In Appreciation: Eleanor Gibson

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Eleanor “Jackie” Gibson died December 30, 2002 at the age of 92. Gibson was an experimental psychologist who made many significant contributions to the fields of perception, infant development, and reading. Gibson received her PhD in experimental psychology from Yale University in 1938. She worked with her husband, James G. Gibson in the Department of Psychology at Cornell University from 1949 to her retirement in 1979. She worked first as a researcher in the department from 1949 to 1966, when she was appointed professor. She was the first woman to hold an endowed professorship at Cornell, the Susan Linn Sage Professor of Psychology.

Gibson wrote many books, with her most well-known books being *Principles of Perceptual Learning and Development* (1969) and *The Psychology of Reading* which she wrote with Harry T. Levin (1978). She was elected to the National Academy of Sciences and was awarded a National Medal of Science in 1992 by the President George H. W. Bush. In 1993, Gibson delivered the Keynote Address at the American Psychological Society Annual Convention in Chicago. She was very active in her retirement and continued to write, research and advise her protégés, even into her 90s.

Thinking about Eleanor Gibson

Rachel Keen

Jackie’s career was long and outstanding. It began in the 1930s when to be a woman scientist was an arduous task. Beginning in graduate school with a Yale professor’s abrupt refusal to allow a woman in his lab, to years of being refused a regularly faculty position at Cornell, Jackie’s career progress was blocked like that of many women of her time. But though the outward trappings of being on the regular faculty and having tenure were denied, Jackie’s research flourished. She published landmark journal articles and the book on reading during this period. Then finally in the 1970s when she was over 60, Cornell finally recognized the gem they had and she was appointed a professor. In the next two decades Jackie came into her own, galvanizing the field of perceptual development with ingenious experiments on infants and exciting applications of ecological theory to developmental questions. After Jackie retired and moved to Middlebury, Vermont in 1987, I made many visits to see her. She was always curious about what people were working on, what were the questions being asked, and what were the most interesting studies coming out. We rarely talked about her accomplishments because she was an extremely modest person in that regard.

During a visit a couple of years ago Jackie and I had an exchange which I think characterized her attitude toward life, toward work, toward self-assessment. She was 90 years old at the time. The year

before she had published a wonderful book on perceptual development, co-authored with Anne Pick. In the year of the visit, 2001, an autobiography had just come out. At one point she complained to me of having nothing to do, nothing to write. I said that if I were her, I would rest on my laurels. Jackie replied, “Oh, Rachel – you would never do that!” as though this were an unthinkable option for anyone. It reminded me of something Duke Ellington said in response to an interviewer’s question about which of his compositions was the greatest. Ellington replied “The one I’m going to write tomorrow.” And so it was with Jackie. She always looked forward, and she remained vitally interested in science and in people until the very end of her life. During the same visit described above, I left her with a preprint of a manuscript recently submitted to a journal. Several days later Jackie called me. After duly complimenting the manuscript in general, she said she didn’t like the ending. “You let the reader down,” she said, “because you never clearly state the bottom line. What do you think is the big conclusion from the study? You don’t really say.” After we hung up I went back to the manuscript and Jackie was absolutely correct in her assessment. The ending was limp and vague. I rewrote the last two pages on her advice. She was teaching, thinking, and caring to the very end. I did not meet Jackie personally until around 1980, but during the last two decades she has been a cherished friend and mentor. Jackie was a model of what a scientist should be and what a human being should be.

Gibson Was a Gifted Mentor

Arlene Walker-Andrews

I came to Cornell in 1975, a place I had never heard of until I applied to graduate school. Within the first month, Eleanor Gibson – Jackie – provided me an opportunity to become involved in hands-on research. I helped an advanced student examine infants’ phoneme discrimination using the nonnutritive sucking paradigm. I learned quickly about the difficulties and joys of conducting research with infants. From that moment on, I was involved in research. I was part of a team of graduate researchers. We conducted several studies that investigated 3-month-olds’ abilities to detect and generalize invariant information for the substance of objects. These were among the first studies to use visual habituation to investigate infants’ discrimination and recognition of features of objects across exemplars, and it was an exciting time. We were brand-new graduate students, but Jackie gave us full credit and introduced us at meetings as her “young colleagues.”

