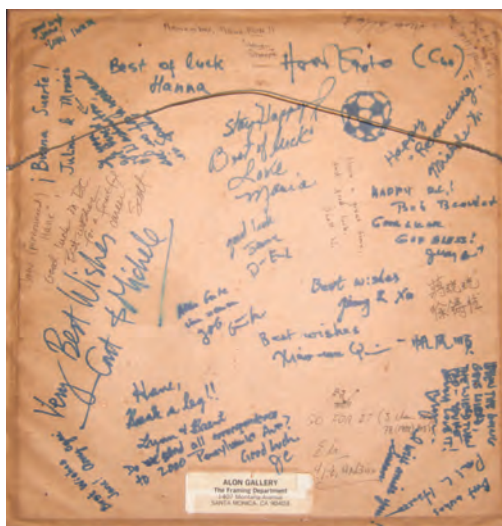
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Jingsong Zhang arrived from Yuan Lee's lab in 1993. A talented postdoc in our group, Floyd Davis, deserves thanks for helping us land Jingsong. The team of Jingsong, Christoph Riehn, and Mike Dulligan could perform miracles. They took the Rydberg method to new heights: coherent rephasing of alignment, brought about through hyperfine interaction; double resonance studies of C_2H_2 photodissociation in which product branching is altered dramatically as a result of C_2H_2 vibrational excitation; the 193 nm photodissociation of HF molecules prepared in $v=3$ using a parametric oscillator; and even studies of the hydrogen atom of unimolecular reactions, formaldehyde. Jingsong left in 1996 to join the faculty at UC Riverside, where is Professor of Chemistry and runs a first-rate research group.



Gathering at home of Curt and Michele Wittig (1987): Above: Günter Hoffmann, Monica and Julian De Juan, Brent Koplitz, Jane Rice, James Horwitz, Harry Kroto.

Jane Rice (postdoc 86-87, leaving for a position at the Naval Research Laboratory) was guest of honor. She received an original lithograph created by a friend in England, Dorothy Bordass. Tradition was to sign and write comments on the back. Contributors: Curt and Michele Wittig, Scott Powers, Hanna Reisler, Steve Sharpe, Harry Kroto, Susan Callister, Bob and Judy Beaudet, Scott Nicololaisen, Delroy Baugh, Günter Hoffmann, Lynn and Brent Koplitz, Eli Kolodney, Paul Houston, Xiao-wu (Charles) Qian, Bryan and Susan Kohler, Julian and Monica de Juan, Zhude Xu and Jiang, Maria, Julio Caballero, Jenny Bates, Lori Iwata, and Amy Ogai.



Part 2. After the Age of Thirty

Tragedy struck on January 30, 2003. Mike Dulligan and his instructor were killed when the two-engine airplane they were piloting crashed during a practice landing. Mike was already an excellent pilot with many flight hours under his belt. He was undergoing a standard multi-engine training exercise: a one-engine landing with a two-engine plane.

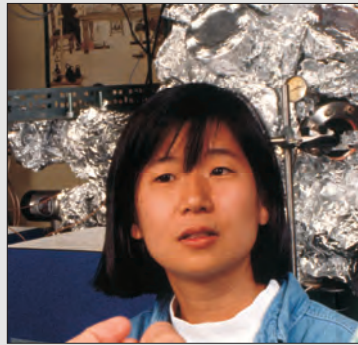
According to the air traffic controller in charge of the flight, as the plane approached the runway it was wobbling and behaving strangely in other respects, as well. As it neared touchdown, it suddenly veered to one side, apparently out of control, and crashed into a hangar. It exploded into flames upon impact, killing Mike and the instructor. The reason for the crash was sufficiently mysterious that the Federal Aviation Administration (FAA) chose to investigate.

The FAA study, including a detailed forensics component, turned up the fact that the instructor had been taking a powerful prescription pain killer for severe headaches: tramadol. Autopsy revealed that he was, in fact, suffering from undiagnosed lung cancer that had metastasized to his brain. He was also taking a powerful drug for rheumatoid arthritis. Tramadol, especially in combination with other drugs, in a person with a brain lesion is known to dispose the person to seizures. Of course, the instructor was unaware of this issue, as he did not know he had cancer. The bottom line is that the instructor suffered a grand mal seizure, and he jammed the left rudder pedal to the floor. Mike could not overcome the mishap in time to abort the landing and thereby avert the crash. It was such a tragedy.

Rich Saykally nominated his student Kun Liu for the Nobel Laureate Signature Award on the basis of his work on water clusters, which stands to this day as a major contribution to our understanding of hydrogen bonding in water. Kun did not receive the award, but the work plus Rich's nomination put him on the map. He joined us to spearhead projects using the Rydberg machine. An interesting guy, he would disappear for days at a time, and then reappear and work non-stop for days at a time. With a team of talented graduate students, an amazing *tour de force* experiment was carried out with the HCl dimer that yielded a striking and completely unanticipated result.

Our earlier work with CO₂-HX complexes had raised the possibility of double resonance studies in which an infrared laser excites the hydrogen stretch, and a UV photon dissociates only the vibrationally excited complexes. This was put on ice for technical reasons, but it was not forgotten.

Part 2. After the Age of Thirty



First row (L to R): Stas Ionov, Pavel Ionov, Eli Kolodney.
Second row: Katya Mikhaylichenko, Mikhail Korolik, Ilya Bezel, Kun Liu.
Third row: Steve Sharpe, Lori Hodgson, Scott Powers.
Left: Minda Suchan.

Part 2. After the Age of Thirty

The HCl dimer work grew out of this idea. By pumping the hydrogen stretch of the outside hydrogen, vibrational predissociation would be minimized. With any luck this would enable vibrationally excited complexes to be photodissociated. Double resonance would ensure that only the dimer, and not larger complexes, is involved in the photophysics. It would open the door to studies of dynamic regio-specificity. The strategy was to first work out the spectroscopy, to ensure that localized excitation could, in fact, be implanted, and that it would last long enough. We would then advance to the photodissociation of the tagged complexes and their fragments.

The spectroscopy of $(\text{HCl})_2$ in its first overtone region was examined using the cavity ringdown method. This enabled the nuclear motions associated with the various spectral features to be understood. A former graduate student, Don Spencer, had invented the cavity ringdown method while working at the Aerospace Corporation. It was introduced as a means of measuring high mirror reflectivity. The Saykally group subsequently turned cavity ringdown into a spectroscopic tool.

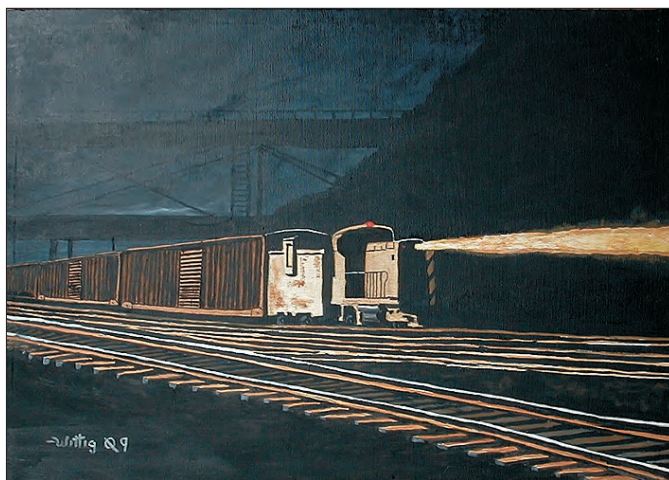
In the *tour de force* experiment, the first overtone was pumped strongly. Specifically, the stretch motion of the hydrogen atom that is not hydrogen-bonded was excited. The first overtone was used rather than the fundamental because it inhibits tunneling mixing, enabling localized hydrogen stretch excitation. The Rydberg method then probed hydrogen atoms that derived from 193 nm photoexcitation of vibrationally excited $(\text{HCl})_2$. At the same time, the Rydberg method also probed hydrogen atoms that derived from the 193 nm photodissociation of the HCl product of $(\text{HCl})_2$ vibrational predissociation.

