FOURTEENTH NATHALIE BARR LECTURE

Passion of Practice:

The Intuition of Treatment

Judy C. Colditz, OTR/L, CHT, FAOTA
Consultant in Hand Therapy
Raleigh, North Carolina

This is actually the second time I stand at this podium to deliver the Nathalie Barr Lecture. The first time was two years ago when, with tears in my eyes, I read the words of my good friend, Anne Callahan, as she remained at home preparing to undergo treatment for her recently diagnosed breast cancer. It is, therefore, extraordinary today to have Anne here and to have received her heartfelt and warm introduction. Thank you, Anne.

Receiving this award is also, for me, the ultimate recognition by my peers of my energies given to this great specialty of hand therapy.

A few years ago, a woman I knew through the Raleigh Chamber of Commerce, who was writing a book about successful professional women, asked to interview me. She asked a variety of questions about the influences in my life that helped me successfully manage a large therapy practice. Constantly I found myself returning to my experiences as a board member and president of this society. I doubt I will ever be involved in anything more exciting than the early years of this organization, when we forged the identity of a new specialty. I had never known that dedicated and energetic women could make the earth move. My meager words today can only in an inconsequential way thank you for the inspiration and excitement that membership in the society has given me.

The path to this podium is paved with a rich tapestry of abundant and enduring friendships, borne initially from our professional acquaintance with one another. The camaraderie I feel with so many hand therapists, including many from other countries, is a rare gift, which few in life are lucky enough to experience. And, as my sister says, "There is nowhere in the world you can go that you do not know someone." Both friends and family have traveled many miles to be here today, and I am deeply grateful.

Before I speak about the passion of the practice of hand therapy, I must recognize with affection Nathalie Rose May Barr, who endowed this lectureship. Without her passion, I would not be at this podium today. Working with Mr. Guy Pulvertaft and Captain Kit Wynn Parry, Nathalie became one of the first hand therapists in England and made many contributions in the early days of hand therapy, including her book, *The Hand: Principles and Techniques of Simple Splint-making*. She generously gave the inheritance she received late in life to the hand surgery, hand therapy, and occupational therapy organizations in Britain as well as endowing this ASHT lectureship. In her obituary of Nathalie Barr, Diana Swann wrote, "Nathalie's greatest satisfaction came from seeing therapists and surgeons working collaboratively for the greater benefit of the patient."[1] Thank you, Nathalie Barr, for your enduring contributions and, most of all, for making this moment possible.

PASSION OF PRACTICE

Do you remember your first kiss? Can you remember the surge of heated emotion as you made your first foray into physical passion? Although you might agree that the first kiss was probably a result of surging hormones rather than of surging

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Correspondence and reprint requests to Judy Colditz, OTR/L, CHT, FAOTA, 2615 London Drive, Raleigh, NC 27608.

passion, you nevertheless probably remember the sensational feeling that accompanied that kiss.

Although an altogether different emotion, every encounter with every patient still, after 27 years, provides me with a deep, moving response. I think this emotion has the same name as that first kiss: *passion*. Passion is described as powerful emotion, often associated with sexual desire, but it is also defined as boundless enthusiasm, limitless excitement, infinite eagerness, and tremendous devotion.

This morning I want to explore the development of professional passion. I see professional passion moving through three stages. The first stage of passion is learning, the second is practicing and integration, and the final stage is intuitive clinical practice. With these words I hope to inspire those of you with few years of experience and invigorate those of you with many years.

I am intrigued by this progression of clinical passion as we learn. In his book, *The Care and Feeding of Ideas*,[2] Adams postulates that the natural process of learning to solve problems follows a certain sequence (Figure 1). Before we become therapists, we do not realize how much there is we do not know, but as young therapists we learn enough to know that we do not know it all. As we learn treatment skills and watch patient responses, we assume we know what we know. But after years of unconscious information gathering, as we watch thousands of patients respond to what we do, we have a huge bank of information stored away. Although we may know much more than when we started, there are many things we do not realize we know until, suddenly, circumstances cause the knowledge to coalesce and erupt into consciousness. It is this process of going from not even knowing we don't know to NOT knowing that we do know that I find absolutely intriguing.

LEARNING

Let's look at Step 1: the passion of learning.* Do you remember how awkward it felt to do measurements or examine a patient's hand for the first time? The first step for all of us as hand therapists is learning the basic knowledge and the manual skills necessary to apply that knowledge.