Jackie’s lab was busy. She had a grant that funded research on infants’ perception of dynamic events. Liz Spelke, Nancy Vanderveer, Jane Megaw-Nyce, Cynthia Owsley, Debra Clark, Lorraine Bahrick, Kate Loveland, and I worked together and also conducted our own research. We acted as observers for each other and met weekly with Jackie. At times it was daunting. You’d be discussing an idea or problem and she’d be looking out the window and you’d think, “Is she even listening to me?” But when you came in the next day, there would be a note and a handful of articles that “might be useful.” Last year I sent her a draft I was working on. A week later, it was returned along with three pages of notes. A few days after that, a postcard arrived with more references and the request that I continue to send her work, as she was becoming bored in her health-imposed isolation.

A particular incident at Cornell illustrates Jackie's generosity, flexibility, and willingness to treat graduate students as independent scholars. Lorraine Bahrick and I wanted to study infants' selective attention. We presented our idea to Jackie. She didn't like it! She wasn't sure just what the results would tell us or whether we would be adding to what was already known. Ulric Neisser, Lorraine's supervisor, was more interested, so we decided to go ahead. We had Jackie's full support: We tested the infants in Jackie's lab, used her equipment and supplies, and enjoyed the help of her research assistants. Jackie ended up proposing an important control experiment as well. She had the grace, the integrity, and the generosity to enable us to go our own way, and after it was completed, she referred to the study in her own publications.

There are many gifted mentors, but Jackie is especially notable for the sheer number of students and colleagues she influenced. Jackie was an outstanding model: Her work ethic, her determination, her raw intellect, and her dedication to the growth and development of students were exceptional. I try to make a point of introducing my students at meetings, because Jackie always did. At the International Conference on Infant Studies (1998), I introduced three students to Jackie, and she sat and chatted with them in the Botanical Garden. They were thrilled and they were especially honored and touched that she treated them as young colleagues. Such was her way.

Gibson Was Dominant Influence

Thomas A. Stoffregen

I received the PhD in Human Experimental Psychology from Cornell University in 1984. My graduate advisor was Ulric Neisser. Eleanor Gibson (Jackie) had no official connection with my graduate education until 1983, when she agreed to serve as a member of my dissertation committee. Despite this, among faculty members she was the dominant influence on my graduate experience (Neisser was also a powerful influence, but was absent two of the four years it took me to earn the PhD). I came to Cornell to work with Neisser on visual attention, and I arrived with no background or specific interest in development. I was given the job of cleaning out the laboratory of James Gibson, who had recently died. Jimmy and Jackie had shared lab space, and this meant that I spent a lot of time in Jackie's lab. I was soon accepted as an informal member of the Infant Lab. I worked in the lab, on and off, throughout my years at Cornell.

Jackie Gibson was a unique combination of uncompromising intellectual rigor, personal reserve, midwestern plain speaking, and early-twentieth-century femininity. Somehow, these characteristics were combined in her everyday behavior. She was personally modest, but had the greatest possible confidence in the value and essential correctness of her science. Her Midwestern roots lead her to be plain spoken while at the same time maintaining the discrete civility that characterized women of my mother's generation. Put together, these traits gave her the habit responding to substandard scientific thinking quietly, briefly and with the utmost civility, while at the same time emphatically consigning it to the scrap heap. One of her most damning criticisms was to characterize an idea, argument, or person as "tender minded" which, for Jackie, meant something akin to "beyond redemption and beneath

contempt.”