This was challenging work in the extreme. Try to imagine the experiment: The nozzle expansion conditions were adjusted to optimize $(\text{HCl})_2$ production; an in situ cavity ringdown assembly was used to lock the frequency-stabilized OPO (0.015 cm^{-1} , 15-25 mJ, $1.77 \text{ }\mu\text{m}$) to a desired HCl absorption feature; an ArF excimer laser was used for the photodissociation step; and the Rydberg tagging assembly had to work perfectly. Most importantly, all of this had to remain stable for quite long periods – in some cases twenty-four hours or more. No wonder so many graduate students opt for theory.



Don Spencer

To our surprise, $(\text{HCl})_2$ vibrational predissociation yielded one HCl in high rotational levels (a group centered near $J = 20$), whereas the other HCl was rotationally cold. This could be rationalized in hindsight, which makes an interesting story, but it certainly was not expected. It was also possible to photodissociate $(\text{HCl})_2$ prior to its predissociation, but this received less attention because of low signal-to-noise ratio (S/N) and less interest.



Night Train
Robert Wittig

Another exciting and unexpected result involved $(\text{HI})_2$. Jingsong spearheaded this effort in 1995, and Joelle Underwood and Delphine Chastaing carried it further in 2003. HI photodissociation creates $\text{I}(^2\text{P}_{3/2})$ and $\text{I}(^2\text{P}_{1/2})$. The recoil imparted by the departing hydrogen atom is insufficient to disrupt the weak I-HI bond. Thus, a radical-molecule complex is formed. The excited $\text{I}(^2\text{P}_{1/2})$ -HI complex lasts a long time, and its absorption of a photon causes the exiting hydrogen atom to scatter from the $\text{I}(^2\text{P}_{1/2})$, deactivating this excited atom in the process. Thus, the hydrogen translational energy distribution is shifted to higher energy by the atomic iodine spin-orbit energy.

It was possible to fit the results using nothing more sophisticated than a two-dimensional Landau-Zener model and easily estimated matrix elements. To the best of my knowledge, this remains the only example of radical-radical scattering from a restricted geometry that has ever been reported.

Work on unimolecular reactions continued, with main projects involving NO_2 and NO_3 . We advanced to quantum statistics. We showed in the case of NO_2 that the density of bound levels just below reaction threshold and the density of scattering resonances just above reaction threshold were each much greater than would be surmised by simple extrapolation, a signature of roaming. We also measured reaction rates at energies just above threshold. With NO_3 , Floyd Davis, Stas Ionov, and Pavel Ionov measured rates in the picosecond regime. Later, NO_3 fluorescence was observed along the molecular beam axis to obtain the very slow rates ($\sim 10^4 \text{ s}^{-1}$) characteristic of lower energies.

Part 2. After the Age of Thirty

Tragedy again struck. Stas Ionov died in 2005 in a cycling accident. A food truck entered the Pacific Coast Highway recklessly, and it broadsided Stas and a cyclist who was passing Stas, and therefore was next to him at the time of impact. They each died within minutes. Stas was a great guy. Again, one of our "family" was killed in a needless tragedy.

The science part of this section is concluded with a few comments about our surface project. Eli Kolodney received his Ph.D. with Aviv Amirav in 1985. He then joined us as a postdoc and set up a UHV surface scattering machine. Eli builds things to last. The apparatus he constructed continued to yield results well after his departure to the Technion, where he has served as Professor in the Department of Chemistry for many years. The first paper involved inelastic scattering of NO from MgO, and there has been constant evolution ever since.

Without going into details, we have examined: collision-induced dissociation (CID) of molecules accelerated using supersonic expansion colliding with MgO; photodissociation of surface-bound ClNO; CID of photoexcited NO₂ colliding with MgO; scattering of HCl from MgO; trapping and desorption of HCl($v=2$) from MgO, in which HCl($v=2$) survives long enough to serve as a probe of transport and site-specific deactivation; properties, transport, and guest-host interactions in amorphous solid water (ASW); and laser ablation of ASW/CO₂ thin films. The work with ASW continues. These items are the work of many talented and dedicated students and postdocs.

Sabbaticals: 1988 and 1995

Sabbaticals were taken in the spring semesters of 1988 and 1995. Michele was at Boston University in 1988, and at Boston University and Radcliffe in 1995. My hosts at MIT were Sylvia Ceyer and Bob Field in 1988, and Bob Field in 1995. Short periods were also spent at Oxford in summer 1985, and at the Hebrew University of Jerusalem in 1988 and 1995. My hosts were Gus Hancock at Oxford and Benny Gerber at the Hebrew University. Memories are legion and include many non-scientific things in addition to the scientific ones.



- A nice apartment on Beacon Hill in downtown Boston was rented in 1988. The building was a couple of hundred years old, the floors were slanted like you would not believe, there was not a right angle in the place, and everything was quaint and picturesque. How cool is that! We entertained many people, usually in small groups. Sylvia Ceyer and Phil Pechukas endured my cooking. Little

Part 2. After the Age of Thirty

did we know that Phil happens to be a gourmet cook. This was learned only much later when we visited him and his friend Rachel in the Berkshires in western Massachusetts.

- Bob Silbey had a wonderful, infectious sense of humor that was spontaneous and from the heart. He was a natural. At lunch or dinner it was inevitable that gripes would be heard – even from MIT faculty, as hard as that is to believe. Bob always managed to maintain a positive focus and keep things moving forward. Only later, after Bob had passed away, did I find out he had been an excellent teacher and mentor. That came as no surprise.
- Bob Field and his wife Susan Geller have shared a lifelong fascination with chocolate and good food in general. Once Michele and I met Bob and Susan at a restaurant in Paris: La Ferme. It was great, but overkill for the likes of Michele and me. Bob and Susan are also keen on classical music. Were you giving a talk at the same time Yo-Yo Ma was performing, you might consider emailing the ppt file to Bob, just in case.
- The Field group seminars often exceeded one hour. My presentation seemed to be going all right, though it looked like it would last an hour and a half. This was not a big deal, as others had gone that long. Nonetheless, the audience seemed anxious, so the talk was wrapped up. It turned out I had read my watch incorrectly. The elapsed time was nearly three hours – a record, but not one to be applauded or broken.
- Peter Giunta was the Rock of Gibraltar of the Field group. He was the group's longstanding Administrative Assistant, as loyal as the day is long, and with an unparalleled understanding of MIT. He has a wry sense of humor. He could even be enlisted for practical jokes from time to time, like the time I sent Bob a chocolate bar that weighed ten pounds. Peter is not the sort of person to push work on others. He takes the initiative and delivers.
- There was the time the weather changed abruptly while jogging along the Charles River. This happened about four miles from our place. The trip home in running shorts was made in a blizzard. People in passing cars must have thought I was crazy, as they stared and sometimes yelled things. It is nice to put a smile to people's faces once in a while. On another occasion, I was jogging from MIT to our place on Beacon Hill and the weather was rotten, as is often the case in Boston. There was a lot of salt on the bridge, so the liquid underfoot was well below 0 °C. Vehicles would hit the many potholes, bathing me in this liquid and creating an interesting effect.
- My office in 1988 was an enormous fancy affair. Overkill would be an understatement. I was talking on the phone when all of a sudden a third party was on the line. He began yelling at me, demanding to know just who in the hell he

Part 2. After the Age of Thirty

was talking to. Responding in kind, I told him my name and demanded to know just who in the hell I was talking to. He was pretty agitated and the interaction became spirited. Soon the front office of the Chemistry Department was in a panic, with people charging down the hall toward my office. It turned out that the guy on the phone was John Deutch, the MIT Provost and former CIA Director. I was using his faculty office, as he was operating entirely out of the Provost office. The phone had not been changed.