The competence we gain in dealing with our environment fulfills our basic needs. Maslow,[3] in his well-known hierarchy of human needs, lists the development of self-esteem and the acquisition of knowledge as central to our human need. We all derive great satisfaction from seeing results with our patients, and this propels us forward in our professional development. The individual motivation that brings us to a career in hand therapy varies. If we experience a sense of satisfaction with the tasks and rewards of hand therapy, we have found the right direction. As Deci says, "A feeling of being effective is satisfying in its own right, and can even represent the primary draw for a lifelong career."[4]

I wonder whether we realize, as we set about learning the technical skills of evaluation and treatment, how important it is that we learn how to touch? When I see a new patient, I always make an effort to touch them lightly on the arm when escorting them into the clinic, and I always touch the uninjured hand before the injured one, to convey my sense of caring and to establish trust before I approach the hand problem. Don't laugh. One study showed that waitresses who touched their

*During this presentation, video clips from the Japanese film *Shall We Dance* (Miramax Films) were shown. The main character's stages of learning to dance were used as an analogy to the stages of learning discussed here.

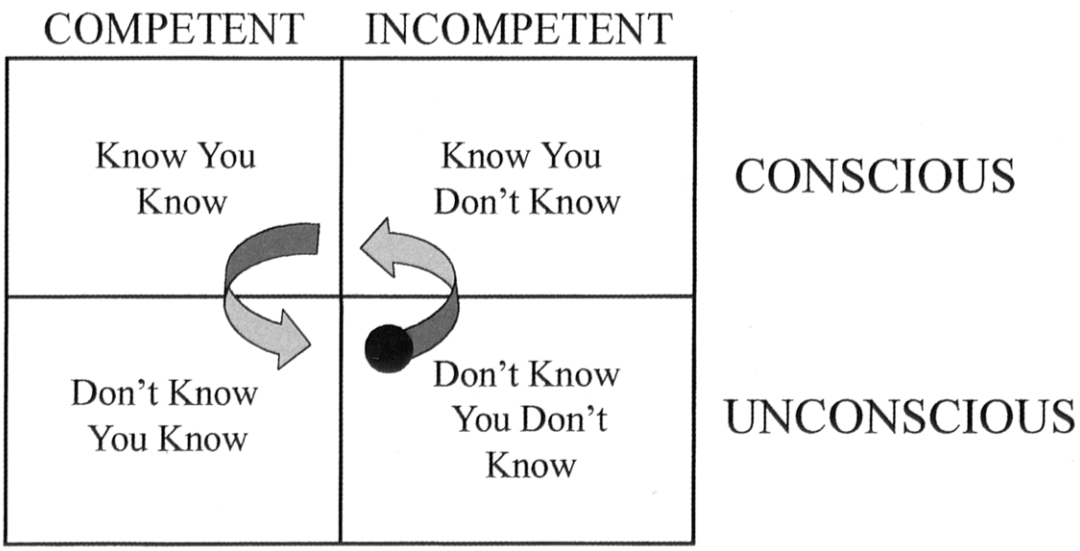

FIGURE 1. *The stages through which we pass in the process of learning and problem solving. Starting at the black dot, the sequence follows the arrows. (Adapted from Adams.[2])*

customers on the hand or shoulder as they returned change received larger tips than those who did not.[5]

In this era of the greatest technological development ever, I feel blessed that we as a profession have the ability to maintain the human moment. Dr. Hallowell, writing in the *Harvard Business Review*,[6] describes the human moment as "an authentic psychological encounter that can happen only when two people share the same physical space." As greater and greater numbers of individuals communicate only through technology, they lose the human moment. To quote Dr. Hallowell,

> Technology has created a magnificent new world, bursting with opportunity. It has opened up a global, knowledge-based economy and unchained people from their desks. We are all in its debt—and we're never going back. Be we cannot move forward successfully without preserving the human moment. . . . The human moment provides the zest and color in the painting of our daily lives; it restores us, strengthens us, and makes us whole.

Those of us who have chosen hand therapy as a profession will always have the gift of the human moment to enrich who we are and what we do each day. Technology cannot replace our touch.