She was not given to overt praise, of her students (or of anyone else). This meant that her students were constantly on watch, hoping to detect some indication, however elliptical, that she found our efforts to be adequate (never mind good). Yet she had great faith in and loyalty toward people who met with her approval. She treated her students as colleagues, and she would bend over backwards to help us. I cite a personal example. Midway through my final year of graduate study it became clear that I would have trouble landing an academic position. Setting aside her other obligations, Jackie sat down and wrote a grant proposal (to the Spenser Foundation) that would support me for a post-doctoral year in her lab. Only years later was I able to understand the extraordinary level of time and personal commitment entailed in this generous act.

Her composure was resistant to a wide variety of impositions. In her mid-70s, I once lunched with her on an Italian beach at which, as shortly became clear, women’s attire did not extend above their hips. One young couple took up a position in the sand mere feet from our table, and in direct line of our view of the sea. Jackie was unperturbed; she ate lunch and talked science as if we were in her lab. A more serious story relates to her retirement at Cornell. She became the first female member of the association of Cornell Emeritus faculty. At her first meeting of the group, she was handed a notebook and pen and told “you’ll take the minutes, of course”. I was astonished when she told me that she had complied; I felt that she must have had some response to this insult. With a smile that was at once pained and dismissive she said “I never went back.”

The participants in Jackie’s empirical studies generally were children, but she did not see development as her primary subject. The applicability of her work to learning in adults is poorly understood, and seriously under-valued. I learned from Jackie that perceptual-motor learning is of central importance throughout the lifespan, that it is one of the central facts of animate existence. I think it is no accident that in the title of her most influential book (Gibson, 1969) development is second to learning.

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Live the Life of a Scientist

Patrick Cabe

Jackie Gibson was my dissertation advisor at Cornell. At that time, Jackie was studying the development of reading. Her willingness to support a comparative project, quite peripheral to her own immediate research interests, highlights a theme that, 30 years later, is one of my most influential impressions from her.

Her career, spanning more than seven decades, divides roughly into three periods. Early on, she pursued

problems of learning, including animal learning. Later, her emergent interests in perceptual learning culminated in her landmark 1969 book. From the mid-1970s, her work increasingly focused on infant perception.

Despite these three stages, all her writing reflects a firm evolutionist stance that is particularly telling. Fundamentally, perception functions to support adaptive control of organismic behavior, allowing successful negotiation of dynamic environmental complexities: Perception is inextricably aligned with ecological and evolutionary concerns. Perceptual learning attunes perception to the fine grain of an organism's individual habitat. Jackie continually reinforced this deep-rooted evolutionist connection, which often seems to be misunderstood or simply ignored in much present-day psychological research.

The most profound lesson Jackie Gibson gave me, whether she ever intended to or realized it, was to strive always to live the life of a scientist. Jackie herself found ways to do solid science – to be that thoroughgoing scientist – even when others rudely, thoughtlessly, or foolishly put obstacles in her way. I wonder what Robert Yerkes would have thought to see the woman he refused to admit to his lab elected to the National Academy of Sciences and honored with the National Medal of Science from the hand of the president of the United States.

Jackie would be nothing but a scientist, even in the face of adversity. Jackie's example of steadfast perseverance to be a scientist, no matter what, has always been in the back of this aging academic's mind.

When I visited her in 1998, Jackie was writing her next-to-last book. She showed me her workspace; it is an enduring image. No powerful computer, no massive data base, no huge library – no, she wrote at a plain table, equipped only with a pad and a container of sharpened yellow pencils … but pencils to be guided by a resolute genius, in a hand that remained firm and clear even when last I saw her a year ago and asked her to inscribe her books for me. Jackie Gibson taught me that ultimately it is not fancy tools we surround ourselves with that makes us scientists. Rather, it is what is in our heads and hearts.

