Memories of Robert B. Zajonc

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Robert Zajonc was a consummate scientist, scholar and social science researcher. His was a remarkable life, a life led during a renaissance period of social psychology and he had much to do with its development and flourishing over the latter half of the 20th century. Exposed to all forms of personal suffering during his youth and young adulthood, Bob found his way to America and Ann Arbor after spending much of his formative period in his beloved Poland and France during WWII. These experiences would form the crucible for his professional and personal experiences for the remainder of his life. The facts of his scientific and professional contribution are easily documented — seven distinct scientific lines of inquiry; hundreds of scientific papers, each a seminal contribution; dozens of doctoral students, honorary degrees, scientific awards and medals — the list endless and richly deserved. Robert was also a builder. He served as head of the newly developed social psychology program in psychology at Michigan in the 1970s, Director of the Research Center for Group Dynamics in the 1980s, and Director of the Institute for Social Research in the 1990s. All received Robert's unique imprint for rigor, quality, and innovation. Bob also played a seminal role in the development of social psychology in Europe, leading to the establishment of the Institute for Social Science Research in Warsaw. Bob was also a father, husband, friend, colleague, and mentor. As chronicled in these remembrances from his first doctoral student, Eugene Burnstein, to Piotr Winkielman, his last student at the University of Michigan, Bob passed along his remarkable scientific judgment and insights that will stand the test of history. But there are others in this list between these two bookend students, distinguished scientists all, Richard Nisbett, Susan Fiske, Mahzarin Banaji, Paula Niedenthal, John Bargh and Richard Moreland who were graduate students, colleagues, co-authors, and deep and abiding friends over the decades.

Bob's scientific career was remarkable in how he did science ("Zajonc rhymes with science," as he humorously told me when we met in 1971). With a keen eye for fundamental causes, Bob sought out the nature of basic mechanisms in human thought and communication. He bore scientific anomalies poorly and was easily irritated by the lack of logical (or psycho-logical) fit among empirical findings. It was this capacity for irritation, known well by his students and colleagues, which drove him to conduct programmatic, novel lines of theoretically driven research, to root out the source of the anomalies, and uncover potential basic mechanisms that might drive some set of molar, observable social behaviors. Although a social psychologist at the core (since he helped define just what that is), Bob's work traversed developmental sciences, cognitive sciences, sociology, and biology. The work of Bob Zajonc was one of reasons I entered social psychology, and the main reason why I decided to take my first (and only, as the tale is told) academic position at Michigan. It was the precision, harmony, and elegance of Bobs' theorizing and empirical research which made him stand out from all others. What I later learned was that it was also his humanity, kindness, ethics, and "joie de vivre" that made him a very special person indeed. I felt fortunate to work as a colleague, to later chair the same social psychology program, direct the same Research Center for Group Dynamics, and more recently to serve as the director of the same Institute for Social Research. Bob laid down a deep and broad intellectual, personal, and scientific footprint. For those who followed in those footprints, we never had a thought about filling them, but instead they provided a guide to what one might aspire to achieve as a social psychologist. That I have

not filled his footsteps is not a source of angst, because without those huge Bob Zajonc footprints I would perhaps not have achieved what I have accomplished. I will miss Bob Zajonc as a scholar, mentor, debater, friend, colleague, and Zen master. He was a wonderful intellectual beacon and humane touchstone over these nearly four decades. What a ride!

James S. Jackson
University of Michigan

From Mentor to Dear Friend

We all know about Bob as a scientist — that in his astonishingly diverse research career he not only solved some long standing social psychological puzzles such as why the presence of others enhanced individual performance on easy tasks and degraded performance on difficult ones or how birth-order and family size influences intellectual development. But he also made discoveries that opened whole new areas having to do, for example, with the effects of mere exposure and the link between facial efference, blood temperature, and affect.

He was my graduate mentor and dissertation chair — I was his first doctoral student — and later my colleague and good friend. Bob, the mentor (and even as a colleague) had the aura of a Zen master who just happened to be born an only child in Lodz, Poland to parents who were killed in Warsaw during World War II when Bob was 16. In short, he was kind, wise, all-knowing (not only about things psychological but also about food, wine, literature, architecture, carpentry, and Europe and its languages; my children while in some awe couldn't resist calling him "… the world's leading expert …"), patient, poised, self-possessed and generous. His generosity went much beyond things intellectual and scholarly. How many distinguished professors would spend hours in a dark dank basement building equipment for a manually challenged doctoral student who did little or nothing but watch and make free with comments about the useful skills his chairman inherited from his Polish peasant ancestors (his family was actually upper-middle class)? Working with him was great fun as well as an intellectual feast, typically occasions full of wit, one-up repartee, elegant (if fantastic) models, "no-one-has-thought-of-this" hypotheses, brilliantly economical (if impractical) experimental designs and "major breakthrough" data.