- My first encounters with Anne McCoy, Anna Krylov, Pavel Jungwirth, Daniel Lidar, Maureen McCarthy, and Masha Niv were in Benny Gerber's group in Jerusalem. The group was packed with future stars and leaders. There were parties at Benny and Helen's apartment, and we would form groups and develop shortcuts through the valley on the way to their place. At different times, Michele and I stayed at Kiryat Moshe, Beit HaKerem, and Belgium House, each a short walk to the office. Benny is unbelievably gracious. Scientists know him as a brilliant guy, but how many of them know he would be first in line for a Nobel Prize in Graciousness, were one given. He would give you the shirt off his back, whether you wanted it or not.
- I managed to get locked inside a building at the Hebrew University. At a certain hour the doors were secured. And they were *really* secured. There was no release mechanism for getting out of the building, for example, in case of fire. Were a person working quietly in a room with the door closed, they easily could go unnoticed and get locked in. It is as simple as that. It was about 1 a.m. and my best efforts could not find or construct an escape route. After a while, a passing soldier saw my plight and set me free. You might think I learned my lesson. No way. There was a second such episode.
- We managed a couple of visits with our friends in North London, Rod and Annie Shone. We got to know them in 1984. The Olympics were held in Los Angeles that year, and USC was one of the host institutions. The word on the street was that traffic and crowds would be horrible, with USC smack in the middle of the cauldron. This sounded scary: It would



Man with Dog
Robert Wittig

Part 2. After the Age of Thirty

be impossible to get anything done. We needed to escape, so a house exchange was arranged with a family in North London. Rod and Annie lived a few doors away. Later we got to know them and their dog Jack very well, and spent many memorable afternoons and evenings at their home playing soccer with Jack.

In the late 1990's we traveled with them through southeastern Italy. Our travels were facilitated greatly by Annie's fluency in Italian. It gets remarkably hot there in the summer, which means some English customs are best replaced with local ones. This was not easy for Rod, who favors tea over water. Were he in the middle of the Sahara Desert, at 4 p.m. he would need to partake of tea. This led to minor adventures with dehydration.

Students, postdocs, and visitors in my group, when moving on to greener pastures, would often receive a picture as a going-away gift. Rod is a professional photographer and many of these pictures were his work. My guess is some of you reading this article have received a Rod Shone picture. A scientific paper was written while in London, so we did in fact get something done.

Incidentally, the dire prediction of impossible traffic in the area immediately adjoining USC did not materialize. Presumably others were also frightened off. Congestion during the Olympics was less than usual.

- We spent a couple of months in Oxford in 1985, and Gus Hancock was my host. He arranged a fantastic place on Staverton Road in North Oxford. It was awfully big for just the two of us, but toward the end of our stay we reciprocated by throwing a large party. There were many memorable social events with Gus, Rosie, and their kids.
- Len Saxe was a friend of Michele's from Boston University. He was (and presumably still is) a scholar and a real go-getter. His tirades against John Silber, President of Boston University, were legendary. They were entertaining to be sure, but troubling in the sense that so much human capital was squandered, despite good intentions, because of Silber's ego.

It is not easy to picture life in the Field group. The intellectual standards and work ethic are off scale, durations of graduate studies and postdoc stints are usually not short, and MIT has cool relationships with its inmates. The reason it works so well is that Bob cares. He worries about the group members, encourages them, and lets them know that he will do as much as possible to further their careers. He



Camera
Robert Wittig

Part 2. After the Age of Thirty

will work for the betterment of his students and postdocs at least as hard as any of them. And this is not to be taken lightly. Bob is inspirational.

There was the chaos era. The mathematical theory of chaos is fascinating and worth studying on its own. It had an interesting introduction to physical science. Edward Lorenz was an MIT engineer trying to predict weather with the help of a computer. It was 1961 and computers were primitive. Nonetheless, the code that had been written resulted in a curious instability. Seemingly inconsequential changes in input parameters yielded vastly different results. That is how Ed discovered the system was chaotic. He gave an enlightening and entertaining seminar to the Field Group about the discovery.



Prairie Weather
Robert Wittig

My interest in chaos was centered around unimolecular dynamics. Many books were purchased and most of them were read, though rarely cover-to-cover. There is no way this would have happened without being on sabbatical. At times that adventure seemed like an intellectual exercise unconnected to anything my group was doing. Though discussions of chaos theory with Bob and Steve Coy were intellectually stimulating, and justified on this basis alone, that was not the case.

My excursion into chaos theory had a lasting effect, in which things like Lyapunov exponents, dynamical filling of phase space, the physics that underlies unimolecular reactions, etc. became intuitive. There are half a dozen books on my shelf from this era. Once in a while someone asks me a question about this material. He or she is given one of those books and shown where to find the answer.

Bob's graduate student Yongqin Chen received the 1988 Nobel Laureate Signature Award. He then joined us as a postdoc, and tackled photoinitiated reactions in weakly bound complexes. He was (is) extremely smart, a human dynamo, and a nice guy. There are seven days in a week and twenty-four hours in a day, but keeping track of the hour of the day and the day of the week was for someone else. Adhering to the Bob Field tradition, Yong more or less worked continuously, teaming first with Gerardo Brucker and then with Günter Hoffmann. What a stun-

Part 2. After the Age of Thirty

ning collection of talent! Anyway, after a couple of years he sought employment and received offers from Berkeley and UC Santa Barbara.

Another postdoc in the group, Seung-Koo Shin, had received his Ph.D. with Jack Beauchamp at Caltech, and also had collaborated with Bill Goddard. When he arrived, he went to the lab, looked over the equipment, and began taking data in less than a week. The phrase "hit the ground running" does not come close to describing Seung-Koo. He was in the job market the same year as



Yongqin Chen

Yong. When the smoke cleared, he and Yong were at UC Santa Barbara and Berkeley, respectively. Seung-Koo never came up for tenure at Santa Barbara because he received an offer of a high-level, one-of-a-kind position at Postech in Korea, and he accepted it. Yong went from Berkeley to KLA-Tencor, where a large number of people from the Wittig group are employed, and he recently joined the faculty at a new institute near Shanghai: Suzhou Institute of Biomedical Engineering and Technology. Yong and Seung-Koo are great people.



Seung-Koo Shin



Left: Gerardo Brucker

Above: Daniel Oh, Günter Hoffmann, Helen Iams

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Row 1: Bob Field, Sylvia Ceyer, Steve Coy.
Row 2: Steve Buelow, Jane Rice, Detlev Häusler.
Row 3: Delroy Baugh, Jeff Segall, Scott Nickolaisen.
Left: Gouri Radhakrishnan.

Being Department Chair

There was no getting around it. Someone had to serve as Chair of the Department of Chemistry. The Department was polled as a means of identifying its version of likely suspects, and the Deans had their own opinions. Hanna and I were in the line of fire in either case. To make a long story short, this was not our idea of a coveted station in life, but after a few rounds of arm-twisting by the Deans and introspection on our parts, we agreed to a four-year package: sequential two-year terms, with me going first. Our Department's divisional structure had begun in 1995, and serving as Section Head of Physical and Theoretical Chemistry from 1995 until the chairmanship in 2001 provided a great deal of relevant experience. Heading graduate student recruitment for a quarter century did likewise. The baton was passed in late spring of 2001.