Gibson's Work 'An Extended Reply to Helmholtz'

Elizabeth Spelke

When I began to study with Eleanor Gibson as a graduate student in the 1970s, I learned of Helmholtz for the first time. Hermann von Helmholtz, the great physicist, physiologist, and psychologist, was frequently cited, with the deepest respect, as the proponent of an approach to psychology that was fundamentally wrong. Delving into his work, and comparing it to that of Eleanor Gibson, one can see the reasons for this opposition. Helmholtz was arguably the greatest experimentalist of the 19th century. It is he who discovered, as a student, how to use behavioral measurements-differences in the timing of a frog's muscle contractions in response to stimulation at different locations-to measure a hidden neural process-the speed at which the frog's nerve impulses travel. It is he who later used psychophysical

measurements to elucidate building blocks of human perception of color and tone. And it is he who donned prisms to measure the plasiticity of spatial vision, launching a line of study that continues to this day. When it came to the developmental origins of our perceptual capacities, however, Helmholtz issued a warning: Although we can debate the role of sensory experience in the development of perception, assembling logical arguments in support of one or another conclusion, we can never discover the origins of human perceptual capacities through experiments. Human infants can be observed, but they cannot be studied either through the psychophysical methods that Helmholtz applied to adults or through the invasive methods he applied to other animals. And observations of infants' behavior will never reveal conclusively what infants do and do not perceive.

One way to view the work of Eleanor J. Gibson is as an extended reply to Helmholtz's skepticism. She showed us how indeed we can study the capacities of inexperienced perceivers through experimental methods that are as ingenious, and rigorous, as those of Helmholtz himself. She devised experiments to shed light not only on the basic perceptual capacities that humans share with other animals but also on uniquely human perceptual and cognitive skills, such as reading. Finally, she showed how a set of theoretical ideas profoundly opposed to those of Helmholtz-ideas linking perception to action and to the extraction of invariants in the flow of visual stimulation over space and time-could be tested most decisively, through studies of the youngest human perceivers.

To reveal the origins of visual space perception, Gibson adopted a comparative approach. Although humans are a highly altricial species that cannot ethically be studied by methods of controlled rearing, many of the perceptual mechanisms found in humans may be homologous to those of other species. One can devise rigorous methods to test for such homologies. When true homologies are found, experiments on non-human animals can test for the role of experience in the development of those mechanisms and of the perceptual capacities they support.

Gibson's classic studies of locomotor behavior on the visual cliff provide the most shining example of this approach. With Richard Walk and Thomas Tighe, Gibson measured the spontaneous locomotion of young animals of many species on two plexiglas surfaces of equal true distance, that presented visual information for surfaces at different distances. As everyone knows, most animals stepped onto the optically near surface and avoided the optically distant one, the "cliff". By varying the visual information for surface distance, Gibson was able to show that infant animals of species as diverse as rats and humans relied primarily on patterns of relative motion to specify surface distance. This common pattern provided evidence that the mechanisms of visual perception and visually-guided locomotion were common to humans and other animals.

Having discovered this homology, Gibson was able to conduct decisive experiments testing the role of visual experience in the development of cliff avoidance. Newborn kids and lambs avoided the cliff at birth, providing evidence that visual experience was not necessary for cliff avoidance in those precocial walkers. Young altricial animals including rats and cats could not be tested on the cliff until some time after birth, when they began to show visually-guided locomotion. To investigate the development of cliff avoidance in those animals, therefore, Gibson and her collaborators undertook a series of controlled rearing experiments. Rats who were reared only in the dark, with no visual experience, avoided the cliff on first exposure to the light. Cats did not: They required a few days in a lighted environment before they began to engage in visually guided locomotion and cliff avoidance. What was happening during those few days: were the cats learning about the tactile consequences of different visual patterns? To

investigate this question, Gibson gave dark-reared cats a few days of visual experience on the plexiglas cliff itself. If cats learn which visual patterns are safe and which are dangerous, then these cats should have shown no cliff avoidance, since the plexiglas surface was safe to walk on. After this experience, however, these cats began to avoid the cliff as much as their normally reared counterparts. Cliff avoidance therefore occurs without any opportunity to learn that cliffs are dangerous, in every animal tested. Given the evidence that cliff avoidance depends on homologous mechanisms across animals and humans, this line of research meets Helmholtz's skeptical challenge. The origins of human perceptual capacities indeed can be studied through a combination of comparative and developmental experiments. Such studies are thriving today.