Those fortunate enough to work with Bob found it among the most exhilarating, gratifying and merry experiences in their career as psychologists. And although I remain disappointed that he chose to desert the austere pines of Michigan for the lush palms of Stanford, I have and will continue to miss him dearly.

Eugene Burnstein
University of Michigan

Affection Knows No Inferences

Bob was a towering figure in social psychology and I was fortunate enough to have him as my advisor during graduate school at Michigan. The project I helped him with as a research assistant was the birth order and intellectual development model, and I wrote some of the computer simulation programs to generate and fit model predictions to large national data sets from around the world. Still, it was

apparent that Bob's mind was already moving out of that research issue into one much more interesting and exciting to me as well — the "preferences need no inferences," or affect-without-cognition idea. I remember the time Bob called me into his office in my first year, held up postcard-size reproductions of two different abstract art paintings, and asked me which one I preferred. Like most others I very quickly pointed to the one I liked best. Then came the telling question from Bob: "Why that one?" As I hemmed and hawed about color and composition, Bob smiled and said "See, you knew your choice before you knew any reasons for it" and the hook was set. I've been trying to understand those immediate unconscious processes ever since.

When we held a *Festschrift* for Bob in Ann Arbor in 1998, it was an opportunity to re-read his many major papers over the years, and a major theme underlying his research interests became clear to me (finally, because I'm a slow learner). Bob was all about finding the simple basic effect that produces seeming complexity — very much in the spirit of chaos theory. The mere presence of others is arousing by itself and can produce improvements or decrements in one's performance, and conscious worries about how those others might evaluate us are not necessary for the effect; mere exposure to a novel attitude object increases our liking for it, even if we are not aware and can't recognize that object! Again, this approach greatly influenced me whether I was aware of it before 1998 or not. Even his approach to birth-order and intelligence influenced me, as Bob's model emphasized the importance of the early family environment, and that is where the nascent research area of "developmental social cognition" is now heading in a big way.

Mark Baldwin's insight in the 1980s that Bob was watching his past and current graduate students from the back of their minds was right on target. For me (and I doubt I'm alone), it was a tough and uncompromising standard, a constant feeling that your work was not good enough yet, and that it needed deeper thought, better data, and greater scholarship. Upon first learning of Bob's passing, the world suddenly felt very strange; I'd never been in a world without Bob in it. But as the weeks have gone by, I have on more than one occasion noticed his presence, still there in the back of my mind.

John Bargh
Yale University

To Animal or Not To Animal

Bob Zajonc was my graduate advisor at the University of Michigan from 1973 to 1978. When I first met him, he was doing research with chicks. To my dismay, he told me he hoped to continue that work with my help. One of Bob's many interests was the social behavior of animals — Bob felt that if a human behavioral phenomenon could be shown to occur in lower animals as well, then that might rule out some explanations (e.g., explanations involving complex cognitive processes) for the human behavior. What to do? Could I tell my new advisor that I did not want to do animal research? I came back the next day and did a courageous thing (by my standards). I told Bob that I wanted to study humans, not animals. Rather than insisting, Bob graciously described several ways in which I might contribute to his other research, especially research on mere exposure effects. As a graduate advisor myself, I have often faced the same issue, but from the other side. I remember what Bob did and I try to be as gracious as he was.

Not long afterward, I was in Bob's office again, this time to design an experiment on mere exposure effects. I expected Bob to simply tell me what to do. Instead, Bob asked me what the purpose of our

research was. What theoretical issue were we trying to resolve? We discussed this until that issue was identified. Bob then left to me the intimidating task of actually designing the experiment. I brought him designs to look over, and he commented on them, but it was clear that he viewed the project as mine. Once again, I learned from this experience a lesson that I try to apply now — students learn more by doing their own work, and perhaps making mistakes as a result, than if they are simply told what to do at every step along the way.

