The Three Faces of Jay S. Rosenblatt

ABSTRACT: This essay provides an account of the development of Jay S. Rosenblatt’s approach and contributions to the study of maternal behavior and the mother-young relationship, focusing on the role in that development of his life as painter, analyst, and scientist. It is personal perspective. © 2006 Wiley Periodicals, Inc. Dev Psychobiol 49: 2–11, 2007.

Keywords: attachment; concept formation; early experience; hormones; human

INTRODUCTION

When I was asked by Gaby González-Mariscal to contribute to this volume I intended to do an analysis of our own work on the development of maternal behavior, taking a psychodynamic perspective which considers not only the role of early life events and experiences with mother on the development of the behavior in the rat, but also the events and intellectual nurturing that I received during my early development that led to this body of work. In exploring the latter, and especially the role of Jay S. Rosenblatt, my mentor and supervisor, on my work I became much more intrigued by the man and scientist himself—which brings me to the focus of this article: “The three faces of Jay S. Rosenblatt: as painter, analyst, and scientist.”

In preparing for this I had the opportunity to talk with Jay over e-mail on numerous occasions where he permitted me to ask—and he answered—many questions, both of a personal and a professional nature. I also went to New York and interviewed Jay in Central Park, at his home in New Jersey, and over lunch on Amsterdam Avenue. Jay provided me with a host of family photos and photos taken at various points in his life and career, with many taken by, and of, students and faculty at the Institute of Animal Behavior, Rutgers University. The IAB was joined with the Psychology Department in the mid-90s. But I am getting ahead of myself. In addition to the interviews, I reread many of his articles and tried to understand the themes that had guided his thinking and his research and those of his students.

Before we start this biographical journey, why are we celebrating the life and work of Jay S. Rosenblatt? We are celebrating a person who, in the modern period starting around 1960, virtually created a field of inquiry: the study of the psychobiology of mammalian maternal behavior. Jay provided the framework, the scaffolding for much of the work on maternal behavior that has taken place in the past 45 years. He was among the first to study its humoral (Terkel & Rosenblatt, 1968, 1972) and hormonal (Bridges, Feder, & Rosenblatt, 1977; Bridges, Rosenblatt, & Feder, 1978; Rosenblatt, Olufowobi, & Siegel, 1998; Siegel & Rosenblatt, 1975a,b) bases; he explored the role of sensory factors, starting with somatosensory stimulation of mammary gland development during pregnancy derived through self-licking (Roth & Rosenblatt, 1966, 1967, 1968), and the role of chemosensory cues in its organization and regulation (Fleming & Rosenblatt, 1974a,b,c; Mayer & Rosenblatt, 1975, 1977, 1993). His work on experiential factors (which harks back to his studies on the role of experience in the mating behavior of male rats following castration) is legion and begins with his famous chapter with Rosenblatt and Lehrman (1963) and culminating in a progress report with Anne Mayer and Harold Siegel in 1979 describing the distinction between the onset of the behavior at parturition under hormonal control and its maintenance, through sensory factors and experience (Rosenblatt, 1970, 1975). Jay’s students and postdocs also explored the role of neural and neurochemical factors. Michael Numan, together with Barry Komisaruk and Jay Rosenblatt were among the first to demonstrate the importance of the medial preoptic area (Numan, Rosenblatt, & Komisaruk, 1977). This work on neural control of maternal behavior, starting in 1975 (Fleming & Rosenblatt, 1974b,c), was very fruitfully...
followed up over the years by other students and postdocs, in collaboration with Joan Morrell (who arrived at the IAB) and in the years that followed until the present. The analysis of the neural and neurochemical mediation of maternal behavior produced as many as 25% of all research articles coming out of the Institute of Animal Behavior/Neuroscience Institute at Rutgers (to name a few, Felton, Linton, Rosenblatt, & Morrell, 1998; 1999; Kalinickev, Rosenblatt, & Morrell, 2000; Komisaruk et al., 2000; Matthews Felton, Linton, Rosenblatt, & Morrell, 1999; Olazabal, Abercrombie, Rosenblatt, & Morrell, 2004; Olazabal, Kalinickev, Morrell, & Rosenblatt, 2002; Rosenblatt & Ceus, 1998; Rosenblatt, Hazelwood, & Poole, 1996; Vernotica, Rosenblatt, & Morrell, 1999). See also work of Judy Stern (for instance, in Stern, 1990).