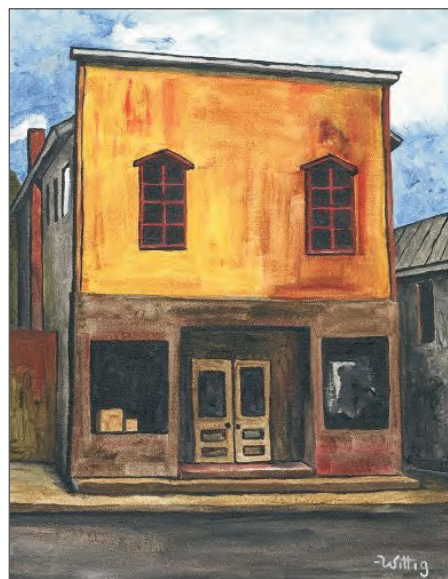
At the outset, my prediction was that time and energy would be apportioned into three roughly equal aliquots: regular duties of the Chair, my own goals for the Department, and things unexpected, mostly putting out fires. This turned out to be pretty close. There was no illusion about putting aside a significant block of time for research. Colleagues at other universities have been successful at putting aside time for research, but even my best attempts at self-delusion did not let me perceive this as a possibility. Being Chair of the Chemistry Department at USC was a full time job and then some, because the Deans were not supportive. An example of one of my goals is given below. Other things are then summarized using bullets to lessen rambling.

The Division of Inorganic and Biological Chemistry arose, in large measure, as a consequence of physical proximity when the divisional structure was introduced. With one exception, the faculty in this Division occupied two small buildings: Organic Chemistry Wing (OCW) and Laird J. Stabler Hall (LJS). When OCW was built it was not a wing to any building, and LJS contains nothing that could reasonably be called a Hall.

These buildings were constructed in the 1950's and 1960's, respectively. They were supposed to be temporary, replaced by things bigger and better. Their second floors are contiguous. A person can pass between the two buildings and hardly notice the transition, at least at first glance. OCW has only a first and second floor, whereas LJS has a third floor. When my chairmanship commenced, LJS did not have a first floor, but instead a vacant underside where its first floor should have been. This sorry pair of orphans constituted the worst research space on the planet: a truly depressing environment. The goal was to improve research space in this division as much as possible. How that was to be achieved was unclear.

Part 2. After the Age of Thirty

Frequent one-on-one discussions with the faculty in this area spanned a broad range of topics: the many nuanced versions of the Department's convoluted history, how the other Divisions (Organic and Materials, and Physical and Theoretical) were viewed, relationships among the Divisions, the Administration at all levels, courses and curricula, graduate students, gripes, suggestions, and so on. No grandiose gestures were made on my part. They had heard it all before, to the extent that it was easy to provoke an allergic reaction. In other words, they did not take kindly to being plied with empty words and promises, as nothing ever materialized. Morale was low. Pessimism was everywhere. Anyone with common sense could see that nothing of worth could be achieved without a significant boost of morale.



In Need of Repair
Robert Wittig

Faculty often subscribe to the fanciful notion that for a division or department to achieve major improvement, all that is needed is to hire the right person: a savior who will set things right and perform countless miracles. Names are tossed about, scenarios are invented, and everyone has fun. Do not get me wrong. Hiring great people is a splendid idea. However, when the situation is bleak to begin with, such talk never seems to get anything useful launched. It manifests as a dream rather than a plan. A magic person is conjured – a person of such extraordinary abilities and inclinations that he or she surely has not yet been invented. Even if a great person did materialize, low morale and disastrous research space would preclude anything good happening.

The only thing that made sense to me, taking into account the boundary conditions, was to resurrect and create research space in OCW/LJS. The Deans argued vehemently that this was a lost cause. They made it clear that they had less than zero interest in financial participation. In a sense this made us even. When it came to something of this nature, it was my opinion that the lot of them was a lost cause on a good day. The Deans pointed out that the space was horrid. True, but if one tallied the square meters there was enough raw real estate to work with, and besides, they offered no alternative. It had not been my intention to sign on for a stint as Department Chair to please the Deans or sit around sobbing and wailing, in effect, choreographing a departmental "poor us" routine. What would later become the Great Resurrection Project began with a few showpiece offices.

Part 2. After the Age of Thirty

RJ Remodeling is a tiny company owned and operated by Eduardo Neirotti. He has a helper or two and that is it. He is excellent when it comes to woodwork, flooring, tiles, moderate construction, electrical, painting, and such things. Hanna put us in touch with him in the 1980's, and he has carried out projects at our house in Santa Monica ever since. He agreed to give it a try.

A few derelict rooms were turned into offices: large, nicely furnished, pictures, etc. They were oases embedded in a landscape that was as appealing as the South Bronx the day it hit bottom. Sources of used furniture were raided and Eduardo performed miracles. He could take a beaten up wood desk and turn it into something that looked fantastic and was more functional



Wash Day
Robert Wittig

than the Formica junk that finds its way into offices nowadays. The first customers were Jim Haw, Charles McKenna, and Marie de la Torre. This was nice, but not a big deal, in the sense that offices are easy compared to labs. Three more offices were delivered: Tom Flood, Peter Qin, and Larry Singer. Peter had just been hired. His research is in the area of biophysics, so research space in OCW/LJS was sensible on disciplinary grounds, meaning that lab renovation would, of necessity, be addressed. Eduardo led the assault.

Try to picture in your mind's eye what that looked like. An enormous tent was set up in a large open area next to the building and heavy equipment was brought in. Steel cabinets and hoods were taken from the derelict labs to the tent, where they were wire-brushed and sanded. Eduardo and his helper donned head-to-toe protective gear and sprayed the cabinets and hoods with epoxy primer and overcoat using huge heat lamps to set the epoxy.

Labs were gutted, hoods were reconditioned, wood was refinished, plumbing was replaced, counter tops were replaced, floors were redone, and so on. The operation was something to behold. When Eduardo came to the United States from Argentina he landed in New York's Lower East Side and worked in a low-end pizza place – an interesting start for a guy who had been born in Rome, Italy. He constantly referred to the fume hoods as pizza ovens.

Part 2. After the Age of Thirty

As a result of this manifestly unorthodox operation, Peter Qin received nice labs that were ready when he arrived, a conference room was raised from the dead, a room was created for mail, copying, coffee, tea, microwave, and so on. I was now spending several hours each day in the area, including participation in a lot of the heavy moving, and carrying out some of the wood furniture refinishing myself. The project was beginning to attract attention if for no other reason than no one had ever seen anything like it before.

Meanwhile the forces of evil were out to get us. Eduardo was lightning fast for the simple reason that he was a one-man-show, start to finish. Moreover, the amount of money going to him was a small fraction of what the University would have charged. In short, he was embarrassing them. There were claims that he was not licensed (until he presented his electrician license), that he was using an alias (until he proved that his legal name is Raul Jorge, as in RJ Remodeling, and Eduardo is a nickname), and so on.