Another experience that had a strong impact on me occurred when Bob and I completed a project that produced what we viewed as important results. As we began to write a paper about the project, I was excited when Bob said that we should submit the paper to one of the major journals. I agreed, of course, and said that those were clearly good choices because they were among the most prestigious journals in the field (I was eager for fame and fortune). Bob then gave me a funny look. No, he said, those journals are the best choices because they have the most readers, and when you discover something that you think is important about human behavior, you want to communicate your discovery as broadly as possible, so that everyone can benefit from it. This experience taught me that science should always come first, not one's career.

Finally, I saw Bob work on several different areas of research while I was at Michigan, and I learned many things as a result. Over and over, for example, I watched Bob take what seemed like a fairly simple idea, and then "push" it just as hard as he could — exploring every possible implication and application of that idea, and resisting the temptation to complicate it by adding layers of mediators and moderators. I also saw how Bob reacted to criticisms of his ideas. Bob was not afraid to become involved in debates of this sort. In fact, he welcomed it, and though Bob always treated his critics with respect, he also fought hard for what he believed.

I haven't said much about the softer side of Bob. He was very kind to me. My wife and I ate many meals at Bob's house, and more than once he invited us to spend the weekend "up north" at his summer home. And there was the joy of belonging to the raucous "tribe" of graduate students that Bob trained. All of that was long ago, of course, but some of it lives on in me and the others. I like to think we have retained some of Bob's best qualities in ourselves. I hope so, anyway. I could not then, and probably never will be the kind of scientist that Bob was, but I can certainly try. As we all should.

Richard Moreland
University of Pittsburgh

A Mind Without Coordinates

Bob was brilliant, of course, but in a way I've never seen in anyone else and never managed to understand despite knowing him for 37 years. He constantly surprised me with his reactions to things and with the ideas he would come up with over lunch or in PhD orals. Speaking of which, he did manage sometimes to terrorize students with his odd connections: he might ask apropos of a dissonance dissertation, "How does this relate to Schimmelpinnick's theory of resistance to extinction?" I once complained to Hazel Markus that he had a mind without coordinates!

That impenetrable mind was responsible for some of the cleverest, and most important, research in all psychology. His work was characterized by its creativity and by the fact that there was no apparent

common thread among the research questions for which he is most famous. His resolution of the puzzle about why the presence of others sometimes improves and sometimes impedes task performance was not tied in any obvious way to his text on animal psychology, which was not linked clearly to his work on the effects of mere familiarity, which in turn was seemingly unrelated to his demonstration that birth order is related to intelligence, which certainly didn't predict his subsequent work showing that emotion sometimes precedes cognition, which was independent of his work on the effects of facial expression on thermal regulation of the brain. Any one of those contributions would have been considered sufficient to make him a highly respected researcher.

Bob once told me that he "never knew where it was going." A problem would suggest itself and he would just begin exploring it, learning from his data to a degree that is unusual and following the trail wherever it led. This surprised me because I always knew where it was going with my research. (Never mind that I was usually wrong.)

Bob was funny, unflappable, gregarious, generous, and a born leader. Any event where he was present was an occasion. Any ISR or psychology department occasion from which he was absent was a diminished event. He took care of his students and colleagues in way that evolutionists argue is one of the surest ways to guarantee survival of one's genes. He provided resources for others who willingly gave more resources back to him. His ideas are going to be memes that will survive long after his passing.

Richard E. Nisbett
University of Michigan

Contrarian, Magician, Encyclopedian

Bob Zajonc always went where no one had gone before. His contrarian strategy targeted under-valued topics, focusing on cognition when others were doing affect, or doing affect when others were all about cognition. Bob disliked agreeable consensus; he always considered the opposite. Working alone, he had areas to himself long enough that he could think in peace. By one metric (Fiske, 2001), he had a major new idea about every five years (1960, cognitive tuning; 1965, social facilitation; 1968, mere exposure; 1976, family configuration and intelligence; 1980, primacy of affect; 1985, embodied emotion; 1993, unconscious emotions; and most recently, collective violence). The time line of Zajontific progress had the field catching up with him at lags beginning with 10 years and decelerating to 20 or 30 years. People were slow to build the bandwagons implied by his brilliant new ideas. But then, the best ideas always make people uncomfortable, because they upset the typical ways of seeing. People require mere exposure to like the gradually familiar.