Jay understood that with a social behavior like maternal behavior, there are two entities to deal with, the mother and the young, and the interaction and feedback between them, which he labeled “behavioral synchrony,” across development. In part, this understanding derived from his studies of cats and their kittens, under Theodore C. Schneirla, analyzing the processes of their mutual regulation and modulation using brooder-reared kittens, isolated from the mother and littermates during various developmental periods, then returned to the mother. In kittens he explored very early on the olfactory, somatosensory, and thermal regulation of the offspring’s response to its home environment and to its mother during nursing; and he discovered the establishment of individual nipple position preferences through learning, this at a time when many believed that learning in young mammals did not occur until well beyond the infantile period (Rosenblatt & Schneirla, 1962; Rosenblatt, Schneirla, & Turkewitz, 1961).

Finally, Jay did not restrict his work to rats, but worked with multiple different species over his career, starting with cats (Rosenblatt & Schneirla, 1962; Rosenblatt et al., 1961; Freeman & Rosenblatt, 1978a,b), hamsters (Siegel, Cohen, & Rosenblatt, 1979; Siegel & Rosenblatt, 1980), lizards (Crews, Rosenblatt, & Lehman, 1974), and, most productively, and in collaboration with Gaby Gonzalez-Mariscal and Carlos Beyer, with rabbits (Gonzalez-Mariscal, Chirino, Beyer, & Rosenblatt, 2004; Gonzalez-Mariscal, Cuamatzi, & Rosenblatt, 1998; Gonzalez-Mariscal, Diaz-Sanchez, Melo, Beyer, & Rosenblatt, 1994; Gonzalez-Mariscal et al., 1998; Gonzalez-Mariscal, Melo, Parlow, Beyer, & Rosenblatt, 2000). He even ventured into a few studies with humans (Rosenblatt, 1989b). His approach was to explore the similarities and differences in behavioral phenotypes across species; this comparative and evolutionary perspective, seen already in Rosenblatt (1989a) is best formulated in his most recent article in the Scandinavian Journal of Psychology on the evolution of behavioral and nonbehavioral patterns of parental care in mammalian and avian species (Rosenblatt, 2003).

In short, Jay explored the psychobiology of maternal behavior and aspects of infant learning from many angles, at multiple analytic levels, using multiple technologies and techniques, as they became available, and from a proximal, functional, developmental, comparative, and, more recently, evolutionary perspectives. He accomplished all this by working very hard, by giving his students guidance (but with a very long leash), by thinking deeply about issues, by being an excellent experimental scientist and methodologist, and by being inherently complex and seeing the world as complex. He was both willing to exploit unexpected serendipitous findings and remain programmatic and somewhat dogged, in his pursuit of a problem. He was not a trend follower and rarely pursued the ‘sexy’ ideas. Perhaps unbeknownst to him (or maybe he did know) he was a trend-setter himself; many careers have grown out of his conceptualizations and his work. Those of us who have had the opportunity to have worked with Jay and our students and theirs, are very lucky indeed.