It was even claimed on one occasion that his work was of inferior quality, which was a real joke. He had painted a hallway. One of the University painters noticed that the paint was thin, and reported this to his superiors, the "head guys." This painter would show the head guys that Eduardo's work was unacceptable. However, what he had seen was simply the first of two coats. Oblivious to the University painter's visit, Eduardo applied the second coat. On the day of the great exposé, the head guys were lined up in the hall and the University painter was talking with great enthusiasm, gesturing at the walls, and proclaiming loudly that such a terrible job has no place at the University and anyone who does such work should be dismissed. There was a lull. The head guys told the painter that he had better explain himself, as this was the best paint job they had seen on campus. It was priceless.

Amy Barrios was hired the following year and her labs were of high quality and waiting for her when she arrived. By Spring 2003 the entire second floor of LJS and all of the offices in OCW had been recovered. A few labs in OCW also had been recovered. The total bill was under 500 k\$. Over a two-year period, Eduardo had beaten the University – with all its paperwork, rigged bids, micro-managing, and hierarchy – to a pulp. Morale in Inorganic and Biological Chemistry improved dramatically and has persisted. At the time, Mark Thompson occupied the third floor of LJS. This had been readied for him when he joined the faculty in 1995. His space was of sufficient quality that it was left alone, so he gained marginally from the Eduardo effect. This is a shame because Mark is a great guy who deserved better. Fortunately, he now occupies an impressive suite of labs and offices in a different building.

Part 2. After the Age of Thirty

The underside of LJS was the domain of skateboarders and worse. It had lain fallow since the building was constructed in the early 1960's. My plan was to convert this to research space. Departmental instruments like NMR, mass spectrometry, FTIR, UV-VIS, microscopes, etc. were scattered randomly throughout the Department. These would be organized into a modest Chemistry Department Facilities Center. Beginning with my chairmanship, an equipment proposal had gone out each year, and each had been funded. This had netted an NMR and a TOF mass spectrometer, giving impetus to the push for facilities space.

Plans and scale drawings were put together and taken to Facilities Management, where John Crichton saw to it that they received proper attention. There were attempts to derail this project, but it persevered through an interesting combination of Crichton working behind the scenes and me talking with architects and making adjustments on the spot. It was approved to the dismay of the College Deans. Without this addition it would not have been possible to put together the Facilities Center that currently exists in the Department.

The invigoration of Inorganic and Biological Chemistry had transpired on different fronts. Physical space was important. This part of the Department would have disappeared without it, as Mark Thompson was being bombarded with offers from other universities, and there would have been no hiring. On the human side, faculty and student morale rose like a step function. The Deans' plan to phase out this part of Chemistry had been thwarted. After several years Amy Barrios left for a position at Utah. However, Richard Brutchey replaced her and he has done marvelously, to say the least. His case was an absolute no-brainer for promotion and tenure. Other young faculty: Matt Pratt, Chao Zhang, and Smiranda Marinescu have been added. These are smart, dedicated, industrious people, who are busy building, and working with, their research groups.

The Department continues to be "plied with empty words and promises" about space. Despite the buzz and hype, nothing to get excited about is on the horizon. Were the Department's plan to wait for salvation to arrive at its doorstep, it would be a long wait. The Department of Chemistry will continue to promote its cause, to the dismay of many administrators. Below are summaries of other Chair items.

- Space renovations were carried out in other Chemistry buildings. These include upgraded faculty and student offices, major improvements in chemical storage and preparation areas, which improved safety, and dramatically improved lab space for Assistant Professor Aaron Harper.
- Staff positions were added, the number of teaching assistant positions was increased by enough to make a qualitative difference, faculty salaries increased significantly, though it is unclear to this day how this was pulled off, and a couple of faculty were hired.

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- The Department of Chemistry Distinguished Alumnus Award was established. These are presented at the annual banquet, which hosts several hundred attendees. On average one per year has been given, but this number will likely increase in the future. This was long overdue. It is clear from the responses of those receiving the awards that it was the right thing to do, for no other reason than the recipients are fully deserving.
- An interesting achievement was doing nothing in response to a bombardment of "make work" demands from the College Business Office. Its head, Roger Stewart, never encountered a list he did not like. He recently left, but he was going full steam during my chairmanship. His efforts spanned quite a range. Progress could be inhibited from the humanities to the sciences. Dean Joseph Aoun answered my complaints about Roger's frontal assaults by telling me to ignore his emails. My overarching policy was to protect the faculty from distractions, so they could get on with more important things.
- It was my responsibility to prepare a comprehensive document in anticipation of a Departmental Review that would take place after Hanna took over as Chair. I dropped the ball, which annoyed me then and still does. Hanna took over and as usual did a great job. The Deans refused to acknowledge the worth of her report, boasting that they would not pay attention to it. Later they ate their words on a number of occasions. A significant factor in my success as Chair derived from the fact that Hanna's term followed mine. The transition was as seamless as could reasonably be expected.
- The greatest achievement of my chairmanship was the marked increase in morale that took place throughout the Department. Nothing else comes even remotely close. Morale is the core from which a department's strengths emanate. Without it time and energy are squandered. On a personal note, improving people's spirits gave me great satisfaction.

Sabbaticals: 2004 and 2010

It is often said that sabbaticals are more important than ever following a stint as department chair. In my case this was true in spades. We had visited New York a number of times and liked it, so we decided to give it a try. My host at Columbia in 2004, Jim Valentini (currently the Dean of Columbia College), pointed out that lower Manhattan would be an interesting place for us to live, and we had come up with Greenwich Village on our own. A mathematician at the Courant Institute, Michael Overton, would be on sabbatical for the same period as our stay in New York, so we rented his place. It was at the corner of Fourth and Mercer, diagonally across from where Bob Dylan got his start at Gerde's Folk City. Cardboard boxes containing our books, papers, and clothing were sent ahead to minimize schlepping. The deed was done.



James Valentini



Monet

It was late afternoon on a cold winter day. The day was not just cold, but cold to the bone, like you expect from Chicago, not New York. Monet Bunny and I had arrived at JFK and we needed to get to the apartment. It was just the two of us, as Michele had gone to South Africa on a work-related trip. She would be back in a couple of weeks. Monet was not dressed for the weather. Rising to the occasion, I insulated his cage as much as possible, sprinted to a taxi, pushing through dozens of people in line ahead of me, and jumped into the taxi with Monet. Everyone was gesturing and screaming unkind things at me, so my best New York accent was mustered and they were told where they could go. It was a fitting introduction to life in the city.

Time passed quickly, with Michele at NYU and me at Columbia. It was a super experience on all levels for each of us. The post-traumatic stress syndrome that afflicts past chairs was remedied by concentrating on academics. Teaching a half-semester course was fun, and I focused on research and pedagogical class materials that evolved to the *Notes Project*, as described later. Great times were had with Jim Valentini, Phil Pechukas, and George Flynn, including frequent lunches and dinners.

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In subsequent years we have spent, on average, six weeks each year in New York City. This has been, with only a couple of short (two weeks) exceptions, either in Greenwich Village or Park Slope, Brooklyn. It is a great place to work, as everything is convenient and there are, believe it or not, few distractions, at least for people like us. It is also a good idea to be reminded of one's complexity from time to time.



Rachel Brier and Phil Pechukas



Heidi Perry

We have even kept in touch with one of the Columbia Chemistry Department graduate students we got to know in 2004. Heidi Perry is not only highly intelligent, but also very nice. She watched over Monet Bunny while we were away for a week in the spring of 2004. Heidi is one of those people you do not forget, whose presence makes a difference. She and her friend John visited us in Santa Monica just a couple of months ago. They are in the process of trading New York (Park Slope, Brooklyn) for the Pacific Northwest, probably Portland, Oregon. We will somehow continue to keep in touch with her.