Bob appreciated people making sense of their world, but he also knew that people like to be entertained by novelty, incongruity, and magic. If his intellectual life was full of surprises — and that was his trademark — so too his social life was unpredictable and fun. When I went on sabbatical to Michigan, Hazel Markus and Bob were the consummate hosts, always ready for a good meal with sophisticated food, wine, and conversation. The intellectual magic came partly from Bob's encyclopedic knowledge of classics in the field. On various occasions, he would trot out a historic reference to the early European meaning of attitudes as intentions, or the classical world's division of elements, or the French vascular theory of emotions. Just when the crowd thought it knew everything, this genius of a magician would

show them that the opposite was also true, according to scholars decades or even centuries earlier. One always learned something new from his magical, contrarian perspectives in work and in life.

Susan Fiske
Princeton University

The Mere Zajonc Effect

Bob Zajonc's mere presence in psychology made it shine with a brighter light. He did this through the brilliance of his observational powers and his empirical discoveries, through the demystification of complex mental processes so that a simpler one was revealed, and through the understanding of the power of social forces in the lives of ordinary humans. To me, for whom his work has been a constant beacon, Bob Zajonc's mere presence was uplifting and emboldening.

The great joy of the business in which we are engaged is that teachers can be acquired and heroes created through the spoken and written word. I was never a student or colleague of Bob's but he was a teacher of a very special sort — from his choice of problems and his insights, he inspired me to imagine the contributions that psychology can uniquely offer to science and to human welfare.

By merely studying certain topics, in particular unconscious mental processes and emotion (both no-no's at the time), Bob gave these topics legitimacy. Those of us who thought ourselves relatively alone in doing so in the 1980s had the assurance that Bob Zajonc had already been there and therefore that it was safe to go. By his penchant for the simple, he provided a rare model. It was always a "mere": The mere presence of others as socially facilitating, the mere exposure of a thing as the source of preference, the mere position of a person in the birth order as the determinant of intelligence. Each of these meres (mere presence, mere exposure, mere position) was a gem of an example of a simple yet aesthetic and profound feature of the human mind.

In conversations with Bob Zajonc the genius, I recognized the leagues that separated him from the rest of us. He became for me the things to aspire to — in the type of work, in the manner of the work, and in the spirit of the work. I looked for connections wherever I could — that we were both immigrants; that we had both received our training in Midwestern universities to which we owed a great deal; that in his interest in genocide and mine in prejudice, we were both social psychologists engaged in the study of how good people can cause devastating harm.

There was, in the spirit of psychology Bob represented, a boldness of vision, and a clear sense that our work is the closest thing we irreligious folk will come to experiencing what it means to do God's work. Bob's mere presence, his mere thoughts, and his mere words have made my daily work a genuine preference that needs no inference.

Mahzarin R. Banaji
Harvard University

Emotions and Intellectual Discovery

As a sophomore at the University of Wisconsin-Madison, I took introductory psychology with a former

student of Bob's, D.W. Rajecki. Shortly after learning how to pronounce Rajecki's, name, we learned how to pronounce Zajonc. "Like science," Rajecki said. Although it was an introductory class, Bob's work was featured prominently, and it stuck with me. In my junior year, in my "Psychology of Human Emotions" class, I read "Feeling and Thinking." I was hooked. "Where do you want to go to graduate school," a departmental advisor asked. "Michigan," I said. I had been accepted at a couple of fine graduate schools, but not Michigan.

I finally was accepted at Michigan. Bob was not my major advisor, but because we had common interests we worked together on several projects. One day, long after I had obtained my PhD, I was sitting with a former Michigan classmate at a conference. He said loudly, "Paula, I remember a time when you were in Bob's office. There was much screaming. Then you came out crying and ran off. I have been meaning to ask you why?" He asked this in front of about 20 people. I was crying, I answered, because Bob had once again found something wrong with my ideas. The problem was, he was right every time. The very thing that drew me to him as a student, as most of his students I suspect, was the very thing that was the most challenging: the logic and clarity of Bob's thinking could be applied to everything. And when it was applied to a graduate student's silly ideas, it could provoke tears.

Once Bob admitted to me that he was still a bit mad at me for not working on his research about temperature, blood flow, and emotion. After he told me that, I thought back to the times that I sat down in the laboratory while he toyed with the special equipment that he had purchased for this research. He was using me as a subject to learn to use it. In order to provoke an emotion, he told me jokes. They were really very bad. (Hazel Markus' jokes at the time were wildly funny.) I wondered why Bob couldn't say something funny so that the temperature of the blood flowing to my brain would actually change. But I was missing the point. His work was about how feedback from the face influences subjective experience of emotion. And that is where the field is right now. Bob was always 20 years ahead of us, it seems.