THREE FACES

So what about these ‘faces’ and how have they contributed to the scientist and science? Jay Rosenblatt was born in 1923 in the East Bronx of parents who were immigrants from Russia and Austria. His father was a furrier, a hard-working, quiet, but kind man. His mother was a “consummate housewife and mother,” very warm and sociable, and a strong base. She came to the United States in the early 20th century, to escape the Russian pogroms. His father arrived alone as a teenager, from Austria. Jay was the youngest of three children, with an older brother and sister. His childhood was a happy one and his memory of his home life is very positive. He was admired and supported by his parents and his older sister, who was the intellectual of the family, not simply for being “cute,” but for being very competent; he excelled in sports, was popular in school, had an active group of friends, did well academically, and showed real signs of talent in his painting. When I asked him what were some positive memories from this early period, in addition to his warm family life, he described listening to the stories of the Hebrews in biblical times (themes which come out in his paintings) told by young rabbis who also “took us on picnics when we played baseball.” He also says “when I was 16 I spent weekends and one half day a week in his mentor’s studio, painting and listening to classical music—a most enjoyable way of spending one’s teens.”

And negative memories? He had more trouble with this, but then said that times were very difficult during the
depression and at that time his father became quite ill with blood poisoning and had frequent surgeries. “I continually worried about his life and the suffering he was enduring.” His father was eventually cured, a miracle at that time.

This brief personal biography does indeed explain the developmental antecedents of Jay, his work ethic, his self-confidence, his warmth, his interest in relationships, and the intellectual life that followed (Fig. 1—cumulative percent mature).

The Painter

It was in the context of his home that Jay began to paint. During his early teenage years Jay painted on his own and did life drawing under the WPA program for artists and as apprentice in the studio of Ben Wilson, with the implicit and financial support of his father “who didn’t really understand what (Jay) was doing,” but supported him nonetheless. However, it was his relationship with the painter, Ben Wilson, only 10 years his senior, that had the greatest impact on Jay. “I saw that he was thoughtful and deeply sincere in his work and that he would be supportive of my becoming a painter” Ben Wilson went on to become an established New York painter, influenced initially by the “great depictors of tragedy and morality—El Greco, Goya, and Daumier—and later by Kandinsky, Mondrian, and Max Weber.” His work was primarily expressionistic and deeply moving.

Hence Jay’s attachment to painting was also related to an attachment to Ben, with whom he kept in contact for 63 years until Ben died 2 years ago. Relationships and loyalty mean a lot to Jay. We are all pleased by that trait. In terms of the influences on Jay’s own painting, Ben’s own style was one influence, but to that was added the influence of the French school, Braque, Cezanne, Picasso, perhaps more in terms of the form and esthetic and less in terms of the content. Jay’s paintings show the strong influence of Judaism “because it provides a symbolism and setting within which to portray important contemporary feelings, stripped of their current images;” as well, he was influenced in his thinking by Marxism “—in its scientific, economic, philosophical, and political applications.” His paintings are often political. They also show the horrors of war and of the holocaust; they show groupings of people who are survivors of social catastrophes such as the “Desaparecidos” in South America and of nuclear explosions. Some are representational; others are more expressionistic; others almost decorative and abstract. Most are somber; some are serene. Like the work of his mentor, Ben Wilson, “he sought to infuse his work with a depth of emotion and to create a union of the cognitive and the expressive” (quote from a Ben Wilson retrospective at the Blair Academy gallery www.blair.edu/Performing_Arts”), a set of characteristics that also come out in Jay’s approach to science.

My visit to Jay’s studio was revealing because unlike the prototype of the art studio, it is not a bright, open,
environment. Instead it is somewhat dark and close, down in the basement. It is clear that he paints from his interior world; that he paints ideas and emotions. These are illuminated from within not without. The paintings elicited in me a very mixed reaction of—dare I say it?—approach and withdrawal. On the one hand, they depict suffering or sorrow and produce discomfort. On the other hand, most include relationships, contact, and interaction and nurturance and becoming comforting. Even those that describe the redemption... but more especially, the many that show mothers and their children. The kids are not particularly cute or attractive to the outsider or viewer, but they clearly are to their mothers who are usually feeding and holding them (Fig. 2—mothers and infants).

Jay did not become a professional painter, although Rutgers University mounted a one-man show of 56 of his paintings, drawings, and gouaches in the late 90s, but painting has always been important to him; he has been painting most of his life.