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We took sabbaticals in New York again in 2010. Michele was at NYU and the CUNY Graduate Center, and George Flynn was my host at Columbia. It was nice to see old friends and make new ones, like David Reichman and Laura Kaufman. We saw Heidi frequently, and our network of East Coast friends grew.

Teaching a half-semester course was replaced with participation in George's group seminars, which dealt exclusively with graphene. This was just right: new enough to be interesting but familiar enough to not overwhelm me. I finally started to understand quantum field theory beyond simply quantum electrodynamics. It was about time. Once over that threshold things began to click. The Notes Project was going strong, and a 350-page bound document was produced by May and distributed free of charge to a number of people. Again, this will be discussed later.



George and Jeanie Flynn



Couple
Meirav Gebler

We got to know George and Jeanie Flynn rather well. They are ranked on a human scale with the best people in the world. George is well known to the vast majority of physical chemists: from his legendary leadership at Columbia, to his seminal scientific contributions, to his service to the scientific community, to being a great mentor and nice guy. But probably not all of you know Jeanie. She is smart, well-educated, hard working, and has a great sense of humor. She puts up with me, and even tolerates some of the places we expose them to in the West Village. You cannot ask for better than that.

The Theory Project

Maybe it can be traced to that magic fourth semester as an undergraduate at Navy Pier, when intellect emerged, or maybe it is a natural evolution. For whatever reason, somewhere around 2005 a serious interest in theory developed. Or perhaps it should be said that an interest in serious theory developed.

Theory means different things to different people. In the humanities and social sciences it often stresses rationalization or wishful thinking, but not necessarily prediction. Theories in economics are taken more seriously, despite their miserable track record, presumably because money is involved. In physics, bottom-up approaches garner great respect, while in chemistry puzzle solving is the rule.

On this basis, my group's mindset lies between physics and chemistry. A couple of decades of experimental work had centered mainly on unimolecular reactions, conical intersections, and nonadiabatic processes. For the most part, existing theoretical models had been used either out of the box or adapted slightly. This is pretty much what you would expect from a group bent on carrying out experiments. The time had come to pay attention to the theoretical foundations that underlie these and related phenomena.

It is a good idea to start with something that seems conceptually straightforward. Complexity enters soon enough. Two starter projects involved (separately) the Landau-Zener model and unimolecular reactions. The former was in no way earth shattering: simply a better way to deal with the math. It was done as a pedagogical contribution, but for some reason has drawn way more attention in research circles than expected. It is hard to predict how things will play out. The unimolecular project explained what is going on with the use of random matrices to model open channels in unimolecular reactions. Something was obviously not right with the many published computer experiments. It took a long time, but finally the correct interpretation was recognized, amazingly, from material presented in a graduate class.

Such pencil-and-paper studies seem to suit me better than large-scale computation, despite the fact that the latter has my greatest respect. With these projects completed, it seemed reasonable to try something bigger, better, and probably



West Village
Robert Wittig

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tougher. In hindsight, this was not really a reasonable move, but one that took place nonetheless.

Fermion spin is introduced in Freshman Chemistry by faculty who may well be brilliant when it comes to spin's use, but invariably have little appreciation of what it is at a fundamental level. Many of my friends told me that spin is relativistic because it follows from the Dirac equation. This is a non sequitur. Everyone



From Google Images

knows that spin is alive and well in the non-relativistic regime. The fact that it is present in the Dirac equation means nothing insofar as whether it is inherently relativistic. The new physics introduced by Dirac (beyond what Pauli had done) is that of antiparticles, not spin, and it turns out that the Dirac equation should be dealt with as an equation in relativistic quantum field theory (RQFT) to account for the creation and annihilation of elementary fermions.

The goal was to identify spin's non-relativistic origin. Though RQFT contains spin, it also contains all known physics other than gravity. Thus, spin cannot be said to be relativistic just because it appears in a relativistically correct model. Peter Toennies wished me luck early on, stating that one could expect vicious opposition regardless of the stance taken. Closure was achieved after two years of excruciatingly hard, and at times agonizing, work. In the end it was shown that spin is a manifestation of fermion exchange symmetry and not a separate entity. A second paper dealt with photon spin. It also required a large effort, certainly more than one might guess from the finished product. For several years, weekends were devoted to these projects, as were early mornings, evenings, and every available opportunity. Obsessive would not be too strong a term.

This work was followed by a complementary approach to the geometric phase associated with conical intersection. Insight was gained, but the work will probably not inspire change in how electronic structure theory deals with the issues. Michael Berry had identified the role of adiabaticity, hence the term Berry phase. Being a $U(1)$ gauge field theory like QED, it works for a single adiabat. However, a conical intersection involves two adiabats. At the degeneracy point, the gauge symmetry must be $U(2)$ or $SU(2)$. It took time (and some courage) to settle on $SU(2)$ and then break this symmetry as the system departs from degeneracy. Of the three $SU(2)$ gauge fields, only one survives. It spans the upper and lower adiabats, behaving as $U(1)$ with respect to each, albeit correlated. The broken symmetry creates force: in the language of chemical physics, the other two gauge fields

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become nonadiabatic couplings. This work convinced me that progress could be made on important problems, but it would be necessary to go slowly, do a huge amount of reading, and improve my ability to make contact with people who know more than me and extract information from them. So what next?

The Darwin term that arises in relativistic quantum chemistry will be examined from the perspective of field theory. This deals directly with the creation and annihilation of particles. The Darwin term is a manifestation of this physics as perceived from the framework of a fixed number of electrons, rather than dealing directly with transient electron/positron pairs. It will be interesting and perhaps important to see how the two approaches compare.



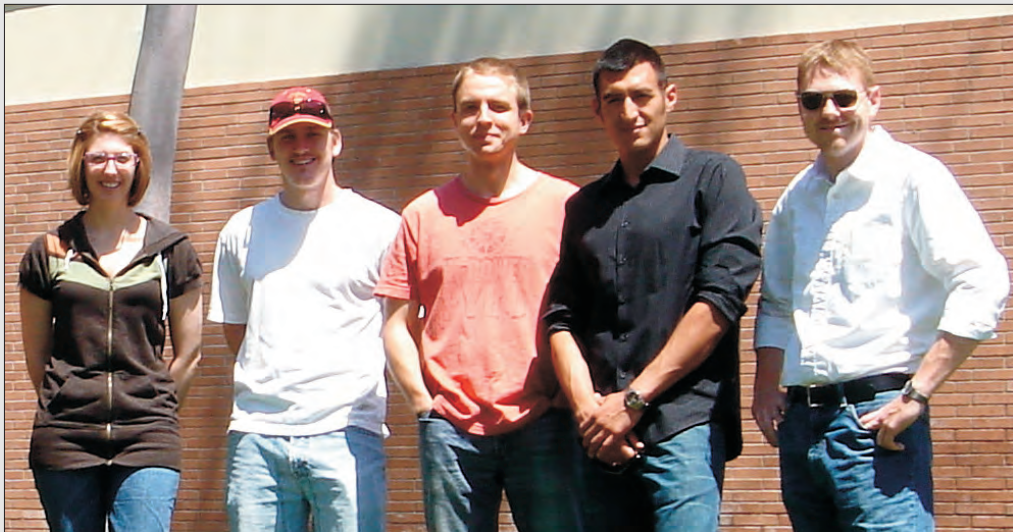
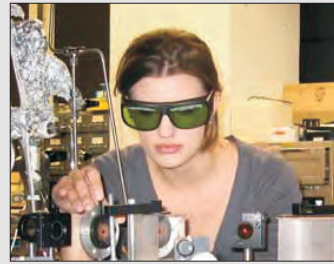
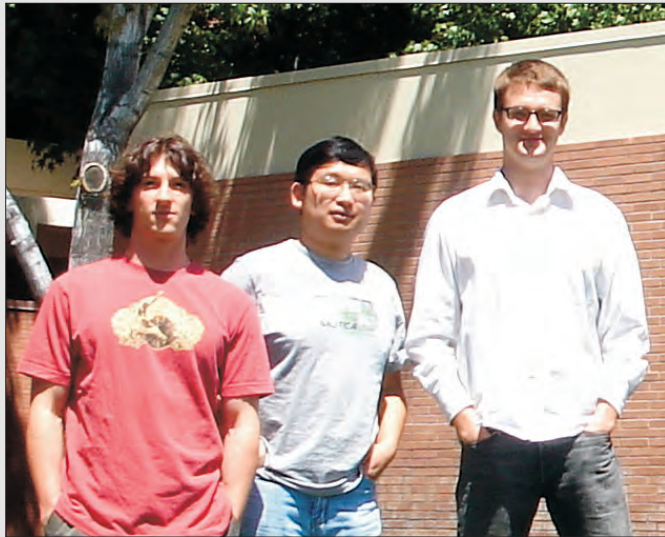
Einstein's gedanken experiment: The train car moves past a standing observer. Lightning strikes the car at its back and front.