The approach to perceptual development exemplified by research on the visual cliff does not, however, appear to answer all questions about perceptual development. What can we learn, in particular, about perceptual and cognitive capacities that are unique to humans? In the middle of her career, Gibson turned her attention from visual surface perception to reading. With Anne Pick and other students, she developed a research program based on a simple and powerful assumption: When human children develop new culture-specific perceptual skills, they deploy older perceptual and cognitive mechanisms that evolved for other purposes and are shared by other animals. Study of those mechanisms, in younger children and in non-human animals, therefore can shed light on older children's accomplishments. In the case of reading, controlled-rearing studies of animals provided evidence that a wide range of animals learn to discriminate between sets of objects by seeking out and discovering the contrastive features that distinguish them. Pick and Gibson applied this principle to children's learning of letters and letterlike forms. They discovered that children, too, learn to discriminate letters and forms by discovering their contrastive features. Their studies are a prototype for current work that seeks to decompose complex, uniquely human skills into their ontogenetically and phylogenetically older building blocks.

Finally, how can experiments help us to arrive at the right theoretical conception of human capacities to perceive and act? According to Helmholtz, every perceptual experience is a kind of inference, in which a set of disparate sensory data are evaluated and their most likely causes, among the possible objects and events in the surrounding world, are assessed. In contrast, the approach to perception developed by James J. Gibson holds that perception depends on the detection of higher-order invariances in the flux of stimulation, and it results not in disembodied experiences but in adaptive actions. Are these just different ways of looking at the same phenomena, or are they different substantive theories leading to contrastive empirical predictions?

I, personally, am not sure how I would answer this question. But Eleanor Gibson clearly viewed this fundamental debate over the nature of perception as an empirical matter to be settled ultimately by experiments. Her efforts to settle it produced some of the most beautiful studies of infant perception that the field has seen.

I was lucky to be at Cornell when Gibson founded her infant perception lab. At the time, most students of infant perception were guided, at least implicitly, by the Helmholtzian framework, and they attempted to discover the sensory building blocks of perception by testing infants' discrimination of colors, lines, and patterns in two-dimensional displays. Gibson, in contrast, used her new lab to test infants' sensitivity to invariant relationships in a flow of stimulation produced by real objects and events. With Cynthia Owsley, Arlene Walker-Andrews, and others, she showed that young infants are sensitive to visual information specifying whether a surface is rigid or flexible. The Gibson lab also showed that

young infants relate such visual information to the feel of a rigid or flexible object. When older infants begin to locomote, information for rigidity or flexibility guides their locomotion over a variant of the visual cliff. With this work, Gibson's developmental research returned to its beginnings. Her reply to Helmholtz's picture of this field, and its limits, was complete, and the contemporary study of infant perception began.

Today, the approaches that Gibson initiated are so widespread that it is easy to forget how much we owe her. Gibson herself did not help us to appreciate her contribution, because she always downplayed her own role in the field. Sitting now at my computer, I can imagine her reaction to this brief history. "There you go, Liz, getting carried away again. You're paying way too much attention on Helmholtz and to me. Our field is the result of work by many people." As always, Eleanor Gibson's criticisms give me pause. But in the end, I stand by my claims. On December 29, 2002, we lost the greatest experimental psychologist of the 20th century. Twenty-first century psychology will be built on the comparative, developmental, and experimental foundations that Eleanor J. Gibson gave us.