The Analyst

This is the most curious part of Jay and the least accessible. I recall as an IAB student we all became accustomed to Jay leaving work at 3 pm 3 days a week, and he would not deviate from this schedule—EVEN if we needed him. It felt like he had another quite mysterious ‘other’ life. Why did Jay become an analyst? What did it do for him? Who influenced him? These questions were all put to Jay and the answers were actually quite simple and not-at-all mysterious. Jay met Max Hertzman, a psychoanalyst and older colleague in the Psychology Department at CCNY where Jay taught as a TA and later Assistant Professor. Hertzman did a lot of pioneering work on Rorschach testing. “It was his thoughtfulness, originality, and honesty which attracted me to him. I felt close to him.” Again Jay became attached to a figure who served as a role model for things Jay himself wanted to do or be. Jay was attracted to Psychoanalysis because he wanted to get down to the “individuality and ordinariness without (the) theory or generality” inherent in research and theoretical scientific work and to understand more about intrapsychic events both in his clients and in himself. And the analytic approach was distinctly about development. In addition, Jay “wanted to see if his understanding of psychology related to the real world,” which then led him to take a job at a Pediatric Psychiatry Clinic at Brooklyn Jewish Hospital diagnosing emotionally disturbed, retarded, and cerebral palsied children. “I found that in fact my academic psychology background did help me to diagnose and understand these children.”

The Scientist

There were few indications from his earlier life that Jay would go into Science. His favorite subjects in school were art and “the social sciences attracted (him) more than the sciences (which [he] feared a bit).” Between 1943 and 1945 Jay was in the army, stationed in various parts of Europe including several places in England, in Paris, and Liege, Belgium. In 1946 he entered NYU to complete his training. The years between 1945 and 1953 were pivotal to Jay’s scientific career. At NYU he met T.C. Schneirla whose work and theoretical position was clearly reflected in Jay’s own subsequent work and thinking. Schneirla convinced Jay that having a “firm grounding in animal behavior (would provide) the broadest basis for understanding human behavior in addition to being of intrinsic interest.” Jay describes a conversation between the two where Schneirla said “well you are not going to get rich studying animal behavior” to which Jay responded “well, I was prepared not to get rich becoming a painter, so I might just as well not get rich studying animal behavior.” And so Jay started his PhD work nominally with Schneirla but also with Lester Aronson studying the role of hormones and experience in the organization of sexual behavior in male cats (Rosenblatt & Aronson, 1958).

It was at the American Museum of Natural History (AMNH) on a grant with Schneirla that Jay began his first foray into the study of mother–young interactions in cats. During that time he became very interested in early learning by the kittens and with Gerry Turkewitz who was a student, established that kittens develop home orientation by day 3–4; at the same time he discovered that kittens develop nipple position preferences on day 1–2 of life. This work was important because it was counter to the belief based on more traditional conditioning paradigms that animals cannot learn at such young ages; it showed that by using ‘natural’ species-characteristic themes-themes he explores from both a subjective and a scientific perspective.
situations, common now in the work of Jeff Alberts and others, experience and learning can be shown to occur very early in life (Rosenblatt, 1983).

Earlier, as a teacher at NYU, later at City College as a TA, and then as Assistant Professor at CCNY, Jay became close with Herbert Birch, a human developmental psychologist, who for a period constituted another important influence in Jay’s intellectual development. Birch worked on development in newborn babies, providing Jay with an outlet for his interest in human development. It was during these formative years in New York City that Jay met Danny S. Lehrman. This was a friendship that lasted until Danny’s untimely death in 1972. Jay and Danny Lehrman were graduate students together at NYU and also were colleagues at CCNY as assistant professors, as well as associates of the Department of Animal Behavior at AMNH where both of them did their doctoral research. Dan was the more advanced in animal behavior as an expert ornithologist than Jay, had already published a research article at the age of 17, and was becoming world renown because of his critique of Konrad Lorenz in 1953 (he received his PhD in 1954!). Says Jay of this relationship: “I learned a lot from Danny but most of all we were warm friends who could talk to one another about the most important things in our lives.” This affection is reflected in Jay’s biography of Danny written for the National Academy of Sciences (Rosenblatt, 1995; Silver & Rosenblatt, 1987; Fig. 3: Ethology, 1955).