Caboose
Robert Wittig

Experiments

Several projects were carried out to better understand NO_2 photophysics. These were centered on subtle effects that manifest in the threshold regime. The density of states increases sharply as D_0 is approached from below, due to the long-range (inter-fragment) part of the potential being accessed. It follows that just above D_0 this high density of states results in a high density of resonances. Others had recorded spectra in the region above D_0 . Because the resonances overlap, however, extracting a distribution of widths is an exercise in wishful thinking. Our decision to use time domain measurements meant that the measured rates would be averaged over several resonances. This presented little additional complexity, as trace invariance ensures that average rates do not change due to overlap.

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Group members: 2004-2013

Photo of 3: Chris Nemirow, Zhou Lu, Anton Zadorozhnyy

Photo of 5: Lee-Ann Smith-Freeman, Jordan Fine, Sergey Malyk, Oscar Rebolledo-Mayoral, Bill Schroeder

Head shots (from the top): Stephanie McKean, Jaimie Stomberg

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At higher energy the subpicosecond laser was adequate. In the threshold regime, however, the subpicosecond laser was abandoned in favor of one that would strike a compromise between time and frequency resolution. The experiments involved IR-UV double resonance and 10-20 ps time resolution, yielding spectral resolution of $1\text{-}2\text{ cm}^{-1}$. Effects brought about through parent angular momentum were also determined in the threshold regime. This was extremely detailed work, so you are getting a quite summary overview. In addition, experiments involving NO_2 embedded in superfluid helium droplets were carried out. Without the brilli-

ance and stamina of people like Ilya Bezel, Daniil Stolyarov, and Elena Polyakova it would not have been possible to pull off these studies. Finally, the cliché "enough is enough" prevailed and we said goodbye to gas phase NO_2 .

The work with NO_2 embedded in superfluid helium nanodroplets led to a study of NO transport and photoionization. Daniil and Elena carried this out. There was also collaboration with the group of Vitaly Kresin in Physics. Vitaly is not only an expert in cluster physics, but he is very easy to work with. Daniil and Elena graduated in 2006, and around 2009 they founded a company: Graphene Laboratories. The company was in place when the 2010 Nobel Prize was awarded to Geim and Novoselov for their seminal work on graphene. This did not exactly hurt business. After leaving my group, Elena did a postdoc with George Flynn at Columbia, which explains the move from helium nanodroplets to graphene. Daniil did a postdoc at Brookhaven, so they lived between Columbia and Brookhaven. Our interest in helium nanodroplets has waned and this work has been phased out.

The main experimental efforts since 2004 have involved: (1) relativistic effects in the dissociation dynamics of molecules containing heavy atoms; (2) guest-host interactions in amorphous solid water (ASW), which is carried out jointly with Hanna Reisler; (3) the photophysics and photochemistry of C_2H ; and (4) experimental and theoretical studies of the photophysics of the OLED molecule: *fac*-tris(2-phenylpyridine)iridium.

Item (1) is the basis of a series of studies carried out by Joelle Underwood, Delphine Chastaing, Lee-Ann Smith-Freeman, and Bill Schroeder, with critical help in H_2Te synthesis from Tom Flood's group. There was an important collaboration with the theory group of Aleksey Alekseyev. It was instructional to see how profound the differences could be in going between the non-relativistic and relativistic regimes. Joelle contributed in three areas: nonadiabatic dynamics in H_2O ; superelastic scattering in photoexcited $(\text{HI})_2$; and the H_2Te work. She is a tiger.

Item (2) has undergone continual metamorphosis. The evolution began with Samantha Hawkins and kept going with George Kumi, Sergey Malyk, and Oscar Rebolledo-Mayoral. An exceptional undergraduate, Naihao Chang, participated on the theory side. In his four years as a USC undergraduate, he received degrees in Physics, Chemistry, Mathematics, and Economics. Naihao is doing a Ph.D. in Applied Physics at Northwestern. A postdoc, Chris Larson, and graduate students Stephanie McKean and Jaimie Stomberg are currently pursuing this. This work has far reaching implications, notably in areas of astrophysics and astrochemistry. It has gone exceptionally well recently.

Item (3) is harder than it looks. It turns out that the 193 nm absorption cross section of expansion cooled C_2H_2 is down from its 300 K counterpart by an order of magnitude. We have now adopted a laser ablation strategy for obtaining the ab-

sorption cross section over a broad spectral range. Item (4) is the work of a post-doc Zhou Lu (now a Professor in Beijing) and students Chris Nemirow and Jordan Fine, with help on the theory front from Anna Krylov and Kadir Diri. Chris and Jordan now work for a company founded by, of all people, Israel Niv.

The Notes Project

This seemed harmless enough at the outset. The course taught at Columbia in 2004 resulted in a stack of scribbled notes that were unreadable by anyone but me. Though not distributed in class, their low quality was annoying, so when the course ended they were put in order: typed, figures, references, bibliography, and exercises. From here it was straightforward to refine and add new material, which yielded more than 100 pages. This package was put on ice.

Math Methods was taught in Fall 2004. The content varies from year to year depending on student backgrounds, interests, and research areas. Math is introduced through applications in quantum mechanics, classical mechanics, and electrodynamics. The main topic in Fall 2004 was periodic lattices. Handouts were prepared following the format of those put on ice. This marked the beginning of the Notes Project.

This template was followed for several years. The packages that accrued were each topical, with the group of packages eventually spanning a broad range. Special lectures and mini-courses were subsumed. By the time of our 2010 sabbaticals much material had accumulated. Organization is not my strong card, and it took quite an effort to keep the whole thing from spiraling out of control. It seemed that the best way to avoid chaos was to take half the material, clean it up, and have it printed by one of the cheap printing outfits found online. The finished product was never intended to be in great shape, like a real book, but it would force a degree of organization.

What came back from the printer were 120 copies of a 350-page document properly bound with a soft cover. It was nice looking but still a rough draft. Copies were distributed at no cost to those receiving them.

The original material has since been revised, often dramatically, and new stuff has been added. There are now about 800 pages. The thought of converging this is scary. Maybe it cannot be done; maybe it should not be done; maybe, maybe. When a copy was given to Phil Pechukas his feedback was succinct: who needs places like Oxford and Cambridge University Presses. Phil is extremely smart and his comment was taken to heart. Here is the plan.