Paula Niedenthal
UniversitÃ© Blaise Pascal

The Polish Connection

Bob Zajonc shone upon my scientific life for nearly 25 years. In 1985, as an undergraduate in Warsaw, I read "Preferences Need No Inferences." I was floored from the very first paragraph where Bob contrasts psychology's marginalization of emotion with a poet's insight, quoting e. e. cummings: "since feeling is first, who pays any attention to the syntax of things will never wholly kiss you." Bob seemed not only deeply correct and wickedly smart, but also effortlessly stylish and refreshingly irreverent. So, naturally, I wanted to meet him — my curiosity amplified by the larger-than-life stories of his life during WWII in Europe and his migration to America.

We first met in early 1989 — Annus Mirabilis, with Poland's "almost-free" election coming in June, and then the Berlin Wall falling that November. Hailing from Iowa, on internship from Bielefeld University, I arrived in Ann Arbor on a rainy day. There was Bob in his "Sunday best," jacket and all, in the spacious ISR director's office, with two secretaries guarding access. I was initially intimidated by the formality, but soon we were excitingly discussing the political developments in Europe. Critically for my fate, Bob encouraged me to apply to Michigan and suggested imaginative paths to PhD funding. This small story illustrates Bob's much bigger commitment towards building bridges between U.S. and

European science, especially Poland. Bob wanted to foster tangible social change, and knew the value of creating formal and informal structures. He helped establish ISR's sister Institute of Social Studies in Warsaw, supported the student exchange between Michigan and Warsaw, and, as importantly, he and Hazel hosted a steady stream of European visitors.

As Bob's last Michigan student, from 1991 to 1995, I experienced many dimensions of his unusual mind. Our first project looked at subliminal affective priming of preference judgments. Bob's prediction — that affective reactions are impervious to attributions or even consciousness — was not only brilliantly correct, but also exemplified his intellectual sovereignty, as it ran counter the more "sensible" predictions from established models. But I also experienced his inscrutability, with design choices justified by "elegance" and "simplicity" (only years later did I understad the inferential power of parsimony). When our next project, linking emotion to brain temperature, required that I master complex psychophysiology, Bob's major advice was "just do it." He was not a hand-holding type.

In some ways, Bob's philosophy embodied Apple's "Think Different" slogan. Pursue your own path, be bold, fresh, think big and free. Bob never cared for "small minds working on small problems." His early work on cognitive balance upset the cart of behaviorism. When cognition dominated, he argued for affective primacy and the representational role of the body. When Bob felt that emotion research became too enamored of itself, he challenged the received wisdoms (e.g., "facial expression is one of the worst misnomers in psychology"). I remember being often puzzled by his wild pronouncements (e.g., "most research in social cognition is nothing more than replication of cognitive experiments with social content"). He meant many as provocations — a way to push us students and colleagues to think harder and nimbler. But some were quite prescient. I remember Bob arguing that much of general cognition derives from social cognition, as the human brain primarily evolved to solve social problems. This radical statement now seems quite reasonable.

Bob was a contrarian, perhaps because he disliked ideologies, of any kind. But he also simply liked to have fun, turning the profound into the ridiculous, and the mundane into the elevated. Just as he claimed that poets knew more about emotions than did psychologists, Bob pointed out that "Dear Abby" letters first noticed how spouses become similar with age, or that an obscure French scientist named Waynbaum understood facial expressions better than Darwin. At some point, Bob told me that street life, old books, television or newspapers are the best sources of ideas. He advised me to read fewer journal articles and to get a girlfriend.

What is most remarkable about Bob is his continuing impact. He is cited over 200 times per year, including papers he wrote 40 years ago! In the emotion field alone â€“ a fraction of his legacy — Bob's insights into affect-cognition interaction, functions of emotion, and the role of embodiment are as inspiring as ever. So, I am heartened by the thought that his extraordinary mind, captured in writing and etched in our personalities and memories, will continue to push, provoke, and inspire us for many years. Yet, as Bob knew well, thoughts cannot conquer feelings. I will miss him tremendously.

Piotr Winkielman
University of California, San Diego