The 1950s was a difficult period in US history, during the McCarthy era and Jay and a number of his colleagues (Max Hertzman) were fingered as persons of interest by the House of Unamerican Activities Committee (HUAC), an ‘interest’ that was conveyed to the CCNY administration which was followed by the nonrenewal of his contract. Jay soon thereafter moved to Rutgers University to join Lehrman in his newly created Institute of Animal Behavior in Newark, New Jersey.

Jay began his work on rat maternal behavior after arriving at Rutgers. This work was what he spent most of his intellectual energy on for the next 45 years (Jay retired in 2005). It is not possible to discuss each and every one of the 150+ papers and chapters that Jay has written in his 60+ years as a scientist. I will, however, describe some of the primary themes that have grown out of his work and the primary influences he has had on the field and on his students. As Jay himself pointed out, “most theorists are known for one or two ideas that formed the framework of their thinking.” In Jay’s case there are two and, maybe, three, principle ideas that have come to be identified with his perspective and have had an impact on the field in general and on the direction of my own work, in particular (for overview, see Corter & Fleming, 2002; Fleming & Li, 2002; Numan, Fleming, & Levy, 2006; Moore, 1995; Stern, 1990). I feel forever indebted to Jay for these ideas.

1. The first major contribution to the field was his recognition that given the right ecologic and naturalistic context one can demonstrate learning by the neonate at ages that are considerably younger than believed possible at the time this work was first done in 1960s (Rosenblatt, Turkewitz, & Schneirla, 1969). The sensory modalities recruited for this early learning were initially single modalities, thermal, and tactile, but through associative processes, came to depend heavily on the olfactory sense and eventually became truly multimodal. Jay’s early kitten work, illustrating these processes and described above, provided the groundwork for an entire field of study that focuses on learning within naturalistic contexts and by neonatal animals (Rosenblatt, 1971; Rosenblatt et al., 1969). This idea, tested well before its time, is reflected in more recent work called ‘the constraints on learning.’

Although Jay is most famous for his work on rat maternal behavior, which he started when he joined Danny Lehrman’s new Institute of Animal Behavior in 1958, his first work on kittens (started in 1954 at the AMNH) really epitomizes his approach to the organization of behavior and the influence of Schneirla’s Approach/Withdrawal theory (Schneirla, 1952; Schneirla & Rosenblatt, 1961), namely: that to understand development one must understand the transition between dependence on basic sensory-motor reflexes which occurs first, to the development of affectively based perceptual-motivational relations. Hence, through learning, simple responses to primary stimuli (thermal and tactile) that vary along the intensity dimension become approach or active withdrawal from affectively laden multimodal stimuli (often with the addition of olfactory information; Rosenblatt, 1971).
When I asked Jay what was the most exciting personal moment in his career—a rather unfair question, I realize—he described it was these kitten discoveries, which were in fact, quite serendipitous. While weighing kittens on a daily basis he had noted and later set Gerry Turkewitz to study, that whenever kittens were replaced back into their home environments (after removal of the mother), the kittens would return to the home corner and do so more rapidly each day. Since the kittens seemed to know where to go, despite having no vision, this could only be based on early learning of the olfactory characteristics of the area where mother normally nurses her young (Rosenblatt, 1983; Rosenblatt et al., 1969).

He says of this work and the kitten work that followed, “It seemed to me all the problems of early development could be studied in the development of home orientation of kittens—development of sensory capacities and developmental transition in the use of sensory systems, development of motor capabilities, and the effect on sensory system use (when kittens rise off the floor (crawling to walking) they can not use olfactory stimuli as well or as continuously and need to shift to vision with olfactory support, etc.), transition from use of socially conditioned stimuli (nest odors) to social stimuli (mother), development of learning and cognitive structures (internalization of path-taking) and of course, their emotional development indicated by their distressed vocalization and its termination” (Rosenblatt, 1983).