Recent studies of the effects of massage dramatically demonstrate the value of our touch. Premature babies massaged three times a day for ten days will be more alert, active, and responsive than babies of the same size and condition, who are not massaged. They will be discharged six days sooner, which represents a savings of $10,000 each.[5] Research from the Touch Research Institute in Miami has shown that massage boosts athletic performance, reduces agitation in patients with Alzheimer disease, and relieves stress at disaster sites. It helps those with asthma breathe more easily, improves the ability of children with autism to concentrate, and reduces apprehension in burn victims who are about to undergo debridement.[5]

But it is not just the patient who receives something when we touch. There is an equal advantage to us, as it is the only way we can perceive the quality of the human tissue, the extent of the muscle contraction, or the stiffness of the motion. We cannot adequately solve clinical problems if our senses limit the information we receive. Sadly, anthropologists call America a nontactile society. In a study comparing the number of times couples touched in outdoor cafes in the United States, Puerto Rico, and France, the lowest frequencies were, by far, among the Americans.[5] Isn't it sad that the current National Education Association motto reflects our American culture, "Teach—Don't Touch."

There was some emotional draw for all of us to this profession. The balance between empathy and objective detachment remains a career-long challenge as we allow our emotions to intertwine with those of patients who suffer devastating injuries and loss. It is a wonderful gift to experience a close relationship as a patient regains control over his or her life.

One of my most memorable experiences as a new therapist came during a rotation that I spent on the pediatric intensive care burn unit at Parkland Memorial Hospital in Dallas. As I treated a beautiful blue-eyed, blonde 3-year-old who screamed every time I changed his dressings and splints and ranged his joints, I became unsure of my chosen profession. I could not bear to hurt him. At the end of my time in Dallas, I visited the burn unit to say good-bye, and as I walked into the unit, this child was walking across the room toward me. Suddenly I understood that my difficult job had contributed directly to the quality of the remainder of his life.

In tribute to my blue-eyed 3-year-old, who inspired me to keep going along this therapy road, I would like to share with you a quote from an obscure paperback I read on a plane, entitled *The White Rhino Hotel*. I feel this quote aptly describes what we should empathetically understand about our patients:

> His fingers would not serve him. Some had no nails. Smooth and rounded like the tips of rubber gloves, a few still carried surviving nerves, their insulation destroyed, their alarms too sensitive and shrill. . . . The dwarf finally secured the collar button between the thumb and forefinger of his right hand. He concentrated and tried to seize the left collar in his other hand. Disobedient, refusing the authority of his will, the left hand would not help the right. Some nerves too numb to tell him when he touched the buttonhole, others too hysterical to let him grip the cloth, instead of being his servants, these antennae were now his master. He struggled once more. Even the hinges of his joints defied him.[7]

In addition to the value of your touch and your capacity for empathy, what is important in this early period of learning? The obvious clinical knowledge is crucial, and knowledge of the anatomy should be automatic. You should gain an ability to visualize the underlying anatomy and its movement. From this knowledge you develop the ability to deduce a logical reason for the symptoms. I do not know how it is possible to practice one skill without the other.

Learn to depend on measurements. Do not take measurements to reflect what you see, but routinely take measurements to see what they tell you. If the difference between active and passive motion is widening, focus on exercise. If the active and passive motion has little differential, focus on gaining passive motion to create the potential for active movement. If measurements do not show progress, change or discontinue treatment. Without good measurements, clinical decisions cannot be made.

Most of all, as you set about learning the specialty skills of hand therapy, do not rely on learning your skills from the vendors who sell us the products for our profession. They are motivated to sell us what gives them a good return on their invest-

ment. It is not their responsibility to educate us; it is ours. Find a mentor who is a skilled clinician, and become an appreciative apprentice. Take advantage of local and national continuing education. Most of all, read and question. Use every patient every day to provide a beneficial learning experience.

PRACTICING AND INTEGRATION

The second phase of our professional passion I call practicing and integration. As we become more experienced therapists and move around the circle of Adam's chart (Figure 1), we begin to realize what we do not know and also what we do know. We learn what works in our treatment and what we need to learn more about. This is an intense period, when we solidify who we are as therapists. I see this period as having two important possibilities: first, the opportunity to learn and respond to the subtleties of the art that we apply to our limited science; second, a time to learn that much of what we have been taught as clinical practice has never been questioned.

A few years ago, I was asked to follow a patient who had had a zone 2 flexor tendon laceration about seven weeks earlier, in another city. This patient had gone to therapy two or three times a week for two hours each time, had numerous home exercise programs, and had four different splints.