A Role Model for Generations

Anne Pick

Jackie's distinguished career and her important contributions were recognized, of course, by many awards and honors including membership in the National Academy of Sciences and the National Medal of Science, the nation's highest scientific honor. However, as those of us who were her students can attest, there were significant attributes of her science, her scholarship and her personal demeanor that are not reflected in her numerous honors and awards and that profoundly influenced what we learned from her and what we have aspired to in our own careers.

She was a very special mentor for her students. She excited our curiosity and engaged us as her collaborators in seeking knowledge about development right from the start. She was always available to talk, and eager to discuss one's ideas. She had an amazing knack for taking a student's most ill-formed idea, pondering it for a while, and then returning it – *and* the credit for it – barely recognizable as it had been turned into a really good idea, elaborated, clarified, and often made precise as an elegant plan for a study. Her standards were very high and she taught us by example while generously sharing the credit. Her science was characterized by rigorous and clever experimental design, attention to detail in experimental procedures, and a profound concern for the conceptual and theoretical bases of the problem being investigated.

Her standards for writing were also very high. She wrote clearly, cogently and interestingly, even in the first draft. I recall vividly the very first responsibility she gave me as her research assistant on my very first day in graduate school. She handed me a sheaf of yellow-lined pages on which she had hand-written a draft of a manuscript and she asked me to read it critically and suggest revisions. As I began reading it I became completely terrified! I fancied myself a pretty decent writer and, as far as I could tell, this draft was ready to be published! (There wasn't even a split infinitive, something which, I soon learned, she

abhorred.) I knew already that she expected me to have a more substantive and detailed response than "this is really good" but I couldn't think of anything else to say! She taught us, by example and by tutorial, how to write about complex ideas with clarity and simplicity without sacrificing their richness.

She was an inspiration for many women in science, but her perspective on her own roles can as well be taken to heart by men. In an autobiography she wrote: "What does a woman need to succeed in a profession that seems to have evolved chiefly for men? She needs all the obvious things like education and drive, of course. Some women have forgone the privilege and joy of a family in order to achieve academic success. I am glad I did not do that. The family may introduce some obstacles, but it is certainly worth it. Helpful colleagues and first-rate graduate students are very important too. Most of all, one has to want the kind of life that teaching, research, and scientific fellowship offer. I cannot imagine any other kind of life being so satisfying. Sometimes I have felt that I had two lives and that one was temporarily being short-changed, but I believe each is the richer for the other."

Jackie was a role model for generations of students as a passionate, respectful and humane citizen of academia as well as a brilliant scholar. I only hope she knew how and how much she taught so very many of us.

Life: Finding the Invariants

Roberta Michnick Golinkoff

Life is a search for the invariants. Jackie Gibson knew that and showed us the full meaning of that statement in her relationships with students, in her classroom, and in her interpretation of events in the world. Jackie would probably not approve of my use of the term "invariants" in this broad way; after all, it is not a metaphorical concept but a scientific one. And of course, she would be right. Yet as I age (gracefully, of course) it becomes clearer to me that the Gibsons' formulation is a metaphor for our lives. Our motivation is to *find the invariants*, to make sense of the range of experiences we have despite the constant change over which we have little control. Although the study of perceptual development concentrates on how young children learn about their world, it can be extended too, to understand how adults' *thinking* about the world evolves and changes. We also try to figure out the affordances of objects, people, and concepts we encounter in our lives. Can I count on her? Does she afford trust? Does a particular theory I have concocted afford a purchase on the problem at hand or is it a dead end? What are the invariants that guide me when I design a research study and how can I communicate them to my students? We spend our lives searching for the invariants – those things we can count on and which surprise us when they change.