2. The second set of ideas or themes that have come to be identified with the Rosenblatt framework are reflected in the concepts of behavioral transitions in the maternal behavior cycle and behavioral synchrony between mother and young. Since these concepts have had such an impact on my own work and are by now part of the vocabulary of the study of maternal behavior (‘onset vs. maintenance’), they will now be discussed in some detail (Rosenblatt, 1970).

Although the study of maternal behavior is not primarily about early development, Jay treated the phases in the maternity cycle much as he would any developmental problem, as a series of developmental transitions. He became very interested in the phenomenology and then the mechanisms that mediated the development of maternal responsiveness from mating through pregnancy, to pregnancy termination, through the postpartum period, and into and through weaning. Each of these phases was characterized, for each he established the role of sensory factors, the associated physiological changes, the feedback effects of behavior, the role of endocrine factors, and then the role of shifts in hedonic and affective mechanisms. For each phase the mother undergoes there occurs a synchronized set of behavioral and physiological changes in the offspring. While in his rodent work, the emphasis was on the mother, the developmental status, and needs of the offspring changed accordingly, so that mother and offspring were mutually adapted in their behavior to one another. According to this view maternal care begins before the young appear, with conception. Once mating and pregnancy has taken place, the mother-to-be experiences endocrine changes that alter her behavior and psychology. She shows enhanced nesting and self-grooming behaviors, she comes to restrict her movements and reduce activity level, focusing instead on a particular nest site; she changes her eating preferences and behavior, with increases in preference for needed nutrients; and she shows variations in emotional behavior, changes in perception, and comes to attend to some cues over others (Lott & Rosenblatt, 1969; Rosenblatt, 1980).

The next transition in the maternity cycle that Jay and his students have studied most intensively occurs at the end of pregnancy and was first described in a chapter by Rosenblatt and Lehrman (1963). “The transition between the onset of maternal behavior and its maintenance is a powerful one; with onset being mediated by the hormonal changes occurring towards the end of pregnancy and at parturition.” While Jay did not know which hormones “turned on” maternal behavior initially, his 1972 studies with Joseph Terkel on the role of blood borne factors in the functional parabiotic manipulation showed that the relevant factors were present during the last 48 hr of gestation (Terkel & Rosenblatt, 1968, 1972). These studies with Terkel were followed up by studies by other students and postdocs working at the Institute of Animal Behavior. These described the pregnancy effect in which mothers undergo elevations in maternal responsiveness across pregnancy, peaking close to parturition. By means of the famous (infamous) hysterectomy-ovariectomy (HYST-OVX+E) endocrine manipulation that came to be associated with the Rosenblatt lab, at various points throughout pregnancy, Jay and his students established the importance of midpregnancy endocrinology and the subsequent decline in pregnancy progesterone and rise in estradiol for the onset of maternal behavior (Siegel & Rosenblatt, 1975b,c, 1980). These studies lead to a recognition that estrogen priming is also essential to the later discovered activational effects of oxytocin and prolactin in the initiation of maternal responsiveness.

The third phase in the maternity cycle, “the maintenance phase,” has, until recently, received very little attention. However, again Jay did some landmark experiments on the role of experiences acquired during the postpartum on the subsequent expression of the behavior at a time when the parturitional hormones were no longer playing a role (Rosenblatt, 1980).
experiments suggested the existence of a sensitive period for the long term effectiveness of a postpartum experience with young; it also suggested a role for different sensory modalities in the experience.