When I saw him I felt he had two primary problems: Tight intrinsic muscles limited his ability to gain greater passive interphalangeal flexion, and he was unable to isolate and pull his profundus tendons. I took one splint he had and changed it to stretch his tight intrinsic muscles. His therapy sessions consisted solely of my holding his hand and giving him specific feedback when he correctly pulled with his flexors and did not co-contract or use primarily his intrinsic muscles for flexion.

The experience with this patient only increased my concern that we as therapists are perhaps doing too much: too much motion, too much splinting, too much fiddling. Instead, it seems to me that we need to better develop the skills of knowing when the patient is moving correctly, the skill to help the patient appreciate the correct movement, and the ability to listen for when the tissues are ready for more frequent movement. Dr. Wyndell Merritt, writing in our *Journal of Hand Therapy*, has said it well: "Exactly how much tension one uses to mobilize the healing stiff joint, encouraging slippage of un–cross-linked collagen instead of causing inflammatory response, is an art, not a science!"[8]

It is impossible to ever get all the facts. Sooner or later you must realize that the skill is to determine the path of therapy within the limits of the information you have. Learning to evaluate and respond to the subtleties of a clinical situation should lead us during our second phase, of practice and integration, to question continually whether we should deviate from the protocol path.

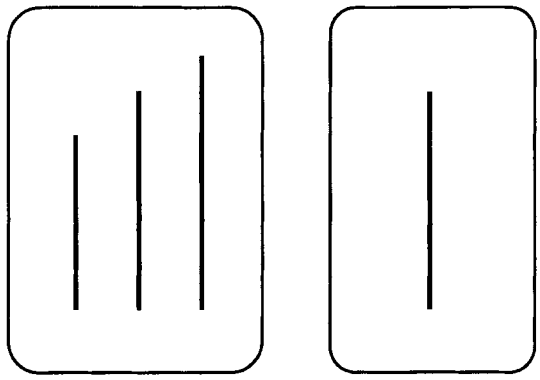

FIGURE 2. Which line in the box on the left is the same length as the line in the box on the right? (Adapted from Asch.[9])

How many patients have not reached their full potential because of a therapist's inability to see beyond the rigid protocol? The protocol may not be the best path for an individual patient. A protocol is the best-case scenario and, in the absence of significant complications, the safe route of treatment. It is not our vocation to memorize cookbook protocols. It is our responsibility to develop the skill to read each clinical situation as unique and modify treatment in response to the individual tissue reaction.

I am not suggesting that you wildly deviate from protocols and experiment. I am suggesting that you methodically question what part of a protocol can be safely changed for the best result for a specific patient. In my experience of teaching various workshops throughout the world, I have been amazed at how frequently, when I ask "Why do you do it that way?," the room becomes very quiet before someone timidly replies, "Because that is the way I learned it." Just because something has not been done before does not mean that it is the wrong thing to do.

Asch, a psychologist, asked subjects to identify, on the diagrams shown in Figure 2, which line in the box on the left was the same length as the line in the box on the right. Most of you would say the middle line was the line of equal length. But Asch's subjects were told that others who had been tested had chosen the line on the far left as the correct answer. They were so afraid of being wrong that they also chose the line on the left, even though they believed the middle line was of equal length.[9] I want to challenge you to choose the line you know is right. Question all that you have been taught.

Even Georgia O'Keefe, known throughout her career as an avant-garde painter, said, "I visualize things clearly. I could think of a whole string of things I'd like to put down, but I'd never thought of doing it because I'd never seen something like it."[10]

As we endeavor to find a science of this discipline of art, I fear we may decrease our ability to