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There are seven major parts and this number shall be cut in stone. Each will be converged before moving on. In Fall 2014 two parts will be used. These contain more material than can be fitted into a one semester course. I will work through all of it regardless of whether it is covered in class. A comparable amount in Spring 2015 will put the end in sight. My guess is that this will comprise 500-600 pages. By the end of summer 2015 there will be more than enough to print. Distribution will be at no cost to those receiving copies, including shipping. This will be my contribution to the community. The material will also be mounted on my website for download.

A former graduate student in my group, Lee-Ann Smith-Freeman, attended Santa Clara Law School after receiving her Ph.D. in Chemical Physics in 2009. She is now a patent attorney working in the general area of intellectual property. Lee-Ann will help to keep the project legal. The goal is a living document that is broadly accessible and easily maintained, for example, upgrading it each time it is used in a course. The remaining material will then be attacked in a like manner.



Lee-Ann Smith-Freeman (2014)

When my academic journey began way back in 1973, the furthest thing from my mind was a pedagogical contribution.

It was Paul Christensen who argued persuasively, and instilled in me, that one would most likely never get on top of a subject without writing a book on it. His words have not been forgotten. They might not apply to people at the very top, like Nobel laureates, but they certainly resonate with mere mortals like me. The Notes Project is my homage to pedagogy. It has proven helpful to generations of graduate students in our Physical and Theoretical Chemistry program, and it has enabled me to get on top of subjects at levels that never would have been possible otherwise.



Paul Christensen

But did this autobiography get in the way of the Notes Project, steal a year, so to speak? Not at all. It forced me to improve my non-technical writing, and this will manifest in the Notes Project as a better product. At least that is my hope.

The End

My deepest and sincerest thanks go to Hanna Reisler, Stephen Bradforth, and Jingsong Zhang. Without their monumental efforts with the Festschrift, this book would not have happened.

Writing this autobiography was quite an experience. I certainly did not anticipate at the outset that it would assume such a life of its own and evolve to its present state. There was a critical period at the beginning when it could have gone either way: short and sweet, maybe ten pages or so, versus something more ambitious. Why I chose the latter is anyone's guess, but that is often the way things are in life.

Once the more ambitious trajectory had been launched, memories were revived, and a great deal of information about my ancestors was unearthed. Some of it, as with the story that emerged of Franklin Betz alias Zeal Hayes, is truly remarkable. He was an outrageous wild man set loose on society in a unique time and milieu. In a different vein, but equally riveting, is the story that emerged with my paternal grandmother, Klara Wittig (Wynczek). Her own odyssey, and by proxy my father's, was quite a feat.

Committing to paper what I could recall about my early life spurred me to introspection. What, for better or worse, were the most important influences? What might have happened were it not for a certain twist of fate? And what about the role of sheer luck, effects due to loneliness experienced at a young age, how fragile our trajectories are, Lenny, Milwaukee Avenue, and so on. There was lot of *stuff*. In the end, I reconnected with an aunt and cousins whom I had not seen in many decades and with a few people from Saint Georges Court. I discovered that some of my scientific colleagues have fascinating backgrounds, including some experiences and ancestral baggage that is similar to or complements mine.



Hanna Reisler
Stephen Bradforth
Jingsong Zhang



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Michele's underlying presence has, of course, been integral. As many of you are aware, she is spectacular. The real deal and the original super, she is a person of immense character and kindness, without a mean bone in her body, soft fire with a cloud's grace. Written thirty-five years ago, the lines below are as true today as they were then.

You are a beautiful human being.
When I look at you in your sleep,
I can feel who you are,
And I know who you have been,
And who you might have become.

Michele retired from CSUN after forty-one years of service as a faculty member in the Psychology Department. At least that is the story that has been circulated. However, those of you who know her realize it is undoubtedly bogus. There is no way she really retired. Talk of such can be nothing other than a vicious rumor. She simply opted for one of those "too good to pass up" golden handshakes. Her activity level has always been that of a hyperactive teenager, and it has not changed. She does a great deal of professional



2013

work in the Los Angeles area, most of which is driven by her strong sense of social responsibility, jogs almost daily, and is frequently working on the computer at 4 a.m. There have been a few concessions. We meet friends (Rebecca, Darrel, Marie, Matt, Touraj, Sunil, Laurie, John, Leslie, and others) on Saturday mornings at a local Santa Monica coffee house that is owned by, of all people, Bob Dylan. We even get to the Pacific Resident Theater more often than before. We have been very fortunate.



1962

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Here is how Michele sums up her past:[‡]

Got born / stayed warm / went to school / was cool
Matriculated / demonstrated / graduated
Miniskirts / maxi-flirts / hopped into bed / stayed wed
Civil rights / take-back-the-nights / got high / studied psy
Protest / divest / moved west
Became professorial and tutorial / digitized / diagonalized / formalized
Taught 'em / tested 'em / final-assessed 'em
Steered clear of radicals / went on sabbaticals
Took stock / health shock
Got fit / got well / jogged along the Inkwell
Was recruited and re-routed / organized / prioritized / revitalized
Quit the commute / ditched the drive / said goodbye to the 405
Back to school / still cool
Newest voice in the community chorus / más "antigua" en la clase de español
Not ready for a leisure suit / I'm on a roll
Confused? Amused? / I'll be more explicit / if you visit
<http://wittig.socialpsychology.org/>

[‡] Apologies to Bob Dylan's *Subterranean Homesick Blues*.

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Finally, please do not equate the writing of this autobiography in any way with that phenomenon of modern times referred to as retirement, the dreaded R-word. If and when that happens, it will be well downstream from the present. Right now, its mere mention reminds me of the song written in 1967 by nineteen-year-old Alexandra Elene Maclean (Sandy Denny) and popularized in the 1970's by Denny, Nina Simone, and Judy Collins: *Who Knows Where the Time Goes*.



Birds
Robert Wittig

And of a different life in a different era, lived long ago on Saint Georges Court.

Curt Wittig

Pictures, Photos, and Images

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Robert Wittig can be contacted by email at wittig.robert@sbcglobal.net. He describes himself as follows:

My name is Robert C. Wittig. I am a painter of pictures. I do not consider myself to be an artist. The word "artist" implies to a lot of people that one has fame

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and stature. I make no such claim. I paint pretty much because it is a compulsion. It also earns me a small amount of money to pay for supplies and shipping costs for those who purchase my paintings. Still, I have sold in excess of 3,000 paintings, so someone must like them. I sell mostly on eBay, and my work for sale can easily be found by googling ebay bobwittig. I painted yesterday and again today, and there is a high probability I will paint tomorrow. It keeps my demons at bay.

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Meirav Gebler's art can be viewed at www.meiravgebler.com. She can be contacted by email at meiravi.g@gmail.com. She describes her work as follows:

My works are a series of meditative processes that get at the tension that exists between the physical and the spiritual, the soul and the body, the light and the dark. I find that in most moments our words fall short of expressing that which is truth, and end up creating barriers that prevent us from experiencing true light. Therefore, honest reflection and meditation triumphs in a way that words fail. These paintings are my expression of that tension and the meditation that is demanded by it.

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- Tom Randolph is a photographer based in Venice, California. Some past work for us has been used: Koplitz, Xu, Dulligan, Böhmer, Wen, Valachovic, Davis (230), Hodgson (233), Oh, Hoffmann, Iams (242), Segall, Nickolaisen (243).
- My siblings and I own all the old family photos.
- Other photos are snapshots taken over the years.

The man sitting next to me on the subway in New York handed me a sketch as I was getting up. It took Lowell Bowie a mere five minutes to do it – nice guy. (June 20, 2014)