Why are adults not often surprised by world events (barring the incredible tragedy of 9/11) or the turn of human relations in their lives? Adults have abstracted the common features of many life experiences. To use Gibson and Pick's (2000) terms from their wonderful book, *An Ecological Approach to Perceptual Learning and Development*, that came out in Jackie's 90th year, we have learned the limitations of our

agency, agency so different than the ability we develop to control our own behavior and the immediate environment around us when we are children. We learn "prospectivity," or what gives our behavior its forward-looking character. Despite the world's insanity, we take vacations and travel abroad, and even plan ahead and set sub-goals in the face of uncertainty. And those of us who survive as adults have cultivated "flexibility." As Gibson and Pick wrote, "Finding the relation that remains invariant over change and that specifies a potential affordance does not mean that either perception or action is rigid and unchangeable as situations change." The system is continually adjusting to presented conditions; daily life requires the flexibility to perceive and use whatever affordances are necessary for the tasks at hand (p. 169).

I'll say. The Gibsons worked on the fundamental problem that faces us all, at any age: How do we make sense, find *meaning*, in our world? We cannot live our lives reacting to each instance. We need the economy afforded by extracting the invariants. We must distill the essence of our experiences. The persistence of this task in all domains of our lives is compelling. It is an idea that continues to crop up in theories of perceptual development, conceptual development, and cognitive development more generally because it is so powerful.

What were Jackie Gibson's affordances, those elements of her approach both intellectual and social that I, and her other students, learned that we could count on over time? Intellectually, Jackie afforded us an alternative to radical nativist or radical empiricist approaches to perceptual learning. She and James Gibson (her beloved husband and fellow theorist) gave us a way to think about how we learn from our experience, without coming prepared a *priori* stuffed with ideas and concepts. True, for my money, she sometimes underestimated that preparedness can come in the form of biases rather than fixed ideas (Hirsh-Pasek & Golinkoff, 1996), but she could be counted on to ask the right question: What is the source of that knowledge and how can we study it? Because of our highly developed sensory systems, and because of our drive to find the invariants over the dynamic transformations in our lives, we are prepared, as numerous studies by now have shown, even prior to birth (e.g., DeCasper & Fifer, 1980), to learn about our world. As Gibson and Pick (2000) wrote, "The search for order, regularity, and pattern is evident in the most ordinary human behavior" (p. 168).

Those of us lucky enough to have worked with Jackie understood the invariants that she expected of us, although occasionally we didn't measure up. Jackie conveyed to us that science was about perseverance, hard work, and rich concepts. Concepts that grounded the life of the organism in its ecological niche and fed into its survival. Concepts that were not exercises in the lab (such as the Muller-Lyer illusion) but relevant to how real organisms navigate and manipulate their worlds. Concepts that babies could not live without – like figuring out which surfaces would support their weight for traversing.

Jackie also afforded a mirror – especially for her female graduate students – in which we could try to see our own reflection. In a time when not many women were in the field, Jackie's life was a model for how we could live – complete with family and friends, and rich with the life of the mind and scientific endeavor. No, we didn't have to settle; we could have it all. After all, she did.

But more than a mirror where we could see ourselves, Jackie afforded us a haven. Not from the cold but from the intellectual ups and downs that we all experienced during our careers. Jackie always assumed – even when we were graduate students – that we could make something of ourselves and that our ideas were (even if wrong-headed) worth discussing. I daresay that none of Jackie's students ever felt that

they were not taken seriously. And this, from a world class scientist, meant something to us all.

The decision to ask Jackie to be on my dissertation committee turned out to be one of those breathtaking choices whose consequences you can't begin to see at the time. I have "carried" Jackie Gibson in my head for years. The pleasure that she took in her students' achievements was palpable. Her beautifully told autobiographical book, *Perceiving the Affordances* (2001), produced in her 91st year, touched me greatly and made me appreciate the obstacles that she had to overcome to achieve her own professional success. I think that made her all the more determined to have her female students succeed.

Jackie Gibson's passing is a great loss to the field. She has left us an amazing legacy however, in her life's work as well as in the encouragement and nurturing she provided to many generations of graduate students. Jackie Gibson will be my role model forever.

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