Work initially by Bridges (1975), Bridges et al. (1977), Cohen and Bridges (1981) and then by our laboratory (summarized in Fleming & Li, 2002; Numan et al., 2006; see also Stern, 1989, 1990, Stern, Yu, & Crockett, 2002) followed up on these early studies and we began to explore the role of the expression of the behavior *per se* and of somatosensory versus olfactory experiences with the pups in the maintenance of the motivation to mother. We illustrated the importance of the timing and duration of the maternal experience, and, as with other forms of learning, the importance of the interval during which pups are not present on responsiveness at test (the retention interval). These studies started by Jay show that reproductive behaviors like maternal behavior may be species-typical and relatively stereotyped in form, but they are nevertheless subject to the influences of experience and learning and exhibit considerable flexibility in when they are expressed and with what intensity. These behavioral flexibilities are mimicked by flexibility in brain function and structure.

The end of the maternity cycle, that of weaning, was also of considerable importance to Jay but it remains to this day the least studied phase (Reisbick, Rosenblatt, & Mayer, 1975). Jay’s early work on weaning by mother cat of her kittens is a true classic and describes behavioral synchronies between mother and kittens that are all too easy to translate into a human experience. The imagery of the analogy is palpable. The ‘approach and withdrawal’ tendencies that both we, as parents, and our teenage children, experience in relation to one another is strangely analogous to the behavior shown by the mother cat who actively withdraws from her growing and proactive litter prior to weaning (Williams, Hall, & Rosenblatt, 1980).

**The Father and Companion**

Jay is the “father” of the experimental study of maternal behavior. His thinking and work on rat maternal behavior provides the model for all work in the area in all species that have been studied. He is also the “father” or “uncle” to many of his students, his postdocs, and his younger colleagues. Over the last 45 years Jay has trained at least as many students and postdocs and influenced countless others. We have benefited enormously from his example in his science, his creative mind, and in his mentorship, as have our students. Many of us would simply not be doing what we do today had we not met Jay, read his work, or studied under his supervision (Fig. 4).

Jay is also a father in his ‘real’ life. We started this essay in good tradition of development, at the beginning, with a description of his family history and parents. In good intergenerational tradition, we will end this essay with a mention of the people who have been most affected by Jay, his children, and companions in life. These represent Jay’s
‘other faces:’ as husband, as father, as grandfather. Jay’s first wife and mother of his children was Gilda, a very smart, thoughtful, and energetic woman who worked in the New York City schools as a Psychologist diagnosing learning and emotional disabilities in a low income minority neighborhood. Gilda would often accompany Jay to conferences and there we, his students, would spend wonderful hours talking and laughing with Gilda. She was an astute observer of the behavior of scientists and would invariably provide an analysis of a science interaction that was ‘spot-on.’ Gilda’s illness came as a shock to Jay and his community. She was much too young. My last encounter with Gilda was while she was in the hospital, a few weeks before her death in 1999, and I remember with pleasure having had the opportunity to laugh with her this one last time.

The loss for Jay was enormous, after 52 years of marriage. However, Jay knew what a good life felt like and that there was still a life to live; in 2000 Jay was very fortunate to meet Pat, who he married. Pat was able to help Jay become whole once again. Pat is a very accomplished potter, illustrator, and artist in her own right and a wonderful companion. Although new to our scientific community, she already has many friends and admirers and we welcome her. Finally, for many years now we have had the opportunity through Jay’s wonderful descriptions to watch Jay’s two children, Nina and Danny, grow up into talented professionals in their own right. Nina, who has a PhD in art history works as a history and art teacher in a Middle school, much like her mother and also her father; she is also a mother herself, of Olivia and Suzanna. Danny is an Assistant Professor of Anthropology at Scripps College in Pomona, California. The apples seem not to have fallen too far from the tree! We come full circle.

POSTSCRIPT

Jay, this essay only scratches the surface of your life and its impact on your Science, Community, and Family (Fig. 5—AAAS). But, for even that small ‘look-in,’ we are profoundly grateful.

REFERENCES


FIGURE 5 Jay S. Rosenblatt, on becoming a Fellow of AAAS.