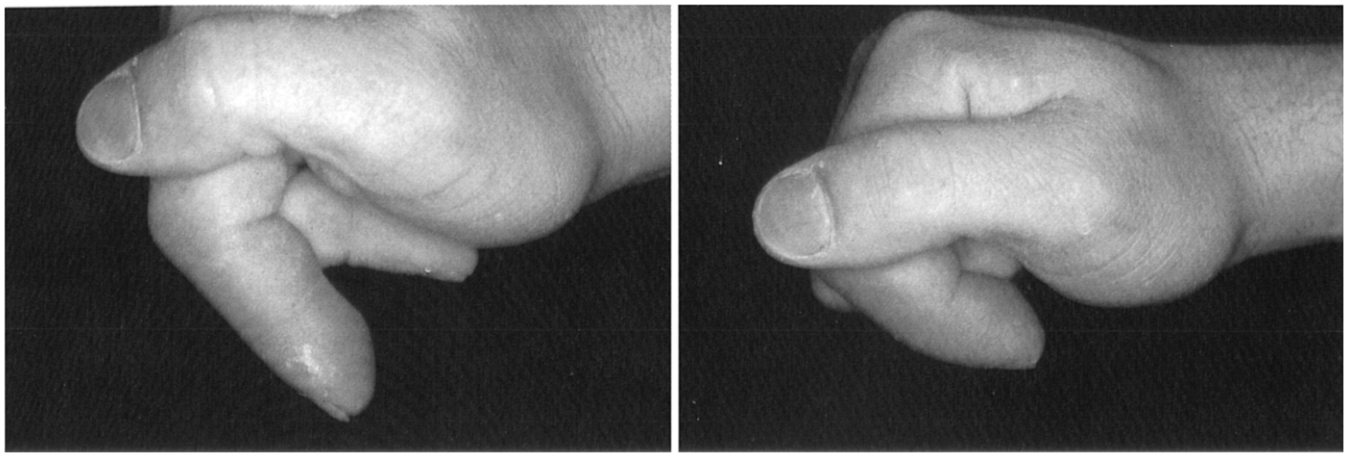

FIGURE 3. Active range of motion of the index finger before treatment (left) *and after edema reduction with no other treatment* (right).

see and understand the subtleties. Most of all, I fear we are losing touch with the basics. I often see therapists mobilizing tissues without respecting the need to reduce edema prior to mobilization. Figure 3 shows the difference in active motion before and after edema reduction with no other treatment. I see therapists instructing patients in multiple exercises but failing to help them learn to use the correct muscle to do a specific motion. It seems that we often forget basic principles as we use our high-tech equipment, our multiple splints, and our rigid, frequent exercise routines.

Recently, I treated a 45-year-old engineer with the complaint of hand pain, who spent the majority of his day using a computer mouse in his dominant hand. Prior to my seeing him, he had undergone a regimen of immobilization splinting, iontophoresis, and a vigorous exercise program. No one had appreciated that the intrinsic muscles of the index and long finger of the right hand were tighter than his other intrinsics because of their constant contraction while he used the mouse. After one week of intrinsic stretching, he was symptom-free—very basic.

This mid-period of our career determines whether we will we be "lighting the flame or . . . will be warmed by it."[11] As we integrate the skills needed to be a good therapist, this period will determine whether we rigidly follow protocols or apply clinical knowledge specifically to every clinical situation.

INTUITION

The third stage of passion I call a time of intuition—a time when one gains an awareness of knowing, a skill of sensing, the ability to feel the intuitive answer.

I have greatly frustrated some of the therapists who have worked with me. When asked a clinical question, why I did something a certain way, I was often unable to say exactly why. Invariably I answered, "I just know in my gut it was the thing to do." That gut feeling is the result of subconscious learning that took place each time I sat down to treat a patient. I accumulated that knowledge through many experiences without even knowing it.

As we trace the full circle on Adam's chart of problem solving (Figure 1), we realize that the final stage of learning is when we do not know what we know. In other words, our intuitive sense has been keenly developed while we were busy treating patient after patient, learning how to do. That information rises to the surface only when the right circumstances combine to call it forth.

Even Charles Srebnik, a noted Wall Street investor, says that "all the statistics in the world and so-called insider information [aren't] worth a damn against a gut feeling."[12] And Albert Einstein agreed: "An idea is the product of intuition as well as reason."[11] In other words, we come to know a great deal that we cannot verbalize.

I will forever be grateful to my beloved mentor and teacher, John Packer, because very early in his career as a hand surgeon I believe he gained uncanny intuition of what made patients better. As I watched patients do well under his somewhat varied approach I, too, learned to read the tissues, the patient's personality, and the multiple pertinent circumstances and modify my treatment accordingly.

But change and the expression of one's creativity as a therapist, especially in this litigious American society, can be dangerous in the clinical environment. The normal sequence we choose for problem solving is this: We become aware of the problem, we study it, and we recall past solutions. Based on this contemplation, we then imagine new solutions while we also imagine the consequences.[12] We have difficulty thinking outside this box and creating new solutions. When past solutions have not worked well, it is difficult for us to create new solutions from old information. I would like to salute two hand therapists who have given themselves permission to listen to their intuition.

Roslyn Evans has read extensively and examined her patients in the clinic while applying intuition and logic to create new clinical treatment

approaches, primarily with tendon injuries. Sandra Artzberger intuitively developed the treatment approach that she named manual edema mobilization, using what she learned from the treatment for chronic lymphedema and applying it to our trauma patients. Her approach, for me, has been an "Aha!" experience.

There are many more of us who have intuitive insights to share with our colleagues. We have all shared the same incubation period, a time that is "a mysterious period when conscious thinking about the problem is dormant and the intuitive voice has a chance to break through."[12] Let me share a few examples of intuitive treatment I have recently experienced.

I saw a young woman who had altered her lifestyle as a result of five years of symptoms of bilateral de Quervain tenosynovitis. She had received all the traditional treatments, but each had provided only temporary relief. My initial intuitive thought was that I must do something to change the mechanics of the glide of the extensor pollicis brevis and abductor pollicis longus through the first dorsal compartment or else this patient would never improve under my care. Somehow I knew that I needed to consider doing something I had never done before. I fitted each wrist with a small leather band that acts as an external pulley over the first dorsal compartment. She wore these all the time during her working day and in one month could work all day at the computer without symptoms. Another month later, she was able to resume her passion of dart throwing.

I saw a young woman with rheumatoid arthritis who had localized synovitis of a metacarpophalangeal joint, which appeared to be exacerbated by daily keyboard activities. I showed her differential intrinsic stretching exercises and fitted her with a custom neoprene splint to shift the balance of motion at this joint while she typed. Her extensor tendon was beginning to shift ulnarly over the metacarpophalangeal joint but was not yet dislocating. Two years later, I happened to see her in another location and I was unable to determine which finger we had splinted, since the extensors were all centralized and the synovitis was undetectable. This experience and a review of the literature[13–17] indicating that patients with hemiplegia show no deformities on their paralyzed sides caused me to rethink my approach toward rheumatoid arthritis. I now believe that the role of joint loading during use is where our efforts as therapists should be directed if we truly want to have the capacity to alter deforming forces.

In the paper I presented at this meeting on Friday afternoon, on casting motion to mobilize stiffness,[18]† I mentioned the experience of observing a patient with chronically stiff fingers self-mobilize joints in three days in a constraining cast. This has led me to a whole new way of thinking about how we mobilize joints. At the time I started that investigation, I was willing to consciously allow my intuitive self to discover what was obvious but what I simply did not know I knew.

As Mark Twain once said, "A man [or woman] with a new idea is a crank until the idea succeeds."[19] For those of you in the audience who followed my path into the world of administration and are now bogged down with coding and managed care, please come back to the clinic. Give us those intuitive insights that will undoubtedly come as you once again touch patients and unconsciously process what you are seeing. For those of you who crave to be better at this process, do not despair, for those studying creativity say that creativity can be learned.[11]

Some suggest keeping a creative journal with three columns: First list the facts, then close your eyes and visualize. What do you sense? What does your intuition tell you? Write these impressions in the second column. Remember: Eliminate the automatic, the routine. Finally, write down the new idea in the third column.[12] Think about the likely consequences based on your previous experience, and imagine what might be the new outcome. When we think about clinical problems, it is easiest to think analytically (hard thinking), reviewing the logical and practical. Most of us need to become better at random or soft thinking. We must start with the unreasonable and nonjudgmental thinking to allow ourselves to come to a new discovery within us.[11] Yes, creativity and change are risky. Anything can happen, including success.

But inviting the intuitive into your hand therapy practice will bring you the experience of great joy. The process of therapy will become a vehicle for constant discovery of the knowledge and skills within you. You will have episodes of suddenly knowing something that you did not realize you knew.

I would leave you with a quote from the Academy Award–winning actress, Kathy Bates, as she addressed new graduates in the spring of last year: "If you can define success for yourself as this . . . you love what you do and you're good at it . . . that's success."[20] I would only add that, as you do this, you will experience the passion. The intuition within yourself will explode into JOY.

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†An abstract of this paper appears in the proceedings of the meeting on p. 72.

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